City Council
Utility Committee

Meeting Agenda
Friday, March 15, 2019
WTP CONFERENCE ROOM, SID COPELAND WATER TREATMENT PLANT
1955 North Washington Avenue, Louisville
2:30 - 4:00 pm

I. Call to Order
II. Roll Call
III. Approval of Agenda
IV. Approval of Minutes from January 18, 2019
V. Public Comments on Items Not on the Agenda
VI. Agenda Items and Date for Next Meeting
   - Advance Agenda & Meeting Dates
VII. Reclaim Rate
VIII. Water CIPs Budget Adjustments
IX. Solid Waste Fund and Transition Discussion
X. Update – Water Resources
   - Water Supply Update
   - Windy Gap Firming Project Update
XI. Upcoming Projects and Council Action
   - Utility Rates – March 19th
   - SWSP Transmission Capacity Design – April 2nd
   - SCWTP Building Upgrades – April 2nd
   - SCWTP Disinfection CM and Construction – 1st QTR
   - Windy Gap Financing – TBD
XII. Adjourn 4:00 pm
XIII. Tour of SCWTP – Pump Station
Attachments: 1-18-19 Draft Minute
Advance Agenda
Reclaim Rate Memo
CIP Budget Memo
Supply Forecasts
City Council
Utility Committee

Draft - Meeting Minutes
Friday, January 18, 2019
CITY COUNCIL CHAMBERS

I. Call to Order – Councilmember Stoltzmann called the meeting to order at 2:30 pm.

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

City Council: Mayor Muckle, Councilmember Stolzmann and Councilmember Maloney

Staff Present: Mrs. Balser, Mr. Kowar, Mr. Watson, Mr. Mosley, Mr. Peterson, Mr. Phillips, Mr. Elkins, Mr. Snyder, Mr. Venette and Mrs. Golden

Public: N/A

III. Approval of Agenda

Councilmember Stolzmann requested the agenda be rearranged to move up item VIII: Update - 2018 Utility Projects before item VI: Agenda Items.

IV. Approval of the Minutes

Councilmember Stolzmann requested the September 28th minutes to be amended by removing the sentence regarding impacts of reallocations on page 3. Both the amended September 28th minutes and the November 9th were approved.

V. PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA

None

VI. 2018 Utility Update

Mayor Muckle asked if introductions could be done before proceeding.

Mr. Phillips began the 2018 update by providing an overview of the utility group and the guiding principles and mission statement.
Mr. Elkins spoke about the Wastewater Treatment Plant (WWTP) project objectives and the benefits that staff received for attending the WEFTEC Conference in 2018. In 2019 the WWTP group plans to focus on the SCADA System and additional automation with advancements in the asset management system and automating reporting to the Colorado Department of Public Health and Environment (CDPHE) and Environmental Protection Agency (EPA). Mr. Elkins outlined several performance charts for the new WWTP included in the Committee packet. Mayor Muckle asked if the new process has improved the odor control, specifically at the discharge location. Mr. Elkins said staff sample monthly at the discharge and have not experienced any issues. Mr. Elkins finished his presentation with a summary of two pilot program currently underway. The first is a chemical treatment program for the management of fats and oils buildup within the treatment process. The second pilot program is related to the use of biosolids onsite that will save an estimated $10,000 in 2019 by reapplying biosolids locally instead of hauling offsite as part of current operations.

Mr. Kowar asked how this fit in with the long term plan with Harney Lastoka. Mr. Elkins is working with Boulder County to utilize the Harney Lastoka property as a future location for biosolids application. Further testing, planning and discussions are anticipated prior to implementation. Councilmember Stolzmann spoke in favor of this and the goal to be sustainable by the reuse of this material as well as the reduction in transportation costs and impacts.

Mr. Snyder was the next presenter and explained the 2018 accomplishments for the Industrial Pretreatment Program and related activities. The City worked closely with a consultant to help prepare for a routine EPA inspection and identify areas of improvements prior to the inspection. This consulting firm is also assisting with the update and revisions to the local limits. The outcomes from this project are anticipated to require modifications to the municipal code and updates to the Significant Industrial User (SIU) Permit process. Councilmember Stolzmann asked to explain what is anticipated for us to change in the permit levels for the Industrial Users. Mr. Snyder explained it’s still under evaluation with existing limits and what the consultant recommends. Mr. Kowar asked and Mr. Snyder confirmed that the updated limits will focus mostly on metals concentrations. Councilmember Stolzmann asked if any of the current users have existing pretreatment equipment of facilities. Mr. Snyder stated that a single SIU utilizes onsite pretreatment. Councilmember Stolzmann asked if there was certain times of year when elevated levels are occurring. Mr. Snyder said typically the City sees an increase in early winter around November during low flow conditions.

Mr. Venette provided an update to the committee on the projects at the Water Treatment Plants. These include the changes at the plant, construction startup, improvements to operations and 2019 objectives. Mr. Venette highlighted the new pump station at the Sid Copeland Water Treatment Plant (SCWTP) and the greater efficiencies in water deliveries achieved since implementation. He continued to say that staff have been testing new means for controlling algae and some of the techniques were successful this year with good results. Councilmember Maloney asked if we used barley straw in the lake and how that worked. Mr. Venette explained that barley straw was one of the techniques used along with other
various treatments. Councilmember Stolzmann asked if staff could reach out to Parks to help with treatment of other open water like Warembourgh Pond, Community Park and the Golf Course Ponds. Mr. Venette said he would reach out and see how they could assist. Councilmember Stolzmann complimented staff on not getting any calls for taste and odor. Mr. Venette added that in 2017 Louisville participated in the annual taste test at the RMSAWWA Conference and came in 2nd place.

Mr. Peterson updated members on 2018 CIPs. There were 42 total water and wastewater projects and 25 were wrapped up in 2018. The 17 projects carrying over to 2019 are all active and in some form of either design or construction. The majority of the carryover projects are scheduled for completion in first quarter of 2019. Mr. Peterson went on to say there are a total of 30 new projects for 2019 and a few of these are already in the bidding process. Mr. Peterson, noted that many of these project will finish in 2019 with a couple design projects with a scheduled construction phase in 2020. Mr. Kowar explained that in utilities it is typical to do the design in advance of construction as there are shorter construction windows resulting from operational constraints. Mr. Peterson next provided background on the Windy Gap Firm Project. Councilmember Stolzmann asked that the summary memo completed last year be provided to Councilmember Maloney. Mr. Peterson affirmed that the memo would be provided. Mr. Kowar continued with the Windy Gap discussion by explaining the recent acquisition costs of CBT water and the comparison to Windy Gap. Mr. Peterson subsequent subject was a summary of the water system facility plan from 2012 that essentially has been finalized with the few remaining project scheduled in the next 2 to 3 years. Mr. Peterson wrapped up with the projects that are still in development and could become future requests including: the Louisville pipeline rehabilitation, long term capital expenses for water storage, water tank repairs and lift stations rehabilitation.

The Utility Committee expressed their appreciation for the presentations and thanked everybody for their time.

VII. Date for Next Meeting

- Next Meeting – Friday, March 15, 2019 at 2:30 p.m.
- Added meeting - April 12, 2019 at 1:00 p.m. - Utility Rate Audit

VII. Update – Trash RFP

Mr. Kowar started by saying that two bids were received which haven’t been posted yet as they are still under review. The bids received are from Republic and Western Disposal. Staff is looking at scheduling interviews in the next week or two. The Committee discussed who will be sitting on the selection team. Councilmember Maloney volunteered to represent the Utility Committee.

Councilmember Stolzmann asked for a general sense on the bids results. Mr. Kowar responded that after his review the City is in a good position.
Councilmember Stolzmann asked when the North End Subdivision would join City trash service. Mr. Kowar stated they are scheduled to start February 1st. Councilmember Stolzmann mentioned there is a planned presentation for composting and asked if other Committee members would like to join her. Mayor Muckle volunteered to join the presentation. Mayor Muckle asked about adding a future discussion items about a regulation that would require the hauler to provide service and price structure in a certain way. The Committee agreed to add this as an agenda later in the year. The Committee also discussed moving the November 8th meeting before the election. It was decided to wait to see what topics are to be discussed prior to moving the meeting.

VIII. CWCB Grant

Mr. Kowar explained that in the next 4 to 5 years the City will be looking to replace the majority of the water meters at an estimated cost of approximately $2.3 million. In perpetration of the meter replacement staff have begun exploring different meter technologies including “smart” systems. One technology explored is a partnership with Dropcountr and Rachio. The Dropcountr is a real time integration technology that would allow customers to see instant usage feedback through a website or phone application. Rachio has partnered with the City since 2016 to provide smart outdoor irrigation controllers as part of the conservation program. A five year pilot program was developed between the City and these two entities to offer Dropcountr to all customers. This pilot program was successful in obtaining a CWCB grant for $158,000 to assist with funding. The City’s cash contribution is summarized as $115,350 over 5 years or approximately $25,000 per year.

The second program discussed is in connection to our existing meter provider, Badger. Badger offers their own “smart” technology that could be integrated with the existing meters with some retrofits. Mrs. Balser asked that the funding for both programs be clarified. The Dropcountr/Rachio program would have a total cost of $316,500. This cost includes $158,000 in grant funds, $42,900 in in-kind matching funds and $115,350 in cash all over 5 years. The Badger program has a projected cost of $44,000. Councilmember Stolzmann was in favor of both pilot program and is hopefully the program can target different parts of town. Mr. Kowar agreed that this was the intent of both programs. The Committee made and approved a motion for Staff to bring both programs forward for Council approval.

IX. Update – Water Resources

- Water Supply Update – Mr. Peterson highlighted the current water supply conditions as average and no action was needed at this time. Next, Mr. Peterson gave an overview for the Reclaim Water System and explained the cost comparisons included within the presentation. The Committee discussed the components of the rate and which ones are appropriate in determining a final rate. Mr. Peterson went on to explain the difficulties in determining reclaim rates and the purpose of the presentation was to provide a range based on what was included in the cost of the reclaim water. As with other communities, the wide range of possible rates pushes
the final determination typically to more of a policy decision. The Utility Committee provide direction that the cost for reclaim water should be revised to include the marginal costs for energy and chemicals. Staff including representatives from Public Works, Finance and Parks should finalize this analysis for the determination of a final rate.

- **Windy Gap** – Mr. Peterson provided an updated on the increase in the revised construction estimate for the Windy Gap Firming Project. These costs are still highly competitive when compared to other water rights and is still a viable and important project. Mr. Peterson concluded that costs will not be definitively until the project is bid.

**X. Upcoming Projects and Council Action**

- Louisville Pipeline Control Vault Construction and Consulting Water Engineers Contract were moved to the February Council meeting.
- Out of City Water connection – Water tap fees and charges are charged double for all out of City connections. Councilmember Stolzmann request this be a discussion item for the upcoming meeting on rates.
- SWSP Design is scheduled for 2019 and Construction set for 2020.
- SCWTP Building Upgrades – also scheduled for 2019 and is within the budget amounts.

**XII. Adjourn**

The meeting was adjourned at 4:25 pm.
<table>
<thead>
<tr>
<th>DATE</th>
<th>ISSUE</th>
</tr>
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<tbody>
<tr>
<td><strong>2019</strong></td>
<td></td>
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</table>
| 4/12 | Preliminary 2020 Rates and Draft Cost of Service  
Solid Waste Administration Fee  
Water Loss Audit Report  
Water Supply Update (Drought Strategy if needed)  
Windy Gap  
CIP Update |
| 5/10 | Draft 2020 Rates  
Water Supply Update (Drought Strategy if needed)  
Windy Gap / Financing  
CIP Update  
Water Engineering Update  
| 7/19 | Final 2020 Rates  
Final Cost of Service  
Instream Flow Update  
Source Water Protection Plan and Presentation  
Local Limits  
Windy Gap / Financing  
CIP Update |
| 9/13 | Multi-family/Commercial Recycling  
Windy Gap  
CIP Update  
| 11/8 | Windy Gap  
Louisville Pipeline Report  
CIP Update  
Memorandum
Department of Public Works

To: Utility Committee
From: Cory Peterson, Water Resources Engineer
Date: 3/15/19
Re: Reclaim Water Rate

Risk Mitigation:
One of the goals of the Utility is to mitigate risk to the City’s water supply and ensure a reliable and resilient system. Drought has the greatest risk impacts to water supplies. To alleviate drought impacts, the City developed an alternative water source by joining Northern Water and making significant capital investment in the acquisition of Colorado-Big Thompson and Windy Gap water rights. To further combat drought impacts, the City constructed a reclaim system in 2004. The reclaim system was in direct response to the 2002/2003 drought in providing an immediate and consistent supply. The new reclaim system allowed for the City to optimize the water rights portfolio and provided increasing value as a backup supply in the catastrophic instant when firm yield supplies begin to degrade and break down. The reclaim system continues to function in this role and is a valuable asset for the City.

Cost of Service:
Given the impacts of secondary treatment, reclaim water has a higher cost of service than that of potable water. Public Works recently performed and presented a cost of service analysis that highlighted reclaim rates that range from $4.60 to $15.04 per thousand gallons as presented below.

Reclaim Usage with Calculated Rates
This situation of higher rates is consistent with all reclaim systems and was highlighted in the 2014 Utility Rate Study performed by Raftelis Financial Consultant (Raftelis). An excerpt from the Rate Study - Executive Summary on the reclaim rate is attached for reference. As a result of the incompatibility between reclaim and potable rates, Utilities typically default to setting reclaim rates by policy instead of using a cost of service approach.

**Market Conditions:**
With the establishment of a reclaim system and the inability to utilize a true cost service approach, the City, with the guidance of Raftelis, developed a market based policy for the reclaim rate. As outlined in the 2014 Rate Study, A weighted average of 75% of the potable rate was ultimately selected as the reclaim rate policy. This rate was stated to provide a customer currently using reclaim water with a significant discount compared to potable water rates. Analyzing this rate in more detail, the 2014 determination seems to be derived on what the market could sustain and overlooked the primary function of risk mitigation for the entire system.

**Marginal Costs:**
Based on direction from the January 15, 2019 Utility Committee, two revised options of the reclaim rate have been developed. Both versions considered only the marginal costs for operating the reclaim system. These costs can be more accurately defined as the reclaim system portion of chemical and energy costs accounted for in the wastewater treatment operating and maintenance budget. Other costs associated with personnel, capital replacement and indirect cost were removed from this analysis and considered indivisible from other City operations.

The first option was based on the existing per unit rate concept. As standard with rate development, total costs are divided by total deliveries to develop a cost per delivery. In this case, total reclaim marginal costs for 2018 were divided by the average 10-year annual deliveries to determine a future rate that could be charged per thousand gallons of reclaim water delivered. Details of the calculation are shown in the following table.

<table>
<thead>
<tr>
<th>MARGINAL COST - OPTION 1</th>
<th></th>
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<tbody>
<tr>
<td>2018 Reclaim Energy Cost</td>
<td>$31,700</td>
</tr>
<tr>
<td>2018 Reclaim Chemical Cost</td>
<td>$5,600</td>
</tr>
<tr>
<td>2018 Reclaim Marginal Costs</td>
<td>$37,300</td>
</tr>
<tr>
<td>Annual Reclaim Deliveries (10-year Avg)</td>
<td>44 million gallons</td>
</tr>
<tr>
<td><strong>Per Unit Rate</strong></td>
<td><strong>$0.85 / 1,000 gallons</strong></td>
</tr>
</tbody>
</table>

The second option, considered a flat rate, is based on executing a single lump sum payment. A similar 10-year average of annual deliveries between the various reclaim use locations was also calculated. These location percentages were then applied to the 2018 total marginal costs to determine a future annual cost by location. The calculations of this rate concept are presented below.
Having reviewed and discussed both alternatives, Staff prefer the per unit approach of $0.85 per thousand gallons. The main reasons for this preference are: to maintain the incentive to manage and conserve water usage and to recognize the reuse system was built to optimize water rights that allow for reclaim.

**Reclaim Rate Scale of Equity:**
The above mentioned rates were combined with other reclaim rate scenarios to develop a visual range demonstrating several characteristics. The far left of the scale represents an extreme and non-defensible policy of offering reclaim water at no charge. On the other end, the full cost of service method that is easily justifiable but not practical nor viable as it exceeds the potable rate and would not be utilized. To make a reclaim rate usable it must be compromised to reach a level below the potable rate. Once this premise is accepted as required, it is clear that the final determination must be based in policy rather than the strict cost of service scenario.

**Impacts of Revised Rate:**
If either of the marginal cost reclaim rates were to be adopted there are negative consequences that are outlined in more detail below. Alternatively, a shift to raw water for one of the largest users/golf course could prove more beneficial from a long term perspective.

Reduction in Revenue - With a 79% reduction from the current rate of $4.10 to $0.85, annual revenues are projected to decrease. Further, as a replacement for the marginal charges, the
remaining 21% will be assigned to the wastewater revenue to correspond to the expenses. The average reclaim revenue of approximately $180,400 will be removed from the water fund. This decrease would be equivalent to an offset of a 3.5% one-time increase in the potable water rate or could smooth out over time.

Long Term Capital - Neither marginal option contains a recovery mechanism for long term capital. With the recent WWTP upgrade project much of the reclaim system has been replaced. However, future capital projects both budgeted and yet to be identified would either need to be fully supported by the utility funds or accounted for in the long term capital programs for General Fund - Parks and/or the Golf Course Fund. Current budgeted projects are accounted entirely in the utility funds.

Opportunity Costs - The City has been approached on numerous occasions to expand the reclaim system to private businesses. Due to the lack of adequate amounts of excess reclaim supplies, these discussions have been limited. The expressed interest has been at the current rate of 75% of the potable rate. In addition, the City is routinely approached for the leasing of effluent with higher values offered from businesses that the City may not desire to be associated with. Finally, from an economic development perspective, providing reuse to an area like Conoco/Phillips could assist in incentivizing or attracting development. From a strict financial standpoint, the Utility could achieve greater revenues from these other sources than what is being proposed with a marginal reclaim rate. Staff would request that the new reclaim rate be clearly defined as a “City-only reclaim rate” to avoid complications or future negotiations of reclaim or effluent. In addition, the existing policy of 75% of potable rate should be maintained for all non-City customers.

Conclusion:
The determination of a reclaim rate is challenging and can be calculated in a variety of ways. City Council sets reclaim rates by resolution. Utility staff recommend that the rate remain at 75% of the potable rate for all non-City customers. However, the proposed pre unit reclaim rate of $0.85 per thousand gallons for City-only reclaim customers is defensible and there are no objections to utilizing this rate moving forward. This rate structure would begin in 2019.
1.7. **Reclaimed Water Rates**

Many utilities set reclaimed water rates based on policy considerations instead of pure cost of service. When a pure cost of service approach is used, the resulting calculated reclaimed water rates are often in excess of potable water rates because of the high cost of building reclaimed water transmission and distribution systems relative to the low level of reclaimed water demand on most systems. For this reason, policy makers frequently choose to ignore cost of service and set reclaimed water rates at a level they believe will enhance the market penetration of reclaimed water. Additionally, a reclaimed rate less than the potable rate often can be justified based on the avoided cost of new water supplies.

The City’s proposed reclaimed water rate is a policy-based rate set between two specific benchmarks. The high-end benchmark (the reclaimed water rate ceiling) is the weighted average cost of providing potable water service across all customer classes. The low-end benchmark (the reclaimed water rate floor) is the weighted average cost of providing water service after the elimination of all treatment-related costs. Treatment costs can be eliminated because once discharged from the wastewater treatment plant, the costs associated with providing reclaimed water service can be estimated based on non-water treatment activities such as pumping, transmission, and distribution.

Table 1-14 shows the development of the reclaimed water rate for the two benchmarks. The reclaimed water rates for the high-end and low-end benchmarks are $4.50 and $2.52 per thousand gallons, respectively.
The City’s initial proposed reclaimed water rate has been recommended to be set at $3.38 per thousand gallons. This rate is 75% of the weighted average cost of providing potable water service ($4.50 x 75% = $3.38). The selection of 75% of the potable water service cost is subjective and is based on a policy decision. It will provide customers currently using reclaimed water with a significant discount compared to treated water rates. If other customers seek to use reclaimed water in the future, the City may elect to consider the implementation of a reclaimed water rate based on full cost of service principles. At that time, adjusting from a base initially set at $3.38 per thousand gallons would likely cause less rate shock than having the initial base rate set at $2.52 per thousand gallons.

### 1.8. Indirect Cost Allocation

The City allocates a portion of central services administrative personnel costs to water, wastewater, and stormwater utilities. These "indirect overhead costs" include the estimated time spent working on utility related issues by City executives such as the City Manager and the Finance Director. They also include the cost of personnel associated with City departments that provide services to each utility such as Information Technology.

<table>
<thead>
<tr>
<th>Line No.</th>
<th>Description</th>
<th>Reclaimed Water Rate Ceiling</th>
<th>Reclaimed Water Rate Floor</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Volumetric Revenue Requirement</td>
<td>$3,128,664</td>
<td>$3,128,664</td>
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<tr>
<td>2</td>
<td>Base Demand</td>
<td>1,458,061</td>
<td>1,458,061</td>
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<tr>
<td>3</td>
<td>Maximum Hour</td>
<td>86,766</td>
<td>86,766</td>
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<tr>
<td>4</td>
<td>Total</td>
<td>$4,673,491</td>
<td>$4,673,491</td>
</tr>
<tr>
<td>5</td>
<td>Less Wastewater Treatment Specific Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>O&amp;M Expenses</td>
<td>($1,819,089)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Capital Costs</td>
<td>(240,228)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Net Volumetric Revenue Requirement</td>
<td></td>
<td>$2,614,174</td>
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<tr>
<td>9</td>
<td>Billed Reuse Volume, 1000 gallons</td>
<td>1,037,954</td>
<td>1,037,954</td>
</tr>
<tr>
<td>10</td>
<td>Reclaimed Water Rate Ceiling, per 1,000 gallons</td>
<td>$4.50</td>
<td>$2.52</td>
</tr>
</tbody>
</table>
Summary:
With the recent responses from several water bid advertisements, a trend in bid prices that are in excess of current budgets is developing. In addition, there are several new projects that have been identified that will require a new allocation of funds. Given the significant impacts and the number of projects, it was determined that a temporary hold should be placed on some of the projects until the following objectives could be decided:

1) Reaffirm the commitment to these projects,
2) Discuss the potential impacts to future rates and,
3) Make any appropriate adjustments.

The intent of this holistic approach is to provide the Utility Committee with the entire scale of the impacts as to maximize the information available in making the final determinations.

Projects:
Two projects, the control vault and metering technology, have already been presented and approved by City Council. These projects include an overage of $209,147 for the control vault and the addition of $159,350 for the metering technology pilot programs. The following is a breakdown of the remaining identified projects starting from the largest financial impact.

- The Southern Water Supply Pipeline (SWSP) has a design budget of $129,000 for 2019 and a construction estimate of $1,324,000 in 2020. The SWSP is the only connection of the City’s CB-T and Windy Gap water rights. Without additional capacity the City will be unable to fully utilize these supplies. Staff advertised for design services in late 2018 and received responses ranging from $126,000 to $344,000. The most responsive and staff recommended proposal has a projected cost of $287,000 inclusive of contingency. The higher cost is being driven by the complexities of the project, including coordination with other entities and several major crossing including Hwy 42 and the railroad. Early discussions with several of the prospective design firms suggest that the future construction cost is underfunded. Costs for similar projects along the Front Range were evaluated and applied to specific site conditions and a new estimate of $3 million was developed. The revised projection, results in an unaccounted for increase in the budget of $1.8 million.
• The Utility Committee is currently evaluating and considering a revision to the reclaim rate. If the proposed lower reclaim rate is implemented, projected revenue will also have a proportion reduction. Utilizing a 10 year average results in a reduction in revenue of approximately $180,000 annually.

• The second project impact is related to the major waterline break on Eisenhower and Ridgeview Drives that occurred in December, 2018. The 2019 budget for waterline replacement was set at $344,000. Current projections estimate the Eisenhower/Ridgeview break at $1.5 million. Factoring the planned replacement for this year, a revised budget of $1,844,000 is sought for the waterline replacement program.

• The SCWTP disinfection evaluation is at 60% design. The current engineers estimate is $975,000. This is $765,000 more than the current budget. This overage is resulting from two main factors. First, the chlorine room is limited in space and the necessary redundant tank was unable to be accommodated. As alternative redundancy, staff is proposing a 3rd generator unit. The second factor is two of the leading manufactures in this equipment have merged. This lost in competition has increased the overall price on the equipment.

• The next project is for the SCWTP Admin Building Upgrades. This project has a budget amount of $523,000 for 2019. The intent of this project is the modernize the Admin Building by the addition of a new locker rooms and bathrooms, along with expanded office space and dedicated area for sensitive SCADA equipment. The recommended design contract is predicted at $160,000. While within the overall budget, it does exceed the $75,000 amount allocated for design costs. The increase in design costs would also lead to the assumption that the remaining construction funds would also need to be adjusted. Budget projections rely on a typical approximation of 15% of the total cost. Maintaining the 15%, would essential double the project estimate to $1.1 million.

• The ongoing delays with the Windy Gap Firming Project are continuing to have a negative impact to the anticipated construction costs. Staff have added $873,000 to the City’s portion over last year’s iteration.

• Several line items within the operating and maintenance budget for 2019 and 2020 are out of alignment than what was experienced in 2018. In addition, one of the water quality sampling programs was inadvertently dropped. Staff is seeking increases to 5 accounts of $45,550 in 2019 and $37,850 in 2020 for a total of $83,400.

• Another 2019 project was a reimbursement to Northern Water for the City’s prorate interest in the SWSP - Eastern Pump Station. The 2019 budget was initially set at $93,000. A recent update provide by Northern, included notice that construction cost have increased to a revised estimate of $150,000. The project has also experienced a delay and is being moved to 2020.

• Finally, the projected revenue for water tap fees in 2018 was estimated at $3.14 million. Actual tap fees received was $1.65 million. The Utility Rate Model utilizes a delay mechanism to mute rate responses to tap fee revenue. Therefore, this shortage is represented in the 2019 model year instead 2018. It is the opinion of Public Works that the experienced shortage is a result of development timing and not the elimination of planned projects. For determining rate impacts, the unrealized tap fee revenues have been delayed four years to 2022 or the 2023 model year. A more precise analysis will be conducted in conjunction with the 2020 budget and rate process.

All but one of the noted projects are within the development phase and have not begun design. Value engineering and alternative analyses will become major components of the design process and efforts will be made to minimize these projected cost overruns. However, as with all City
projects, final costs are dependent on actual bids that can and will be impacted by numerous factors.

The following page contains a summary table of the 2019/2020 Budget and the proposed modifications.

<table>
<thead>
<tr>
<th>Account #</th>
<th>Description</th>
<th>Current Budget</th>
<th>Proposed Budget</th>
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<td></td>
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<td>2019</td>
<td>2020</td>
</tr>
<tr>
<td>501499-660275</td>
<td>NVWCD SWSP Transmission Capacity</td>
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<td>$1,324,000</td>
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<td>501498-660182</td>
<td>Water line Replacement</td>
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<td>Commercial Users Fee</td>
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<td>Water Plants Disinfection Eval</td>
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<td>501499-660245</td>
<td>SCWTP Upgrades</td>
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<td>501499-660190</td>
<td>NCWCD-Windy Gap Firming Proj</td>
<td>$2,500,000</td>
<td>$747,000</td>
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<tr>
<td>501461-522020</td>
<td>Operating Supplies - Laboratory</td>
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<td>Comm SVC Cell Phone</td>
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<tr>
<td>501461-540190</td>
<td>Lead &amp; Copper Sampling</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>501463-550060</td>
<td>Parts/Repairs Maint Util Lines</td>
<td>$15,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>501499-660274</td>
<td>NCWCD SWSP Eastern Pump Station</td>
<td>$93,000</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL Expenditures</td>
<td></td>
<td>$9,133,010</td>
<td>$9,083,180</td>
</tr>
<tr>
<td>Change</td>
<td></td>
<td>$767,550</td>
<td>$3,590,850</td>
</tr>
</tbody>
</table>

Rate Impacts:
The current recommendation to City Council was to not increase the water rate for 2019. Given the short timeframe on the pending approval for the 2019 utilities rates, it was determined to maintain this recommendation and not seek a modification based on these changes. Staff developed several rate adjustments scenarios starting in 2020.
Recommendation:
The underlying fundamental needs and benefits of these projects have not changed as a result of increases in costs. It is staff’s recommendation to maintain the current list of projects and increase budgets accordingly to account for the change in anticipated construction costs, delays and new scopes. The City will initiate the design components, develop more detail cost estimates and bid the work for firm construction costs. At each progressive step that costs are more accurately define, projects can be reevaluated for impact and prioritized.

<table>
<thead>
<tr>
<th>Scenario 1 (Recommended) - Modified Water Rate Increases (All Projects)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RATE</strong>&lt;br&gt;0% 1.2% 1.6% 1.7% 1.8% 1.8% 1.9% 1.9% 1.9% 1.9%</td>
</tr>
<tr>
<td><strong>CHANGE</strong>&lt;br&gt;0% +3.9% +3.5% +3.4% +3.3% +3.3% 0.0% 0.0% 0.0% 0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scenario 2 - Modified Water Rate Increases (All Projects - delete Admin Building Project)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RATE</strong>&lt;br&gt;0% 3.8% 3.8% 3.8% 3.7% 3.7% 1.8% 1.9% 1.9% 1.9% 1.9%</td>
</tr>
<tr>
<td><strong>CHANGE</strong>&lt;br&gt;0% +2.6% +2.2% +2.1% +1.9% +1.9% 0.0% 0.0% 0.0% 0.0% 0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scenario 3 - Modified Water Rate Increases (All Projects - maintain current Reuse Rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RATE</strong>&lt;br&gt;0% 3.5% 3.4% 3.4% 3.4% 3.4% 1.8% 1.9% 1.9% 1.9% 1.9%</td>
</tr>
<tr>
<td><strong>CHANGE</strong>&lt;br&gt;0% +2.3% +1.1% +1.0% +0.9% +0.9% 0.0% 0.0% 0.0% 0.0% 0.0%</td>
</tr>
</tbody>
</table>
March 5, 2019
(Released Thursday, Mar. 7, 2019)
Valid 7 a.m. EST

U.S. Drought Monitor
Colorado

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Author:
Eric Luebehusen
U.S. Department of Agriculture

http://droughtmonitor.unl.edu/
Percent NRCS 1981-2010 Median

End of February, 2019

- Willow Creek Pass, 116%
- University Camp, 110%
- Stillwater Creek, 100%
- Travis Peak, 95%
- Middle Fork Camp, 90%
- North Niwot, 75%
- Lake Eldora, 100%
- Jones Pass, 132%
- Black Canyon, 112%
- Arapaho Ridge, 113%
- Buffalo Park, 112%
- Berthoud Summit, 99%
- Arapaho Ridge, 113%
- Phantom Valley, 89%
- Stillwater Creek, 100%
- Wild Basin, 110%
- Lake Irene, 95%
- Copeland Lake, 113%
- Lake Eldora, 100%
- Jones Pass, 132%

Percent NRCS 1981-2010 Median

- ≥ 200%
- 175%
- 150%
- 125%
- 100%
- 75%
- 50%
- 25%
- ≤ 0%

Created 3-12-2019

0 2 4 8 12 16 20 Miles

USDA Natural Resources Conservation Service
United States Department of Agriculture