

City Council Utility Committee

Meeting Agenda
Tuesday, July 28, 2020
10:00 am - 12:00 pm

This meeting will be held electronically. Residents interested in listening to the meeting or making public comments can join in one of two ways:

- 1) You can call in to +1 346 248 7799 or 833 548 0282 (toll free) Webinar ID # 863 9663 1779.***
- 2) You can log in via your computer. Please visit the City's website here to link to the meeting: <https://www.louisvilleco.gov/government/city-council/city-council-meeting-agendas-packets-minutes>***

The Committee will accommodate public comments during the meeting. Anyone may also email comments to the board prior to the meeting at CPeterson@LouisvilleCO.gov.

- I. Call to Order
- II. Roll Call
- III. Approval of Agenda
- IV. Approval of Minutes from June 23rd, 2020
- V. Public Comments on Items Not on the Agenda
- VI. Dashboards
- VII. CIP Update
 - Fluoride
 - Louisville Pipeline
- VIII. Windy Gap Financing
- IX. Draft 2021 Rates
- X. Upcoming Projects and Council Action
 - Water Rights – Summer
 - Windy Gap Allotment Contract - Fall
- XI. Agenda Items and Date for Next Meeting

- Advance Agenda / Work Plan & Meeting Dates

XII. Adjourn 12:00 pm

Attachments: 06-23-20 Draft Minute

Dashboards

CIP Summary Tables

Pipeline Map

Windy Gap Finance Presentation

Draft 2021 Rates

Work Plan

2021-2026 CIP Requests

**City Council
Utility Committee**
Draft - Meeting Minutes
Tuesday, June 23, 2020
COUNCIL CHAMBERS

Councilmember Lipton began by acknowledging this meeting is being held electronically as a result of City facilities being closed due to COVID-19. He explained how the electronic meeting will operate and what procedures should be followed when you want to speak.

I. Call to Order – *Councilmember Lipton called the meeting to order at 10:00 a.m.*

II. Roll Call was taken and the following members were present:

City Council: *Councilmember Jeff Lipton, Mayor Pro Tem Dennis Maloney, Councilmember Deborah Fahey*

Joining Staff: *Mrs. Balsler, Mr. Kowar, Mr. Watson, Mr. Peterson & Mr. Ahrens*

Additional Attendee: *Mr. Jim Manire, Financial Advisor*

Public: *None*

III. Approval of Agenda

Mayor Pro Tem Maloney motioned to approve the agenda and Councilmember Fahey seconded the motion. All approved the Agenda.

IV. Approval of the Minutes

Councilmember Lipton said we have all looked at the minutes and asked if there were any comments or suggested changes from the May 28th meeting minutes. There were none made. Mayor Pro Tem Maloney motioned to approve the May 28, 2020 meeting minutes. Councilmember Fahey seconded the motion and all approved the minutes.

V. Public Comments on Items Not on the Agenda

None – No attendees

VI. Dashboard

Mr. Peterson explained that the dashboard has some of the updates requested however it was a bit more complicated than anticipated so it's a work in progress and stated we should have for the next meeting and Nat confirmed. Mr. Peterson continued saying that we don't need to go into much more detail at this point. Mayor Pro Tem Dennis Maloney said he really likes the graph with the cumulative consumption and thinks it is very useful. He would like to see it extend to the other utilities as well. Nat stated that he could have it done by the next quarter.

VII. COVID-19

Mr. Peterson said we are not seeing major impacts to usage and operations are within normal ranges. With the delays between billing and payments, the City is still in the early stages on analyzing the economic impacts to the Utility. Staff are continuing to monitor and will report as more information becomes available.

VIII. Windy Gap Financing

Page 12 – Is an overview of the Windy Gap presentation including: project history, City involvement, the role of the firming project and what that means, scenarios of funding, and projections for future actions.

Page 13 – Overview of System Map. Mr. Peterson explained the background of the Windy Gap Reservoir and key statics in its operations to deliver water to Louisville.

Page 14 – Historical Timeline. Mr. Peterson explained that project concept was formed in the 60's but the project didn't make a lot of progress until the 80's with the filing of the water rights. This is important as it demonstrates the relatively junior ranking of these water right. The challenge with this water right is when it is priority there is difficult in storage as reservoirs are typically full. Conversely, when storage space is available the water right might not be in priority. This challenge is the main driver in the development of the Windy Gap Firming Project, with the major component of Chimney Hallow Reservoir (shown on page 15). Chimney Hallow is designed as a 90,000 AF reservoir near Carter Lake. Plans call for a piped connection between the two reservoirs that will allow water to go back and forth. The City will be able to use the Windy Gap stored in Chimney Hallow in the exact same way that we currently use the Colorado Big Thompson (C-BT) water rights.

Page 16 – WG Firming Project Timeline, Mr. Peterson continued with saying the WG Firming Project made significant advances starting around 1999. The project entered the permitting process in 2003.

Page 17 – WG Participants, Mr. Peterson said this is a breakdown of the participants and how many shares each community owns. Louisville owns 9 shares which is about 3% of the project and Broomfield being the biggest percentage. Councilmember Jeff Lipton asked Mr. Peterson to explain why this project is important to Louisville and how it fits into our water resource strategic plan. Mr. Peterson referred to page 18.

Page 18 – Water Management Plan. Mr. Peterson said this is our guiding document that we use and was approved by Council in 2017. What this graph is showing is what our current firm yield supply is 5,000 AF and explained that is shown by the blue bars in the graph. The yellow line is our actual demand that you see over the last 10-15 years. As you can see the City usage varies through the years between 3,400 and 5,000 AF/year in the last couple of years. The graph shows two dotted lines representing the City's best guesses on the longer term buildout demand. He went on to explain that the current projected demand is 6,700 AF. To increase the City's supply from the 5,000 AF today to the buildout demand of 6,700 a series of water resources projects have been identified and outline in Water Management Plan. The Windy Gap Firming Project is one of the water resources projects identified to meet the long term needs of Louisville. He noted that back in 2017 we were thinking it was going to be close to 12 million dollars for the WG Project but now it's looking like 18 million dollars which is due to the increase in cost we've seen in the last 3 years and the delay in construction we've experienced. Councilmember Jeff Lipton asked where the additional demand is coming from and is it coming from our Comp Plan projections? Mr. Peterson said it's a combination of things. Comp Plan data was used along with additional analysis including growth areas like: CTC, old Storage Tech, McCaslin/US36 and general infill. The Water Management Plan also factored in climate change impacts and drought issues.

Page 19 – CO Large Reservoirs. Mr. Peterson pointed out the big take away on this slide is the year the listed reservoirs were constructed. With a few reservoirs in the 80's, most were 20's 40's or 70's. This highlights the changes in regulations and permitting over the years, and the level of effort needed to construct a large reservoir today is very difficult and becoming rare. This shows the value of a project like Chimney Hollow that is already in process. Councilmember Jeff Lipton asked if we have all the entitlements. Mr. Peterson provide a brief update on this topic.

Page 20-23 – WG Funding Summary and Scenarios. Mr. Peterson continued the discussion by reviewing the funding options. The first six options are related to City self-financing. The last two options are what the Group Financing will be which is us joining with the other participants in WG and doing the debt issuance all at the same time. The big advantage that we see is doing the Group Financing, continues to be the reliance of the possibility of assigning the payments as capitalized O&M payment. This provides advantages to the Utility finances and the ability to issue future debt. Finance is working with outside consultants and the City auditors with the support of Public Works to get a final ruling on this possibility. Councilmember Jeff Lipton agreed that is important to

have a determination before moving forward to approval. Then he asked what the significance of the two interest rates listed for scenarios 7 and 8. Mr. Peterson explained that the Firming Project has secured a subordinate loan from CWCB at a rate of 2.08% that Louisville will have access to if we participate in Group Financing. Councilmember Jeff Lipton then asked Mr. Manire if there is a default with the group financing and what impact it has on the City's credit rating and finances. Mr. Manire explained that the City has been participating in the WG Firming Project for some time and has made payments historically as a participant. This project will be documented with a new agreement that will be called the Water Allotment Agreement. They are talking about the allotment of storage rights. Packed into that will be the terms of the operational relationship between the WG Enterprise that the Northern District and the Municipal Sub District has formed and they will enter into individual contracts with each of the participants. So Louisville will enter into a specific agreement that addresses the payments over time that will be due for the operating cost of the facility. If it chooses to participate into the pool financing then payment arrangement would be documented in this agreement as well. He further explained if you are a participant in this pool finance and other participant default there are a lot mechanisms that kick in, yet to be agreed on. Based on our understanding the other participants would first have the opportunity to restore the payment stream then would ultimately get the right to use the storage right related to the default itself. If someone doesn't make a payment, the structure of the bond issue is first protected by the expectation that other participants will set up in their own interest and acquire the storage right. Ultimately the storage right could have been sold to other participant where at any default because there are some transfers and change in configuration of the different storage allocations that have happened year to year over the years. So the likelihood of a default by a participant is unlikely because we do expect the demand of those storage rights to be such that they have a willing purchaser from other participants in the project but if no one volunteered to advance the money there is a mechanism called, "A Step Up Provision" where all the participants would make some proportionate payment to make the cash flow whole. No effect he anticipates on any specific bond rating or access to the market on Louisville or any other participants unless you're the one that defaulted. Councilmember Deborah Fahey asked what happens at the end of the 20 years for maintenance, expansion, etc. Mr. Peterson said there will be an Operation & Maintenance (O&M) component that will be built into this and is similar to what we now have with CBT and SWSP. There is a prepay of our projected O&M costs where Northern District sends us a bill at the end of the year and we'd prepay that for the following year which would include O&M and some capital reserve. Mayor Pro Tem Dennis Maloney said this is all good information and asked what do we have built into our rate model. If we pick one of these scenarios, where are we at with our model and how does it affect the model? Mr. Peterson stated most of these we modeled separately as we go through the process. What's in the current model was the 2019 model. What that proposed was a \$2.5M cash payment and an annual payment of \$930,000. That was based on a lower bond amount of \$17M because our bonding has been changing so much. The impacts to the model; the cash payment is the biggest impact we are seeing and that depends on where our tap

fee revenue may go based on the COVID response. So the last Council meeting we provided the Option B on all CIPs where we assumed no tap fees. In that case we wouldn't want to do the \$2.5M down payment as we end up switching that for the reduction in tap fees. Overall it is built into the model on any of these options and there isn't a big swing one way or the other. Councilmember Jeff Lipton asked in our current fund balances have we reserved money for this project. Mr. Peterson responded, yes this is where the \$2.5M was coming from and that's where we continue to figure out if tap fees continue to progress then there will be significant funding in the fund balance to pay that \$2.5M as the down payment. If for some reason tap fees drop out then that \$2.5M may have a bigger impact to our fund balance and may be something we want to hold in reserve and finance more of the project to maintain the fund balance. Councilmember Jeff Lipton added he didn't want to have another \$2.5M floating in the system if it's already collected for a specific purpose. Committee continued discussing the model, scenarios and options. Mr. Kowar added, another area we can explore is that we can stay conservative for the next few years and if all the legal stuff gets finished up and COVID clears out maybe we keep that \$2.5M and in a year or two when we know everything has cleared out and know our fund balances are healthy then we can put that money down then. Councilmember Jeff Lipton said let's not take it off the table yet. Mr. Peterson said we are looking at three scenarios, 1. Is a zero cash payment, 2. Is a \$2.5M cash payment and 3. A \$1M cash payment. We will continue that analysis through this process until we get a more definition on either a. What our Capital Expense will be, b. Response to COVID and c. What the ultimate cost of the project will be. Mayor Pro Tem Dennis Maloney then asked Mr. Manire about the 8 scenarios and what his opinion is. Mr. Manire said we are working on coming up with a comparative analysis of the pool financing. Don't have a lot of details on that yet. The City has the option of selling Enterprise Revenue Bonds. So if you choose to be the borrower or issue water debt directly you'll have control of these variables we modeled here. We took the three funding amounts we discussed and put on a 20 year prepayment term and compared it to a 30 year prepayment term. If the City wants to control its repayment structure at a close level of detail I think it's going to do its own financing. It's not known yet how much flexibility you'll have as a participant in the pool program. We will be corresponding with Northern District so we can do an accurate comparison then the City can decide what option they prefer. As far as the determination of financing 100% or contributing a component of the cash reserves. I think you have some time to consider that alternative and think about the cash available. Everyone is cautious of COVID and such that they are defensive about their reserve match and fund management policies. If you choose to retain the cash and borrow the additional amount we'll be able to model the alternatives and help you see the impact of it. Councilmember Jeff Lipton thanked Mr. Manire. Mayor Pro Tem Dennis Maloney commented that he appreciates the way all these scenarios are laid out and gives us a recommendation because it give us something to react to and you all have put a lot of work and knowledge into this and it help guide our decision making process. Councilmember Jeff Lipton then asked Mr. Peterson what the blended interest rates will be. Mr. Peterson said he hasn't calculated that out yet but that's something we can provide. Mr. Manire added that these are our recent

projections that we've done. We'll be able to make an educated guess from. I think there are other factors that will be more influential than the interest rate comparison but we are waiting to get some of those details back from the Northern District. Councilmember Jeff Lipton asked Mr. Manire once he gets his comparison if the issue of defusement by virtue of having a City bond versus being part of this pool whether we have more flexibility in the future if we wanted to defuse and to have more cash to eliminate our debt, the two different approaches may be very different and a have an effect on that kind of scenario and the next round of analysis you can give us some comparison. Mr. Manire said of those two we are hoping to get clarity from Northern at that point. Since there is going to be a bond financing done it may be difficult for them to give us as much flexibility on prepayment if we are borrowing through their pool because they have to line up with their own bond. Councilmember Jeff Lipton concluded by saying, please include in the next round of analysis. Councilmember Deborah Fahey said she was wondering why we are choosing scenario 8 over scenario 1 where we pay significantly less. Mr. Peterson referred to the chart on page 24.

Page 24 – Debt Coverage Ratio Comparison. Mr. Peterson said the big driver for staff's recommendation in going with the group financing is avoiding complications with the debt coverage ratio. He continued saying the recent model suggest 5% increase in water for 2021. If we assume self-financing, in order to meet the debt coverage of 1.2, the 5% increase in 2021 needs to be increased to 12%. This utilizes the combined debt coverage of the other two funds of wastewater and storm. If the water fund were to cover the entire ratio the increase would need to go as high as 21%. Mr. Peterson add this the worst case scenario and other factors can be included. This is also the first major step in this analysis and will continue to be evaluated. Mr. Kowar added that some communities view these bonds as intergenerational equity. So if you increase rates now then a lot of folks will pay for the projects now versus spreading it out over a generation but you do pay more interest with that philosophy. Also "Utility Funds" I think is an ongoing conversation of the Utility Committee and how much reserve we continue to carry. One of our biggest drivers of money coming in the door is debt coverages. As staff, we are sensitive to this because it tucks money in the bank. We have had a lot of upgrades we needed to spend money on but there will be periods where we'll be bringing in money because of debt requirements but we may not have as big of upgrades in the system where we will be collecting money that we may not have to spend in some years. So those are a couple things to consider on those, beyond how much interest you would pay. Councilmember Jeff Lipton stated that maybe we look at this over a longer period of time and don't need to be so aggressive on the projects. Mr. Kowar said we could look at that and continued saying that we have been trimming through the years and trimmed at the COVID analysis. He thinks the pivot point is really how the community builds out in the near term and what we need to build to meet our capacity requirements. Councilmember Jeff Lipton asked what the check in points are. Mr. Peterson stated

- The Northern Board is negotiating the allotment contract now.
- The next Utility Committee is schedule for the end of July.

- The allotment contract is about two months out and that's our first step of when it's time to approve.
- Then that's when the City has to decide if we are doing our own financing or group financing. That conversation will have to happen in that 3 month range. We have two committee meetings before bringing to council for approval.

Councilmember Jeff Lipton continued by saying let's keep this on the Agenda as a place holder and we don't have to talk about it but just update us on. Councilmember Deborah Fahey added her thoughts about spreading this out over generations. She thinks the future generations because of climate change and economics are going to have lower water volumes and their own financial issues. So she doesn't like the idea of saddling them with this. She'd rather see it get paid off sooner so they can deal with the issues that come up 20 years from now.

IX: Upcoming Projects and Council Action

- Xcel MOU – July, Mr. Peterson said this is an Xcel program that is free to us where they come through our facilities and do an energy evaluation. Just by participating we get a slightly lower rate on our electric bill and depending on what we improve/add there is additional reductions we can see.
- Water Rights – Still working on various water rights deal. Once those are finalized we are looking to bring forward those contracts in the next month or so.

X. Agenda Items and Date for Next Meeting

- Work Plan & Meeting Dates / Dashboards, to be added to every meeting and be consolidated.
- Next meeting is scheduled for July 28, 2020 from 10:00 a.m. to 12:00 p.m.

XI. Adjourn

Councilmember Fahey motioned to adjourn and Mayor Pro Tem Maloney second the motion, all agreed and the meeting was adjourned at 11:00 p.m.

January 1, 2020 To June 30, 2020

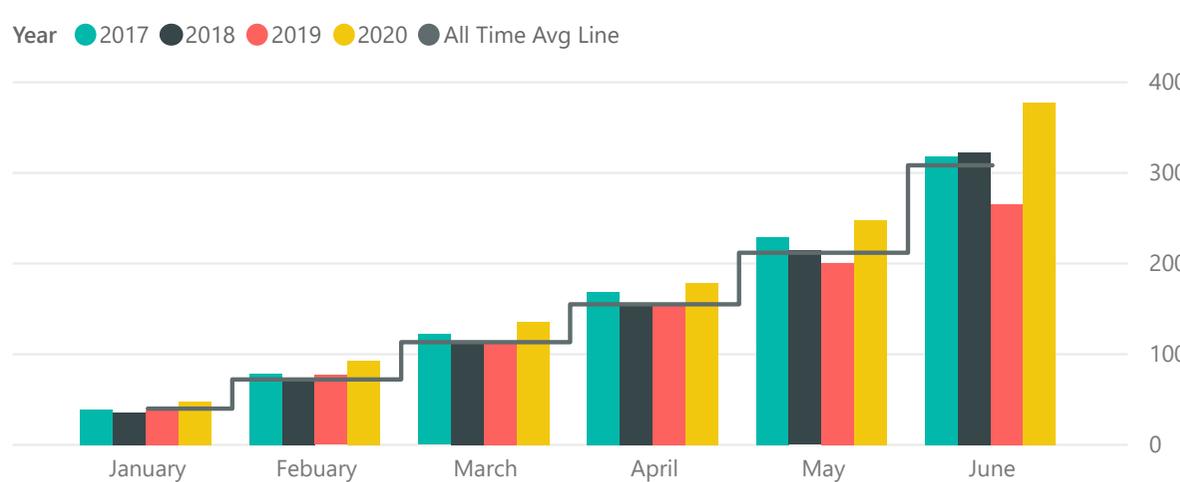
NOT A FINANCIAL STATEMENT. A SNAPSHOT OF KEY INDICATORS.

Revenue Operating Expenses

Source	Balance	Budget	% Complete
Commercial Users Fee	\$739,962	\$2,179,000	34%
Residential User Fee	\$1,410,148	\$3,273,000	43%
Tap Fees	\$1,330,235	\$2,495,400	53%
Total	\$3,480,346	\$7,947,400	44%

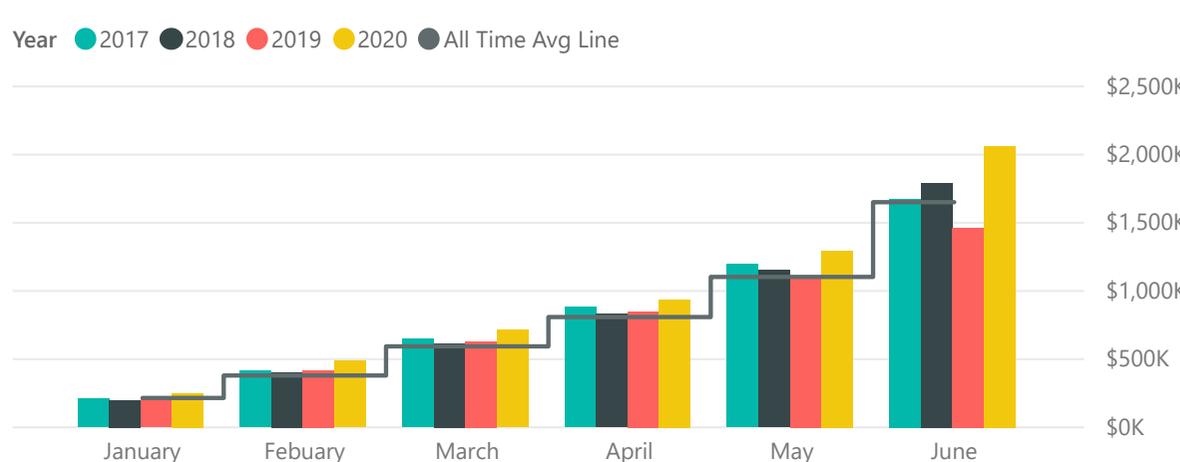
Source	Balance	Budget	% Complete
Central Fund-Wide Charges	\$282,683	\$511,760	57%
Raw Water Operations	\$314,532	\$970,080	38%
Utility Billing	\$66,077	\$154,390	43%
Water Distribution	\$212,799	\$573,180	40%
Water Plant Operations	\$466,585	\$1,544,410	31%
Water Utility Engineering	\$33,062	\$77,700	43%
WTP Building Maintenance	\$106,856	\$251,940	48%
Total	\$1,482,593	\$4,083,460	39%

Cumulative Billed Consumption Year over Year (MG) % Diff from Previous 3 Yr Avg



Month	Cumulative % Diff*	Monthly % Diff*
January	20.0%	20.0%
February	15.5%	11.2%
March	11.5%	3.5%
April	9.1%	2.1%
May	11.1%	16.9%
June	17.6%	32.4%

Cumulative Revenue Year over Year % Diff from Previous 3 Yr Avg



Month	Cumulative % Diff*	Monthly % Diff*
January	15.8%	22.3%
February	13.2%	18.9%
March	9.4%	7.1%
April	6.9%	4.3%
May	9.1%	29.4%
June	18.0%	55.7%

Budget numbers reflect recent amendments voted by Council on 7/14/2020

* Cumulative and Monthly % Differences are based on average from 2017 to 2019

January 1, 2020 To June 30, 2020

NOT A FINANCIAL STATEMENT. A SNAPSHOT OF KEY INDICATORS.

Net Production by Water Treatment Plant (Million Gallons)

Production	January	February	March	April	May	June	Total
HBWTP Net Production	54.19	49.29	56.89	24.59	55.77	78.56	319.29
SCWTP Gross Production	0.00	0.00	1.82	41.47	78.24	91.81	213.34
Total	54.19	49.29	58.71	66.06	134.01	170.37	532.64
2019 Total	51.71	49.00	45.03	49.08	67.79	118.27	380.89

Billed Consumption by User Type (Million Gallons)

Consumption	January	February	March	April	May	June	Total
COM	13.67	12.67	11.59	8.43	17.99	39.21	103.57
IRR	0.00	0.00	0.00	0.06	2.30	4.30	6.66
MF	6.68	6.31	6.26	6.66	7.32	9.77	43.01
RES	27.60	26.26	24.85	28.01	41.30	76.12	224.13
Total	47.95	45.25	42.70	43.16	68.90	129.41	377.37
2019 Total	37.71	39.19	38.40	38.73	46.80	64.61	265.45

Difference Between Net Production and Billed Consumption (Million Gallons)

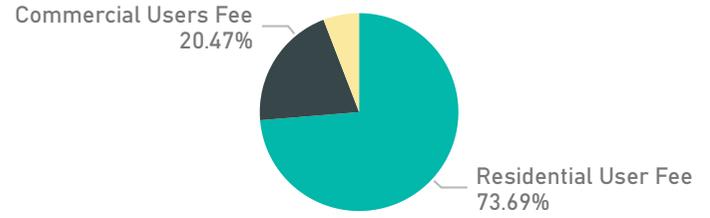
Year	January	February	March	April	May	June	Total
2020	6.24	4.05	16.01	22.90	65.11	40.97	155.27
2019	14.00	9.81	6.63	10.35	20.99	53.66	115.44

January 1, 2020 To June 30, 2020

NOT A FINANCIAL STATEMENT. A SNAPSHOT OF KEY INDICATORS.

Revenue

Source	Balance	Budget	% Budget
Commercial Users Fee	\$390,559	\$996,300	39%
Residential User Fee	\$1,405,863	\$2,693,700	52%
Tap Fees	\$111,320	\$422,880	26%
Total	\$1,907,742	\$4,112,880	46%



Operating Expenses

Source	Balance	Budget	% Budget
Central Fund-Wide Charges	\$233,892	\$378,340	62%
Pretreatment	\$53,103	\$124,580	43%
Utility Billing	\$55,249	\$137,360	40%
Waste Water Util Engineering	\$18,754	\$72,870	26%
Wastewater Treatment Plant Ops	\$335,613	\$974,840	34%
WW Collections	\$102,233	\$260,750	39%
WWTP Building Maintenance	\$84,991	\$322,730	26%
Total	\$883,836	\$2,271,470	39%

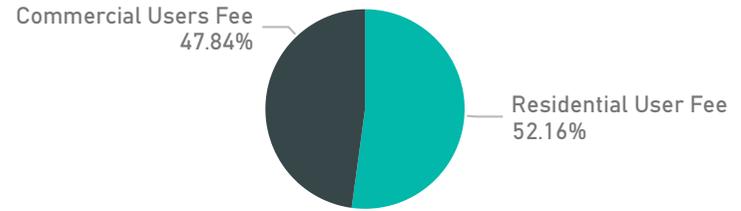
Budget numbers reflect recent amendments voted by Council on 7/14/2020

January 1, 2020 To June 30, 2020

NOT A FINANCIAL STATEMENT. A SNAPSHOT OF KEY INDICATORS.

Revenue

Source	Balance	Budget	% Budget
Commercial Users Fee	\$234,376	\$432,000	54%
Residential User Fee	\$255,501	\$468,000	55%
Total	\$489,877	\$900,000	54%



Operating Expenses

Source	Balance	Budget	% Budget
Central Fund-Wide Charges		\$0	
Storm Water Admin & Operations	\$111,734	\$329,560	34%
Storm Water Util Engineering	\$9,583	\$37,580	26%
Total	\$121,317	\$367,140	33%

Budget numbers reflect recent amendments voted by Council on 7/14/2020

2021-2026 Utility CIP Request - STORMWATER

Completed - carryforward

NEW PROJECT

GRANT FUNDED

Project Name	2020	2021	2022	2023	2024	2025	2026
Essential or Regulatory Projects							
Storm Sewer Detention Pond Maintenance	\$ 238,530	\$ 119,000	\$ 158,000	\$ 124,000	\$ 150,000	\$ 170,000	\$ 174,000
Cottonwood Park Floodplain	\$ 860,000						
Replacement Projects							
Drainageway 7-1	\$ 500,000						
Stormwater Quality Master Plan	\$ 191,420	\$ 200,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Utility Trailer	\$ 1,570						
Backhoe Replacement (20%)		\$ 31,500					
Valve Exercise Trailer (30%)			\$ 23,310				
Stormwater Improvement Master Plan					\$ 120,000		
TOTALS	\$ 1,791,520	\$ 350,500	\$ 281,310	\$ 224,000	\$ 370,000	\$ 270,000	\$ 274,000

2021-2026 Utility CIP Request - SEWER

Completed - carryforward
In process - carry forward
Project Overage - current estimate
New Request
Removed

Project Name	2020	2020 - Revised	2021	2022	2023	2024	2025	2026
Essential or Regulatory Projects								
Sewer Utility Line Replacement	\$ 518,420	\$ 518,420	\$ 368,000	\$ 299,000	\$ 437,000	\$ 540,500	\$ 632,500	\$ 460,000
Drum Thickener Replacement	\$ 275,000	\$ -						
Electrical Assessment	\$ 32,500	\$ 32,500	\$ 100,000	\$ 100,000				
Portable Lift Station Pump	\$ 44,760	\$ 45,560						
Influent Pump Addition	\$ 71,930	\$ 71,930						
Aeration Basin and Reuse mixers	\$ 141,710	\$ 441,710						
Vac Dump Station	\$ 234,970	\$ 234,970						
Solids Handling Upgrades			\$ 220,000	\$ 1,430,000				
WWTP Painting			\$ 60,000					
Replacement Projects								
Vehicle & Equipment Replacement	\$ 57,000	\$ 57,000				\$ 50,000		
Trailers	\$ 4,600	\$ 5,700						
Reuse System Equipment Replacement	\$ 98,000	\$ 98,000						
Asphalt	\$ 20,000	\$ 20,000						
TSS Probes & 2nd Treatment Probes	\$ 45,000	\$ 45,000	\$ 105,000					
Lift Station Painting	\$ 75,000	\$ 75,000						
Utility Master Plan				\$ 125,000				
TOTALS	\$ 1,618,890	\$ 1,645,790	\$ 853,000	\$ 1,954,000	\$ 437,000	\$ 590,500	\$ 632,500	\$ 460,000

2021-2026 Utility CIP Request - WATER

Project Name	2020	2020 - Revised	2021	2022	2023	2024	2025	2026
Essential or Regulatory Projects								
Water Line Replacement	\$ 1,529,440	\$ 1,529,440	\$ 460,000	\$ 391,000	\$ 540,500	\$ 724,500	\$ 494,500	\$ 241,500
Water Tank interior Structure Maintenance	\$ 81,890	\$ 389,490		\$ 30,000				\$ 30,000
Electrical Assessment	\$ 32,500	\$ 32,500	\$ 100,000	\$ 100,000				
Marshall Lake Sediment Control	\$ 110,000	\$ 110,000	\$ 600,000					
Water Plants Disinfection Evaluation	\$ 273,710	\$ 565,300						
NCWCD-Windy Gap Firming Project	\$ 2,500,000	\$ 2,500,000	\$ 926,000	\$ 926,000	\$ 926,000	\$ 926,000	\$ 926,000	\$ 926,000
WTP Tank Cleaning and Evaluation	\$ 50,000	\$ 50,000						
NCWCD-SWSP Eastern Pump Station	\$ 150,000	\$ 152,560						
SWSP Transmission Capacity	\$ 1,514,360	\$ 2,714,360						
HBWTP Recycle Tank Cleaning and Repair			\$ 195,000					
Water Rights Acquisition			\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 500,000	\$ 500,000
Process Pipe Evaluation and Repairs				\$ 80,000	\$ 50,000	\$ 50,000	\$ 50,000	
Replacement Projects								
Machinery & Equip	\$ 4,600	\$ 4,600						
Meter replacement	\$ 44,280	\$ 44,280					\$ 1,040,000	\$ 1,040,000
PRV Replacement	\$ 75,000	\$ 115,000						
Fluoride Equipment Replacement	\$ 92,950	\$ 326,950						
Cent/McCaslin Hi Zone Water Lp	\$ 22,230	\$ 22,230						
SBR Ditch Lining	\$ 258,510	\$ 258,510	\$ 97,750	\$ 218,500	\$ 143,750			
Louisville Pipeline Flow Control	\$ 130,010	\$ 130,010						
Facilities Painting	\$ 225,000	\$ 225,000						
Raw Water Quality Study	\$ 75,000	\$ 175,000						
Pump Replacement/Rehab			\$ 84,000	\$ 276,000	\$ 17,000			
Raw Water Valve			\$ 35,000					
Backhoe Replacement (50%)			\$ 78,750					
Asphalt Patch Truck (30%)			\$ 80,400					
Water Break Repair Vehicle Replacement			\$ 89,250					
Chemical Mixing Tanks				\$ 32,500				
Utility Master Plan				\$ 125,000				
Valve Exercise Trailer (70%)				\$ 54,390				
Filter Media Replacement					\$ 616,000			
Vehicle & Equipment Replacement					\$ 80,000	\$ 50,000		
HBWTP Drying Bed							\$ 221,000	
WTP Instrumentation Upgrades								\$ 260,000

Delayable Projects								
WTP Chemical Storage Tanks	\$ 405,000	\$ -						
Howard Diversion Completion/Upkeep	\$ 125,830	\$ 125,830						
Lower Recycle Pond SCWTP	\$ 29,000	\$ 705,000						
Harper Pump Station Rehab								\$ 95,000
SCWTP Building Upgrades	\$ 426,470	\$ 75,000						
Lateral Ditch Piping								\$ 3,120,000
TOTALS	\$ 8,155,780	\$ 10,251,060	\$ 2,996,150	\$ 2,483,390	\$ 2,623,250	\$ 2,000,500	\$ 3,231,500	\$ 6,212,500

OVERAGES		
Water Tank interior Structure		\$ 307,600
SWSP Transmission Capacity		\$ 1,200,000
PRV Replacement		\$ 40,000
Fluoride Equipment Replacement		\$ 234,000
Raw Water Quality Study		\$ 100,000
Lower Recycle Pond SCWTP		\$ 676,000
		\$ 2,557,600



**CITY of
LOUISVILLE**

749 MAIN STREET
LOUISVILLE, CO 80027
(303) 666-6565

**2020
Louisville Pipeline (Upper Section)**



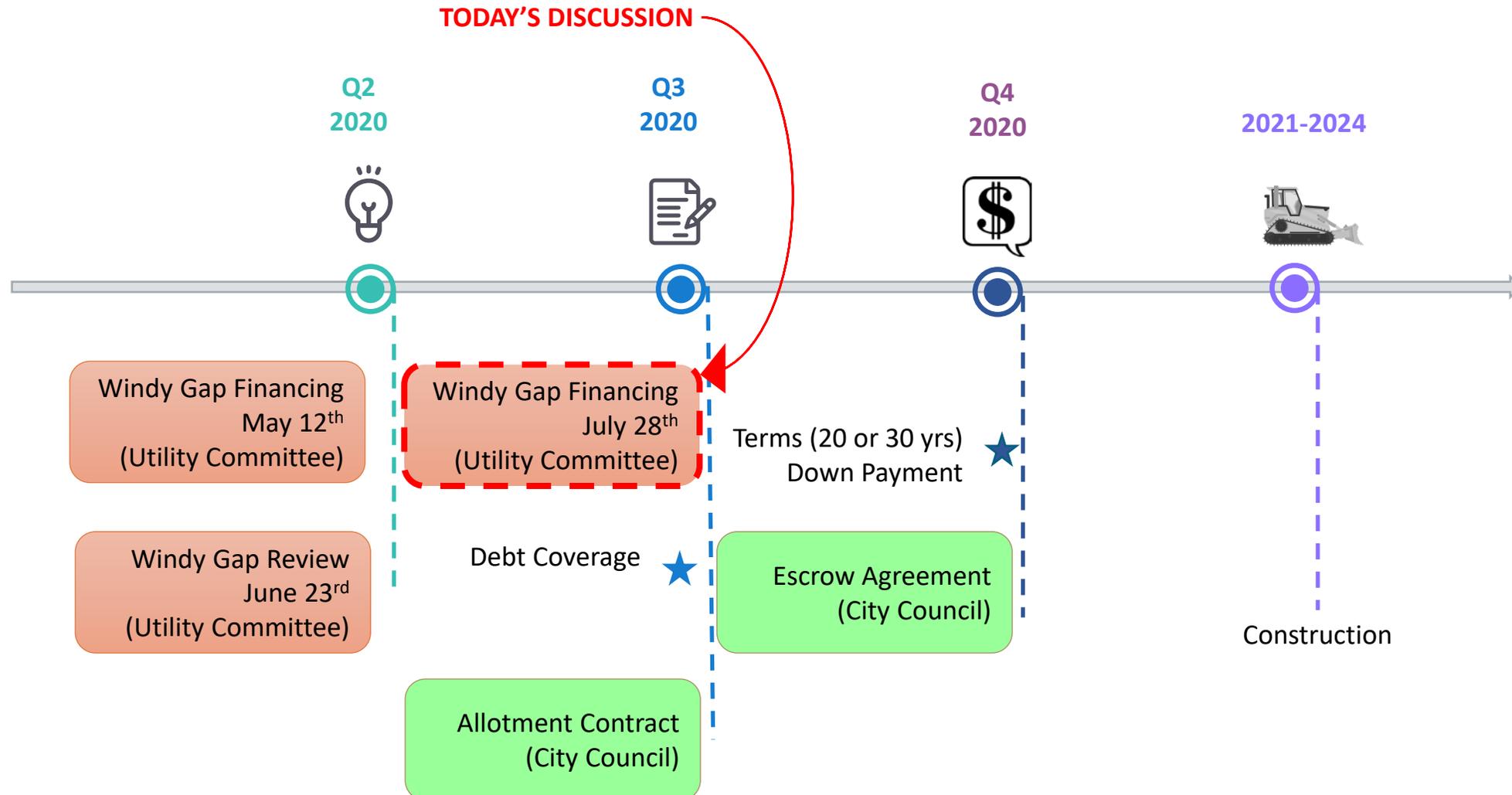
Windy Gap & Windy Gap Firming Project

Utility Committee - July 28, 2020

Overview

- ✓ Windy Gap History
- ✓ Windy Gap Firming Project (In process)
- ✓ 2017 Water Management Plan Review
- Windy Gap Firming Funding Scenarios (**updated**)
- Commitment to Group Financing:
 - Similar payments and interest to City Financing
 - No impacts to debt coverage requirements
 - Preserve ability for future financing/bonding

2020/2021 Tentative Windy Gap Firm Project Timeline



Windy Gap Firming Project Funding Summary Changes

	6/23/20	7/28/20
All Participants - Future Contributions	\$575M	\$586M
Louisville - Future Contributions (~3.15%)	\$18.1M	\$18.46M
All Participants – Estimated TOTAL	\$649M	\$660M
Louisville – Estimated TOTAL	\$20.4M	\$20.76M

Term	Previous Rate	Sr. Loan Rate	CWCB Loan Rate	Combined Rate*
30 YR	3.5%	2.96%	2.08%	2.82%
20 YR	n/a	2.28%	2.08%	2.25%

*Combined Rate will decrease slightly with increase in down payment amount

Windy Gap Firming Project Funding Summary

Scenarios	Type	Rate	Terms	Debt Coverage Impacts	Cash Payment	Amount Financed	Max Annual Payment	Total Payments	Interest Paid
Scenario #1	City	2.5%	20 yrs.	Yes	\$2.5M	\$15.8M	\$985k	\$19.6M	\$4M
Scenario #2	City	2.5%	20 yrs.	Yes	\$1M	\$17.3M	\$1.08M	\$21.5M	\$4.4M
Scenario #3	City	2.5%	20 yrs.	Yes	\$0	\$18.3M	\$1.14M	\$22.8M	\$4.7M
Scenario #4	City	3.1%	30 yrs.	Yes	\$2.5M	\$15.8M	\$784k	\$23.4M	\$7.8M
Scenario #5	City	3.1%	30 yrs.	Yes	\$1M	\$17.3M	\$858k	\$25.7M	\$8.6M
Scenario #6	City	3.1%	30 yrs.	Yes	\$0	\$18.3M	\$908k	\$27.1M	\$9M
Scenario #7	Group	3.5% & 2.08%	30 yrs.	No	\$2.5M	\$15.7M	\$827k	\$24.8M	\$9.1M
Scenario #8	Group	3.5% & 2.08%	30 yrs.	No	\$0	\$18.2M	\$963k	\$28.9M	\$10.7M
Scenario #9	Group	2.25%	20 yrs.	No	\$2.5M	\$15.96M	\$1.07M	\$20.8M	\$4.84M
Scenario #10	Group	2.25%	20 yrs.	No	\$0	\$18.46M	\$1.24M	\$23.9M	\$5.44M
Scenario #11	Group	2.82%	30 yrs.	No	\$2.5M	\$15.96M	\$836k	\$24.3M	\$8.34M
Scenario #12	Group	2.82%	30 yrs.	No	\$0	\$18.46M	\$997k	\$28.1M	\$9.64M

PRELIMINARY UTILITY RATE INCREASE 2021

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020 Rates (Approved 03/03 Council Meeting and Frozen at 04/07 Council Meeting)											
WATER	0%	1.5%	1.8%	1.8%	1.8%	1.8%	1.9%	1.9%	2.0%	2.0%	2.0%
May 12th Utility Committee (COVID Options A-C)											
WATER		3% to 5%	3% to 5%	3.5% to 5%	3% to 5%	1.8% to 3%	1.9%	1.9%	2.0%	2.0%	2.0%
Change from 2020		1.5% to 3.5%	1.2% to 3.2%	1.7% to 3.2%	1.2% to 3.2%	0% to 1.2%	-	-	-	-	-
PROPOSED 2021 RATES											
WATER		4.0%	5.0%	5.0%	5.0%	4.0%	4.0%	1.9%	2.0%	2.0%	2.0%
Change from 2020		2.5%	3.2%	3.2%	3.2%	2.2%	2.1%	-	-	-	-
ASSUMPTIONS:											
<ul style="list-style-type: none"> • Estimated proposed 2020-2022 reduced operating budgets • Full funding for 2021-2026 CIP Requests • Tap Fee from 2020 Revenue Projection • Includes Overage Capital Projects (6 projects at \$2.6M) • Includes \$2.5M Windy Gap down payment • Includes Louisville Pipeline (\$1.1M) 											

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020 Rates (Approved 03/03 Council Meeting and Frozen at 04/07 Council Meeting)											
SEWER	0%	4.5%	4.5%	4.5%	4.0%	4.0%	4.5%	4.5%	4.0%	4.0%	4.0%
May 12th Utility Committee (COVID Options A-C)											
SEWER		4.5%	4.5%	4.5%	4.5% to 5%	4.5% to 5%	5.0%	4.5% to 5%	4% to 4.5%	4.0%	4.0%
Change from 2020		-	-	-	0.5% to 1%	0.5% to 1%	0.5%	0% to 0.5%	0% to 0.5%	-	-
PROPOSED 2021 RATES											
SEWER		4.5%	4.5%	4.5%	5.0%	5.0%	5.5%	4.5%	4.0%	4.0%	4.0%
Change from 2020		-	-	-	1.0%	1.0%	1.0%	-	-	-	-
ASSUMPTIONS:											
<ul style="list-style-type: none"> • Estimated proposed 2020-2022 reduced operating budgets • Full funding for 2021-2026 CIP Requests • Tap Fee from 2020 Revenue Projection • Incorporating Drum Thickner Replacement with Solids Handling Project • Includes Potential Overage in Mixer Capital Project (\$300,000) 											

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020 Rates (Approved 03/03 Council Meeting and Frozen at 04/07 Council Meeting)											
STORM	0%	14.0%	5.0%	4.5%	4.0%	4.0%	4.0%	0.8%	0.8%	0.8%	0.8%
May 12th Utility Committee (COVID Options A-C)											
STORM		14.0%	5.0%	4.5%	4.0%	8.5%	8.5%	3.0%	0.8%	0.8%	0.8%
Change from 2020		-	-	-	-	4.5%	4.5%	2.2%	-	-	-
PROPOSED 2021 RATES											
STORM		14.0%	5.0%	4.5%	4.0%	8.5%	8.5%	3.0%	0.8%	0.8%	0.8%
Change from 2020		-	-	-	-	4.5%	4.5%	2.2%	-	-	-
ASSUMPTIONS:											
<ul style="list-style-type: none"> • Estimated proposed 2020-2022 reduced operating budgets • Full funding for 2021-2026 CIP Requests 											

City of Louisville Colorado Utility Committee Work Plan – July 28th

Topics will be discussed in the quarter which they are listed. Items that are not complete will roll to the next quarter.

Goals:

Support staff during the pandemic

Operations and essential maintenance and upgrades to continue sustainability and efficiency of the Utility

Every Meeting:

- Capital Projects Progress
- Enterprise Dashboards: inclusive of KPI progress, water supply update, water use by customer class, revenue and expense by enterprise (and by customer class where appropriate), energy use by enterprise
- Tap Fee Review - CBT market value update

January 2020 Meeting

- ✓ Utility Rate Structure
- ✓ 2020 Tap Fees
- ✓ Finalize 2020 Rates

May Meeting

- ✓ COVID-19 Impacts
- ✓ Initial 6-Year CIP Plan
- ✓ Committee Confirmed - Water Rights Actions can proceed directly to Council

June Meeting

- ✓ COVID-19 Impacts
- ✓ Windy Gap Financing

July Meeting

- CIP Update
- Windy Gap Financing
- Draft 2021 Rates

October/November Meeting

- Final 2021 Rates

Parking Lot / Hold

- Rate Design & related Financial Policies
- Raw Water Study
-

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Asphalt Patch Truck</u>		Submitted By: <u>Public Works</u>		Version: <u>4/1/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	30%		
<u>Transportation</u>	<u>Transportation Infrastructure Maint</u>	<u>Capital Projects Fund</u>	70%		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	253,000	-	-	-	-	-	253,000
Contingency	15,000	-	-	-	-	-	15,000
Total Costs (Gross)	268,000	-	-	-	-	-	268,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:
<p>Equipment/Project Description: This CIP provides for the purchase of an asphalt patch truck to repair city streets and alleyways.</p>
<p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time.</p>
<p>Reference to Plan being implemented (i.e., Master Plan):</p>

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The purchase of a new asphalt patch truck will provide the Operations Division with four times the capacity of the existing hot box requiring fewer trips to the asphalt plants, and the ability to repair larger asphalt patches and mill/patch more square feet of roadway at a time. The Operations division Purchases on average 415 tons of asphalt costing approximately \$18,300.00 a year. We also spend roughly 1800 man hours repairing city streets. The new patch truck will allow Operations to use two employees to fill pot holes instead of three to four employees with two trucks and the asphalt trailer. This equipment will save hundreds of man hours over its lifetime and give the Operations Division the ability to potentially repair twice as much roadway.

Department Priority Ranking: Highest

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>SBR Ditch Lining</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	85,000	190,000	125,000	-	-	-	400,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	12,750	28,500	18,750	-	-	-	60,000
Total Costs (Gross)	97,750	218,500	143,750	-	-	-	460,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:
Equipment/Project Description: This project includes installation of a culvert lining system to reinforce four ditch crossings on South Boulder Road. Culvert 1 (Cottonwood Park) Goodhue Ditch - 2021 Culvert 2 (East of Main Street) Goodhue Ditch - 2022 Culvert 3 Louisville Lateral - 2023
Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time that may be used to support the project.
Reference to Plan being implemented (i.e., Master Plan): None

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Project will help protect South Boulder Road from potential pipe collapse providing a safe, well maintained transportation system. The project will extend the life of the existing culverts and prevent having to open trench cut a busy arterial road. Project need was identified through City and Ditch Company assessment. Need is due to rusted metal culverts that are at the end of their service life.

Department Priority Ranking: **Medium**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Harper Lake Pump Station</u>		Submitted By: <u>Public Works</u>		Version: <u>5/27/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	95,000	95,000
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	-	-	-	-	-	95,000	95,000
Grants or Other							
Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:

This project will fund the multi-year project of the inspection, evaluation and repair of the Harper Lake Pump Station. The evaluation will start in 2021, with the major construction activities scheduled for 2022.

Project revenue or grants that will support the project and the impacts to the operating budget:

No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The Harper Lake Pump Station was constructed 34 years ago and transfers water from Harper Lake to Louisville Reservoir for treatment. This Project will evaluate and repair equipment as needed. This work will include the removal of all three vertical turbine pumps and motors, as well as inspection of the wet well and all piping in the station. Additionally, the building and structure will be evaluated. Lastly, electrical, security, controls and communication system will be reviewed for upgrade. This pump station is critical to supplying raw water for treatment during summer high demands. The failure of the equipment in the station could potentially result in an inadequate supply of water to the city and possible water restrictions.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>HBWTP Recycle Tank Maintenance</u>		Submitted By: <u>Public Works</u>	Version: <u>3/3/2020</u>
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Water</u>	Funding Source(s): <u>Water Utility Fund</u>	Percent <u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	150,000	-	-	-	-	-	150,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	45,000	-	-	-	-	-	45,000
Total Costs (Gross)	195,000	-	-	-	-	-	195,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This CIP funds the cleaning and inspection of the Backwash Recycle Tank at the Howard Berry Treatment Plant. In addition, funds will be allocated for minor repairs and painting.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The Backwash Recycle Tank at the Howard Berry Water Treatment Plant is utilized to contain process water removed during filter cleaning cycles and stabilize it for recycle or sanitary sewer discharge. Over time the tank collects sediment which has to be periodically removed. Additionally, operational and structural components can deteriorate due to corrosion and from normal operation. The backwash tank was constructed in 1992 and requires regular maintenance, cleaning and inspection to ensure proper operation. Failure of the tank structure or equipment would prevent the backwash operations and would ultimately render the entire plant inoperable.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Marshall Lake Sediment Control</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	600,000	-	-	-	-	-	600,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	600,000	-	-	-	-	-	600,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:

This project allows for the evaluation and design of a solution(s) for the sediment loading that is experienced from Marshall Lake. Possible solutions that will be evaluated are: sediment basins, dredging and/or modifications to the outlet works. This improves the ability to treat water as it makes the raw water properties more consistent.

Project revenue or grants that will support the project and the impacts to the operating budget:

No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Project assesses the best collection techniques, location and position of improvements to enhance and treat raw water from Marshall Lake. A recent diver inspection of the Marshall Lake Outlet revealed that current sediment levels have reached the same level of the Outlet Structure. Sediment levels in this area are estimated at approximately 5 feet above the reservoir bottom. This project will address the immediate need of dredging this material and development of possible long term maintenance solutions to prevent future build up. The reduction in sediment loading in the raw water will improve the entire treatment process by requiring less chemical consumption, fewer backwashes of the filters and lowering the amount of solids sent to the drying beds and discharged to the WWTP. All of these items result in better efficiency and cost savings. Additionally, long term water supply strategies contemplate delivering this water to Harper and Louisville Reservoirs. This project will look to prevent transporting this problem to these downstream reservoirs.

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Pump Replacement and Rehabilitation</u>		Submitted By: <u>Public Works</u>	Version: <u>2/11/2020</u>
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Water</u>	Funding Source(s): <u>Water Utility Fund</u>	Percent <u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	84,000	276,000	17,000	-	-	-	377,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	84,000	276,000	17,000	-	-	-	377,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This project is for the replacement or rehabilitation of various pumps: 2021-SCWTP Lower Pond Pump 2022-HBWTP High Zone Pumps 2023-HBWTP Recycle Pump</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project is a critical component of the City's treatment process and will ensure a reliable water supply. This CIP provides the funds to rebuild or replace the identified pumps. Each pump will be evaluated by a 3rd party vendor to determine the feasibility of rebuilding vs replacement. These pumps are up to 25 years old and carry a significant lead-time if failure occurred. Additionally, in the event of failure staff would not be able to pump water from the recycling tank to the reservoir which would cause flooding onsite and potential fines from the state. Failure of high zone pumps would prevent staff from sending water to the 2MG tank which stores 1/3 of City's drinking water. Lastly, failure of the recycle pump would result in the inability to pump water out of the recycle tank and a 3rd party vendor would be needed to haul away the contents. The high zone pumps are the only system with redundancy as there are three pumps and we need two to keep up with peak demands.

Department Priority Ranking: **High**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>SCWTP Raw Water Valve Replacement</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	35,000	-	-	-	-	-	35,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	35,000	-	-	-	-	-	35,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:

The main valve controlling flow into the Sid Copeland Water Treatment Plant has reached end of life, is difficult to operate and is challenging to shut down completely. It is critical to plant operations and compliance to have this valve fully operational at all times. This project will replace the valve and actuator with a new unit.

Project revenue or grants that will support the project and the impacts to the operating budget:

No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The valve controlling the raw water influent flow into the plant is over 30 years old and has reached the end of life. The valve does not seat completely and allows water to flow through even when closed; replacement of the valve is required before the problem worsens. A new valve and actuator will alleviate issues with plant performance during temporary shut down and help reduce plant start up time. A new valve and actuator will also better accommodate low flow demand during periods of low water usage.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Water Rights Acquisition</u>		Submitted By: <u>Public Works</u>		Version: <u>5/27/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	250,000	250,000	250,000	250,000	500,000	500,000	2,000,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	250,000	250,000	250,000	250,000	500,000	500,000	2,000,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This project is for the acquisition of water rights to meet City water usage demands with emphasis on future growth.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan): 2012 Water System Facilities Plan and 2016 Water Management Plan</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Under long term buildout conditions the City may be unable to provide adequate water supplies. As outlined in the 2016 Water Management Plan, buildout demand was set at 6,700 acre-feet. Firm yield for supply are projected at 6,500 acre-feet corresponding to a shortfall of 200 acre-feet. The Plan provided for 11 recommendations: including the acquisition of 200 acre-feet of additional water supplies.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Windy Gap Firming Project</u>		Submitted By: <u>Public Works</u>	Version: <u>3/3/2020</u>
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Water</u>	Funding Source(s): <u>Water Utility Fund</u>	Percent <u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	842,000	842,000	842,000	842,000	842,000	842,000	5,052,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	84,000	84,000	84,000	84,000	84,000	84,000	504,000
Total Costs (Gross)	926,000	926,000	926,000	926,000	926,000	926,000	5,556,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:
The Northern Colorado Water Conservancy will be constructing the Chimney Hollow Reservoir for storing Windy Gap water. The City's participation is projected to provide 2,700 acre-feet of water storage. Construction is scheduled to begin in 2020.

Project revenue or grants that will support the project and the impacts to the operating budget:
No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):
2012 Water System Facilities Plan and 2016 Water Management Plan

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The project is a critical component of the City's overall Water Supply portfolio and ensures a reliable water supply. Failure to complete the project would result a firm yield reduction of 600 acre-feet and the inability to meet long term projected use. Alternative to this project are severally limited and have a high degree of uncertainty and risk.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Electrical Assessment Projects</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>50%</u>		
	<u>Wastewater</u>	<u>Wastewater Utility Fund</u>	<u>50%</u>		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	200,000	200,000	-	-	-	-	400,000
Total Costs (Gross)	200,000	200,000	-	-	-	-	400,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: An electrical assessment of the all three plants is planned for 2020 and is in the proposal scoping and development stages. This CIP is a placeholder for projects resulting from the assessment.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. No operational and maintenance impacts are expected.</p> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project provides the funds for future projects developed as part of the electrical assessment for all three treatment plants.

Department Priority Ranking: **Medium**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Backhoe Replacement</u>		Submitted By: <u>Public Works</u>		Version: <u>4/4/2020</u>
Program(s):	Sub-Program(s):	Funding Source(s):	Percent	
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>50%</u>	
<u>Transportation</u>	<u>Transportation Infrastructure Maint</u>	<u>Fleet Management Fund</u>	<u>30%</u>	
<u>Utilities</u>	<u>Storm Water</u>	<u>Storm Water Utility Fund</u>	<u>20%</u>	
			100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	150,000	-	-	-	-	-	150,000
Contingency	7,500	-	-	-	-	-	7,500
Total Costs (Gross)	157,500	-	-	-	-	-	157,500
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	Description & Proposed Funding:
	Equipment/Project Description: This CIP provides for the purchase of a replacement backhoe.
	Project revenue or grants that will support the project and the impacts to the operating budget: The purchase will be offset by \$9,500 for trade-in value.
	Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The existing back hoe unit #3411 is a 1996 John Deere 410D that meets the age criteria for replacement. This back hoe is equipped with a manual transmission that is difficult to use taking more time to get from one job site to another. This equipment is used for water main repairs, asphalt patching, snow and ice events, loading salt and spoils, the cleaning of Stormwater inlets, and is used by other departments. The replacement back hoe will be equipped with a hydraulic thumb, tamping plate, and jack hammer attachment. Having these attachments will save hundreds of man hours over the course of the equipments life time.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Water Break Repair Vehicle Replacement</u>		Submitted By: <u>Public Works</u>	Version: <u>4/4/2020</u>
Program(s):	Sub-Program(s):	Funding Source(s):	Percent
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	85,000	-	-	-	-	-	85,000
Contingency	4,250	-	-	-	-	-	4,250
Total Costs (Gross)	89,250	-	-	-	-	-	89,250
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	Description & Proposed Funding:
	Equipment/Project Description: This CIP is for the purchase of a replacement emergency waterline repair vehicle.
	Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time.
	Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The current 2004 Ford F450 water repair vehicle # 3405 has met the age criteria of 12 years, also the internal hydraulic pump is nearing the end of its useful life. The emergency repair vehicle is used for water main repairs, valve exercising/repair, fire hydrant repair/maintenance, water turn-on/shut-off and multiple other uses. The replacement vehicle will be a van equipped with internal shelving containing parts and tools for efficient maintenance and repair of the water distribution system. This vehicle will also have a hydraulic unit on board that will be able to run more than one piece of equipment.

Department Priority Ranking: **Highest**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

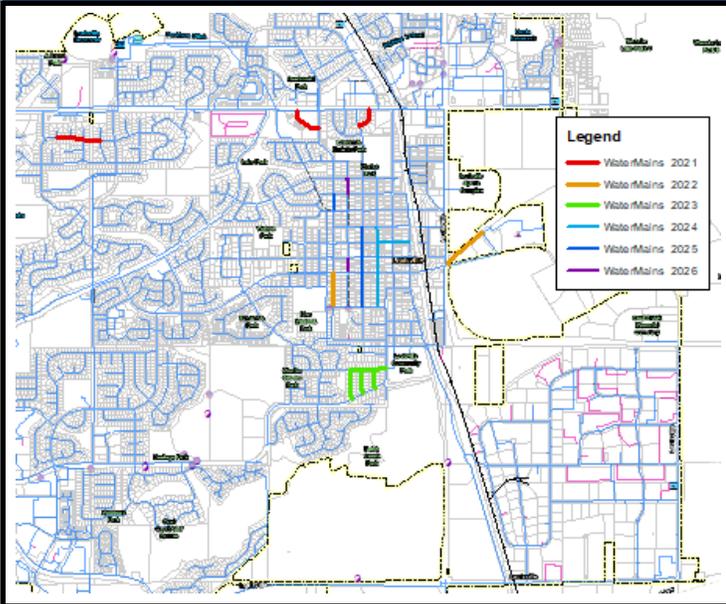
Project Name: Water Pipeline Replacement Program Submitted By: Public Works Version: 4/14/2020

Program(s):	Sub-Program(s):	Funding Source(s):	Percent
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	400,000	340,000	470,000	630,000	430,000	210,000	2,480,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	60,000	51,000	70,500	94,500	64,500	31,500	372,000
Total Costs (Gross)	460,000	391,000	540,500	724,500	494,500	241,500	2,852,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:
 This project replaces older, deficiently sized, deteriorating, water mains. As utility lines age it is more cost effective to replace segments rather than trying to do spot repairs. It is also cost efficient to replace deficient wet utilities when reconstructing or resurfacing streets. The program is focused mainly on Cast Iron and AC Pipe sized 4" and 6". Work is also included with Operations water break data.

Project revenue or grants that will support the project and the impacts to the operating budget:
 No grants have been identified at this time that may be used to support the project.

Reference to Plan being implemented (i.e., Master Plan):
 None

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project will continue to replace old and troubled pipelines. This is an ongoing program. This program is driven by the need to maintain the water distribution system.

Department Priority Ranking: **Medium**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Chemical Mixing Equipment Replacement</u>		Submitted By: <u>Public Works</u>	Version: <u>3/3/2020</u>
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Water</u>	Funding Source(s): <u>Water Utility Fund</u>	Percent <u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	5,000	-	-	-	-	5,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	20,000	-	-	-	-	20,000
Contingency	-	7,500	-	-	-	-	7,500
Total Costs (Gross)	-	32,500	-	-	-	-	32,500
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:
This CIP provides the funds to replace the chemical mixing tanks and equipment at both Water Treatment Plants. Both tanks have exceeded the service life and are showing signs of deterioration.

Project revenue or grants that will support the project and the impacts to the operating budget:
No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Both Treatment Plants utilize small chemical mixing tanks to dose treatment chemicals used to adjust PH and prevent the corrosion of pipes in the distribution system. These tanks were originally installed in 2005 and had a life expectancy of 15-20 years. While they are currently operational, the chemical mixing tanks have outlived their life expectancy and are showing signs of deterioration. Due to the hazardous nature of these chemicals the tanks and mixers start to corrode and wear down over time. Replacing this equipment ensures an adequate feed at the desired dosage and reduces variability in feeding. Replacements of failed components are either fabricated at a significant expenses with a long lead time or sourced by third party vendors. In the event of failure time is critical as this machine provides chemicals necessary to ensure safe, reliable and great tasting water.

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Louisville Lateral Ditch Piping</u>		Submitted By: <u>Public Works</u>		Version: <u>5/27/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	240,000	240,000
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	2,400,000	2,400,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	480,000	480,000
Total Costs (Gross)	-	-	-	-	-	3,120,000	3,120,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This project includes piping the open sections of the Louisville Lateral and the possible replacement of existing piped section to provide for a continuous pipeline from Howard Berry Water Treatment Plant (HBWTP) to the Sid Copeland Water Treatment Plant (SCWTP).</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan): 2016 Water Management Plan</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Piping of the lateral will allow for a secure and readily available means of increasing resiliency of the City's water supply. Project will also accommodate a future project of delivering NCWCD water to HBWTP. Lastly, piping will reduce water loss through seepage and evaporation, reduce maintenance time and protect water quality. The first two main points make up a concept defined as Load-Shifting which is detailed in the 2016 Water Management Plan (WMP). The SCWTP can take South Boulder supplies delivered with either the Louisville Pipeline or the Louisville Lateral. The Pipeline as a typical capacity of 5 cfs or 3.2 MGD, which is 40% of the rated capacity of the SCWTP. This project will ensure the remaining 60% of the SCWTP can be satisfied by deliveries from the Lateral. The 2016 WMP projects the use of Load-Shifting to increase total firm water supplies by 100 acre-feet.

Department Priority Ranking: High Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Process Pipe Evaluation</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	80,000	-	-	-	-	80,000
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	50,000	50,000	50,000	-	150,000
Total Costs (Gross)	-	80,000	50,000	50,000	50,000	-	230,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:
This CIP will fund the inspection and evaluation of existing internal process pipe infrastructure with non-destruction testing (ultrasonic, radiography, or magnetic particle). Contingency amounts were added as placeholders for potential repairs identified during the evaluation.

Project revenue or grants that will support the project and the impacts to the operating budget:
No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Much of the piping inside both of the Water Treatment Plants is 30+ years old. This project will evaluate the integrity and condition of exposed piping and determine if replacement is needed before it fails. Pipe failure could result in the plant becoming inoperable and force plant shutdown, ceasing water production until repaired. Proper inspection and repair can greatly mitigate this risk. Proper maintenance can reduce long term asset expenses and improve water quality.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Tank Maintenance</u>		Submitted By: <u>Public Works</u>	Version: <u>3/27/2020</u>
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Water</u>	Funding Source(s): <u>Water Utility Fund</u>	Percent <u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	30,000	-	-	-	30,000	60,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	-	30,000	-	-	-	30,000	60,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This project ensures the City meets the CDPHE regulatory requirements of cleaning and inspecting of the City's potable storage tanks every 5 years.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The City has five defined potable water storage tanks: three finished water storage tanks with a capacity of 8.5 million gallons and two clear well storage tanks located at each treatment facility. Under State Regulation 11.28, water systems are required to perform a comprehensive inspection and cleaning of its potable water storage tanks every five years. In order to provide water to residents without interruption, the City has previously used dive contractors to perform this work. This Project would complete the comprehensive inspections and cleaning on all 5 potable water storage tanks in compliance with Regulation 11.28.

Department Priority Ranking: **High**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Utility Master Plan</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>50%</u>		
<u>Utilities</u>	<u>Wastewater</u>	<u>Wastewater Utility Fund</u>	<u>50%</u>		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	250,000	-	-	-	-	250,000
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	-	250,000	-	-	-	-	250,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

<p>(Map or Photo)</p>	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: In 2012 and 2015 the City initiated a Water and Wastewater System Facilities Plan respectively. This project will updated these plans simultaneously to provide a roadmap for planning upgrades/improvements, maintenance projects and expansions for the utility system.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Successful management and growth of a water and wastewater utility system is dependent on thoughtful and careful planning. Identifying critical infrastructure needs and developing adequate budgeting for improvements in a cost effective manner is vital for a utility. A water and wastewater system facilities plan provides a roadmap towards planning upgrades and expansions. Existing City infrastructure will be in need of maintenance and upgrades to accommodate increased demand due to population and industrial growth in the City. The system facilities plan will also highlight project that will be needed in response to future and more rigorous regulations and/or new standards.

Department Priority Ranking: High

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Valve exercise trailer</u>		Submitted By: <u>Public Works</u>		Version: <u>3/10/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>		70%	
<u>Utilities</u>	<u>Storm Water</u>	<u>Storm Water Utility Fund</u>		30%	
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	74,000	-	-	-	-	74,000
Contingency	-	3,700	-	-	-	-	3,700
Total Costs (Gross)	-	77,700	-	-	-	-	77,700
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This CIP provides for the purchase of a Valve Exercising Trailer.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time.</p> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The purchase of a Valve Exercising Trailer provides staff with a multi-functional piece of equipment to perform yearly valve exercising. The trailer is equipped to exercise valves, has a vacuum, pressure washer, and hydraulic hook-ups for attachments such as a jackhammer or water pump to assist in with a water main failures. The Operations division exercises on average around 1300 valves per years to make sure all of these valves are working correctly. A valve exercising trailer will be able to assist in fixing hard to operate valves, broken valve boxes, and vacuuming out valve boxes. Presently when vacuuming out valve boxes this requires our large vac truck and a blocker truck taking a large area in the street to clean out a valve box having a valve exercising trailer would only require two technicians with a truck pulling the exercising trailer. The valve exercising trailer will also assist with cleaning storm water inlets.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Filter Media Replacement</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	70,000	-	-	-	70,000
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	440,000	-	-	-	440,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	106,000	-	-	-	106,000
Total Costs (Gross)	-	-	616,000	-	-	-	616,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This project will facilitate the replacement of the filter media at the Sid Copeland Water Treatment Plant. The removal of the media will allow for maintenance and inspection activities to be performed on the filter basins. Planned auxiliary work includes: painting, underdrain inspection and resealing of wall penetrations. Replacement of the underdrain is not anticipated.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan): 2012 Water System Facilities Plan</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project is a critical component of the City's water treatment process and will ensure a reliable water supply. The existing media was last replaced in 2009, with this project scheduling replacement in 14 years. Industry standard suggest replacement of filter media every 10 to 20 years. At this point, two-thirds through the projected replacement schedule, the media is performing as required and is not showing accelerated signs of degradation. Media material testing will be conducted prior to replacement to confirm failure of performance. If testing suggests material is adequate, the project will be delayed an appropriate period as determined at the time of testing.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Meter Replacement</u>		Submitted By: <u>Public Works</u>		Version: <u>5/27/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	800,000	800,000	1,600,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	240,000	240,000	480,000
Total Costs (Gross)	-	-	-	-	1,040,000	1,040,000	2,080,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:

Water Meters have a life expectancy of 10 to 15 years. As meters age they become less efficient and read less flow resulting in loss revenues. With extended age, meters can also develop problems with leaking. This project is a 3-year process to replace all meters city-wide. Staff had nearly 1,000 hours related to meter activities in 2019.

Project revenue or grants that will support the project and the impacts to the operating budget:

No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project is a critical component of the City's water system and ensures accurate usage and appropriate cost recovery. In addition, improvements in meter technology includes: remote notification of leaks, tampering and out-of-threshold operating conditions. This information can also be made available to customers for real-time monitoring of their own system. Increases in meter intelligence have shown to alert users quicker for faster troubleshooting and repair. Shortening response times can lessen damaged and loss of water from leaks or breaks. Aging meters cause a great occurrence of leaks and faults that will trigger a corresponding response from the Utility. An increase in response requires more staff time to investigate and resolve these inconsistencies. In total, aging meters will increase demands on staff and reduce system cost recovery by accounting for less water than what is actually used.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>WTP Vehicle & Equipment Replacement</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	80,000	50,000	-	-	130,000
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	-	-	80,000	50,000	-	-	130,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This CIP provides for the purchase of replacement vehicles. 2023-WTP Truck #3508 (2011 w/ 35k miles) 2024-WTP Truck #3510 (2012 w/ 57k miles)</p> <hr/> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <hr/> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Criteria for trucks replacement is either 12 years old or at 120,000. Staff will evaluate condition of vehicles prior to replacement to ensure maximum life is obtained from current vehicles. This CIP provides the funds to replace vehicles if needed after the vehicles have reached twelve years of use.

Department Priority Ranking: **Medium**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>HBWTP Drying Beds Maintenance</u>		Submitted By: <u>Public Works</u>	Version: <u>3/3/2020</u>
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Water</u>	Funding Source(s): <u>Water Utility Fund</u>	Percent <u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	170,000	-	170,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	51,000	-	51,000
Total Costs (Gross)	-	-	-	-	221,000	-	221,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:

This project will replace the drying bed media and perform maintenance on the filter underdrains.

Project revenue or grants that will support the project and the impacts to the operating budget:

No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

In 2015 drying beds were built at the Howard Berry Treatment Plant to dry sludge wasted from the treatment process. Every year this dried sludge is removed and taken to a landfill for disposal. When this removal occurs a small amount of the sand filter media in the drying beds gets removed as well. This project is part of regular maintenance and will replace the missing media and perform any needed maintenance on the filter underdrains or associated structures. Failure to replenish this media could cause the beds to dry sludge inefficiently and raise the cost of annual sludge hauling. Additionally, containments removed by the beds could pass through the process and impact the Wastewater Treatment Plant if the media and underdrains are not working properly.

Department Priority Ranking: **High**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Instrumentation Replacement</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Water</u>	<u>Water Utility Fund</u>	<u>100%</u>		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	200,000	200,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	60,000	60,000
Total Costs (Gross)	-	-	-	-	-	260,000	260,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:

This Project will replace Water Plant instrumentation that was installed in 2017. These devices have a design life of 8-10 years.

Project revenue or grants that will support the project and the impacts to the operating budget:

No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

In 2017, the Water Treatment Plants installed all new instrumentation designed to monitor processes and equipment throughout both Water Treatment Plants. This gives the Plant staff critical information needed to make operational changes when needed and protect public health. Due to product life cycles and advancing changes in technology, these instruments will be reaching end of life by 2027. This equipment is essential to run the plant efficiently and in compliance with CDPHE requirements. Completion of this project will ensure the divisions ability to maintaining the City's infrastructure and ensure safe, reliable and great tasting drinking water.

Department Priority Ranking: **High**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Secondary Process Probes</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Wastewater</u>	<u>Wastewater Utility Fund</u>	<u>100%</u>		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	10,000	-	-	-	-	-	10,000
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	7,500	-	-	-	-	-	7,500
Capital Equipment Purch	79,500	-	-	-	-	-	79,500
Contingency	8,000	-	-	-	-	-	8,000
Total Costs (Gross)	105,000	-	-	-	-	-	105,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

AN-ISE sc: Combination Sensor for Ammonium and Nitrate (with RFID* technology)



Two-in-one low maintenance sensor measures both ammonium and nitrate at the same time.

Description & Proposed Funding:

Equipment/Project Description:

This project would fund the addition of six new ammonia and nitrate sensors in the wastewater treatment secondary process. Three existing ammonia-only sensors will be repurposed for influent ammonia monitoring. This project includes equipment purchase, field power and communication wiring, and SCADA modifications.

Project revenue or grants that will support the project and the impacts to the operating budget:

No grants have been identified at this time. Annual maintenance is expected to increase by \$10,000 per year.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

The purpose of the secondary treatment process is to remove ammonia and nitrate. The existing probe installation relays only ammonia measurement at the end of the secondary treatment process to the SCADA system. With this improvement, the SCADA system will be able to 1) predict ammonia loading into the treatment process through upstream measurement, 2) increase or decrease dissolved oxygen based on the upstream readings, and 3) increase or decrease internal mixed liquor recycle pump speed for nitrate removal. This modification can potentially reduce energy costs through reliable, real-time process data.

Department Priority Ranking: **Medium**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: WWTP Solids Handling Upgrades Submitted By: Public Works Version: 3/27/2020

Program(s):	Sub-Program(s):	Funding Source(s):	Percent
<u>Utilities</u>	<u>Wastewater</u>	<u>Wastewater Utility Fund</u>	<u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	220,000	-	-	-	-	-	220,000
Other Prof Services	-	-	-	-	-	-	-
Construction	-	1,100,000	-	-	-	-	1,100,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	330,000	-	-	-	-	330,000
Total Costs (Gross)	220,000	1,430,000	-	-	-	-	1,650,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:
 Project goals focus on the evaluation, design, upgrade, equipment replacement and building modifications of the solids handling process for the Wastewater Treatment Plant. It is anticipated that the supporting electrical and control services will require improvements and updating. Lastly, miscellaneous building improvement items including: etching and re-epoxying the floors, minor equipment updates and lighting upgrades will be performed.

Project revenue or grants that will support the project and the impacts to the operating budget:
 No grants have been identified at this time. Annual maintenance is not expected to change.

Reference to Plan being implemented (i.e., Master Plan):

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

During the design of Wastewater Plant Upgrade project in 2013/2014, it was determined that the solids handling portion of the plant process had sufficient life expectancy (estimated at approximately 10 years) to be excluded from the 2015 Upgrade Project. This project request looks to combine two previously identified projects of the drum thickener replacement and dewatering improvements in to a single project that will allow for a comprehensive evaluation of the entire solids handling process. As part of the evaluation process, a detailed improvement plan will be developed and set for implementation in multiyear capital improvements starting in 2022 and concluding in 2023 or possible 2024. Major equipment purchase have substantial lead times and require carefully timing to minimize impacts to operations. Alternative removal would result in significant impacts in the hauling operations with an increase in costs, truck traffic and operations modifications.

Department Priority Ranking: High

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>WWTP Painting</u>		Submitted By: <u>Public Works</u>	Version: <u>3/27/2020</u>
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Wastewater</u>	Funding Source(s): <u>Wastewater Utility Fund</u>	Percent <u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	50,000	-	-	-	-	-	50,000
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	10,000	-	-	-	-	-	10,000
Total Costs (Gross)	60,000	-	-	-	-	-	60,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	Description & Proposed Funding:
	<p>Equipment/Project Description: This project would allow for the repair of several damaged paint areas on aeration basin piping, in influent channels, and building ceilings. Project will require the need for sandblasting and multi-layer recoating to protect these areas from the harsh WWTP environment.</p>
	<p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. No continued operation and maintenance costs are associated with this project.</p>
<p>Reference to Plan being implemented (i.e., Master Plan):</p>	

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Paint used in the WWTP basins is a multipart epoxy which protects piping and channels from the abrasive effects of wastewater. Continuous upkeep is required to ensure the underlying structure is maintained.

Department Priority Ranking: **High**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Sewer Replacement Program</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s):	Sub-Program(s):	Funding Source(s):	Percent		
<u>Utilities</u>	<u>Wastewater</u>	<u>Wastewater Utility Fund</u>	<u>100%</u>		
				100%	

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	320,000	260,000	380,000	470,000	550,000	400,000	2,380,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	48,000	39,000	57,000	70,500	82,500	60,000	357,000
Total Costs (Gross)	368,000	299,000	437,000	540,500	632,500	460,000	2,737,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: The City maintains over 90 miles of sanitary sewer mains. Staff estimates approximately 17 miles of sewer mains are in need of replacement or lining. This project replaces or lines deficiently sized, deteriorating, poorly constructed sanitary sewer mains. Work is also coordinated with the Street Program to prevent replacements in new streets. The program is focused mainly on VCP sized 6" and 8".</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time.</p> <p>Reference to Plan being implemented (i.e., Master Plan): None</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project will continue to replace old and troubled pipelines. This is an ongoing program. This program is driven by the need to maintain the wastewater collection system.

Department Priority Ranking: **Medium**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>WWTP Vehicle & Equipment Replacement</u>		Submitted By: <u>Public Works</u>		Version: <u>3/3/2020</u>	
Program(s): <u>Utilities</u>	Sub-Program(s): <u>Wastewater</u>	Funding Source(s): <u>Wastewater Utility Fund</u>	Percent <u>100%</u>		
			100%		

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	50,000	-	-	50,000
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	-	-	-	50,000	-	-	50,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This CIP provides for the purchase of replacement vehicles. 2024 - Truck 3612 (2012 w/ 4k miles)</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time. Annual maintenance is not expected to change.</p> <p>Reference to Plan being implemented (i.e., Master Plan):</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

Criteria for trucks replacement is either 12 years old or at 120,000. Staff will evaluate condition of vehicles prior to replacement to ensure maximum life is obtained from current vehicles. This CIP provides the funds to replace vehicles if needed after the vehicles have reached twelve years of use.

Department Priority Ranking: **Medium**

Request Number: **(Finance Use)**

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Storm Sewer Detention Pond Maintenance Program</u>		Submitted By: <u>Public Works</u>	Version: <u>4/3/2020</u>
Program(s):	Sub-Program(s):	Funding Source(s):	Percent
<u>Utilities</u>	<u>Stormwater</u>	<u>Storm Water Utility Fund</u>	<u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	119,000	158,000	124,000	150,000	170,000	174,000	895,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	119,000	158,000	124,000	150,000	170,000	174,000	895,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification

<p style="text-align: center;">STORM SEWER MAINTENANCE 6 YEAR PLAN</p> <p style="font-size: small;">Street_Centerlines</p> <ul style="list-style-type: none"> ● 2019 ● 2020 ● 2021 ● 2022 ● 2023 ● 2024 	<p style="text-align: center;">Description & Proposed Funding:</p> <p>Equipment/Project Description: This project will rehabilitate city owned detention ponds and storm sewers to improve their storm water detention and drainage efficiency. The project will follow the recommendations in the Louisville Storm Water Master Plan completed in 2015. Costs include a 2.5% inflation rate.</p> <p>Project revenue or grants that will support the project and the impacts to the operating budget: No grants have been identified at this time that may be used to support the project. Ongoing operational and maintenance will be completed by the operations division.</p> <p>Reference to Plan being implemented (i.e., Master Plan): None</p>
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Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project will ensure the detention ponds and storm sewers continue to function as designed. Maintaining the City's infrastructure is consistent with a City Council goal of addressing aging infrastructure.

Department Priority Ranking: **Medium**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Stormwater Quality Master Plan CIP</u>		Submitted By: <u>Public Works</u>	Version: <u>4/3/2020</u>
Program(s):	Sub-Program(s):	Funding Source(s):	Percent
<u>Utilities</u>	<u>Stormwater</u>	<u>Storm Water Utility Fund</u>	<u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	-	-	-	-
Other Prof Services	-	-	-	-	-	-	-
Construction	200,000	100,000	100,000	100,000	100,000	100,000	700,000
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	200,000	100,000	100,000	100,000	100,000	100,000	700,000
Grants or Other	-	-	-	-	-	-	-
Off-Setting Revenue	100,000	-	-	-	-	-	100,000
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:

Equipment/Project Description:

This project will continue to implement the Stormwater Quality Master Plan. The master plan will evaluate environmental impacts from the storm sewer system on receiving streams and recommend a Capital Project list to be completed each year looking forward. Many of the older subdivisions were built before the current water quality regulations and do not have water quality treatment before entering the creeks.

Project revenue or grants that will support the project and the impacts to the operating budget:

A CDPHE grant was obtained for 2020 to 2021 which provides \$100,000 of matching funds each year for a total of \$200,000 over two years.

Reference to Plan being implemented (i.e., Master Plan):

2020 Stormwater Quality Master Plan

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project will review the existing storm sewer system and associated facilities. This is a is an ongoing program. This program is driven by the need to maintain the storm sewer system.

Department Priority Ranking: **Medium**

Request Number: (Finance Use)

Six-Year (2021-2026) Capital Improvement Plan Request Form for Capital Equipment or Capital Project

Identification and Funding Source

Project Name: <u>Stormwater Master Plan Update</u>		Submitted By: <u>Public Works</u>	Version: <u>4/3/2020</u>
Program(s):	Sub-Program(s):	Funding Source(s):	Percent
<u>Utilities</u>	<u>Stormwater</u>	<u>Storm Water Utility Fund</u>	<u>100%</u>
			100%

Estimated Cash Flow Schedule

Equipment or Project Costs	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Six-Year Total
Land Acquisition	-	-	-	-	-	-	-
Design & Engineering	-	-	-	120,000	-	-	120,000
Other Prof Services	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-
Other Equip/Project Costs	-	-	-	-	-	-	-
Capital Equipment Purch	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-
Total Costs (Gross)	-	-	-	120,000	-	-	120,000
Grants or Other Off-Setting Revenue	-	-	-	-	-	-	-
Impact to Annual Maint/Operating Costs	-	-	-	-	-	-	-

Description and Justification



Description & Proposed Funding:
<p>Equipment/Project Description: This project will update the 2015 Stormwater Master Plan. The master plan will evaluate the condition of the City's storm sewer system and detention ponds. The plan will recommend a Capital Project list to be completed each year looking forward.</p>
<p>Project revenue or grants that will support the project and the impacts to the operating budget: None</p>
<p>Reference to Plan being implemented (i.e., Master Plan): 2015 Stormwater Master Plan</p>

Justification and Alignment with Program/Sub-Program Goals & Key Performance Indicators:

This project will review the existing storm sewer system and associated facilities. This is an ongoing program. This program is driven by the need to maintain the storm sewer system.