

LONGMONT WATER BOARD AGENDA - INFORMATION ONLY

Monday, August 19, 2019

Service Center
1100 South Sherman Street
Longmont, CO 80501

Meeting Cancelled due to lack of any General Business Items. Informational packet only.

1. ROLL CALL

2. APPROVAL OF PREVIOUS MONTH'S MINUTES
 - a. July 15, 2019 – Water Board Regular Meeting

3. WATER STATUS REPORT

4. PUBLIC INVITED TO BE HEARD AND SPECIAL PRESENTATIONS

5. AGENDA REVISIONS AND SUBMISSION OF DOCUMENTS

6. DEVELOPMENT ACTIVITY
 - a. Development Activity Requiring Water Board Action
 - i. None

 - b. Development Activity Submitted for Water Board Information Only
 - i. None

7. GENERAL BUSINESS
 - None -

8. ITEMS FROM STAFF

- a. 2019 Annual Raw Water Tour - Friday September 13th (Staff will provide the Board with information regarding this upcoming tour) Staff Contact: Wes Lowrie - (303) 651-8814, wes.lowrie@longmontcolorado.gov
- b. Windy Gap Firming Project Informational Update – memo attached

9. ITEMS FROM BOARD

- a. Review of Major Project Listing and Items Tentatively Scheduled for Future Board Meetings.

10. INFORMATIONAL ITEMS AND WATER BOARD CORRESPONDENCE

11. ITEMS TENTATIVELY SCHEDULED FOR FUTURE BOARD MEETINGS

- Cash-in-Lieu Review (March, June, September, December)

12. ADJOURN

If you need special assistance to participate in a Water Board meeting, please contact Heather McIntyre at (303) 651-8817 in advance of the meeting to make arrangements.

WATER BOARD MINUTES

July 15, 2019

Service Center Conference Room
1100 S. Sherman Street
Longmont, CO 80501

REGULAR MEETING

The July 15, 2019 meeting of the Longmont Water Board was called to order by Temporary Chair Ken Huson at 3:00 pm at the Service Center Water Conference Room.

1. ROLL CALL

Board Members Present: Todd Williams, Renee Davis, John Caldwell, and Roger Lange

Board Members Unexcused: Kathy Peterson

City Staff Members Present: Ken Huson, Nelson Tipton, Kevin Boden, Francie Jaffe, Jason Elkins, and Maureen Wallace

Council Liaison Present: Marcia Martin

Public in Attendance: Gaythia Weis

2. ELECTION OF OFFICERS

A. Election of Chairperson

Nominations for Water Board chairperson were opened by Water Board Staff Liaison Ken Huson.

Board member Davis made a motion to nominate Todd Williams for Water Board Chairman. Board member Caldwell seconded the nomination. The motion passed 4-0.

B. Election of Vice-Chairperson

The meeting was resumed by Chairperson Williams. Nominations for Water Board Vice Chairperson were opened.

Board member Caldwell made a motion to nominate Renee Davis as Water Board Vice Chairperson. Board member Lange seconded the motion. The motion passed 4-0.

3. APPROVAL OF PREVIOUS MONTH'S MINUTES

A motion was made by Board member Lange to approve Water Board's June 17, 2019 minutes; the motion was seconded by Board member Davis. The motion passed 4-0.

4. WATER STATUS REPORT

Staff member Nelson Tipton gave the current water status report on behalf of District 5 Water Commissioner Shera Sumerford. The flow of the St. Vrain at the Lyons gage at 8:00 am today was 499 cfs with an historical average of 280 cfs for this date. Peak flow at Lyons was calculated at 1,074.77 cfs on July 2, 2019, at 2:00 pm.

Ralph Price Reservoir at Button Rock Preserve is spilling at an elevation of 6,400.4 feet, equaling 16,286 acre-feet. Currently there is 175 cfs being released from Ralph Price Reservoir.

Union Reservoir is at an elevation of 27.67 feet, equaling 12,520 acre-feet, down approx. 248 acre-feet. We started running water down the Oligarchy Ditch to top off Union Reservoir one more time.

Currently there is no call on the St. Vrain Creek, but there could be one at the end of this week or early next week. The call on the Main Stem of the South Platte River is Evans #2 Ditch, Admin # 21,709, with a priority date of 6/9/1909.

The State has hired a new Deputy Water Commissioner for Districts 5 & 6, whose name is Martin Sarley.

5. PUBLIC INVITED TO BE HEARD AND SPECIAL PRESENTATIONS

Gaythia Weis shared her support for more sustainable landscaping requirements with Water Board. She stated that the best way to prepare for drought in the future is to proactively plan for it now through requiring new developments and parks to use more xeriscaping in their landscaping plans. She encouraged Water Board to consider recommending that Council adopt a policy for requiring "more sensible landscaping" than has been done with past developments in the City's neighborhoods and parks.

6. AGENDA REVISIONS AND SUBMISSION OF DOCUMENTS

None

7. DEVELOPMENT ACTIVITY

None

8. GENERAL BUSINESS

A. IGA with Town of Lyons for Treated Water Service

Staff member Ken Huson presented the Board with a preliminary proposal for an Intergovernmental Agreement (IGA) between the City of Longmont and the Town of Lyons. This would amend a previous Water Service Agreement IGA that allows the City of Longmont to provide water treatment services for the Town of Lyons. As they are still working to rebuild after the 2013 Flood and currently constructing affordable housing units to replace homes that were lost in the flood, the cost of C-BT water rights shares are significantly higher than the return margin for affordable housing units will allow. This IGA would amend the following underlying agreements in our current agreement through the following provisions:

1. Reducing the allowable number of maximum service connections from 1,310 to 1,250.
2. Allowing the Town of Lyons to acquire Lake McIntosh Reservoir shares for future Fixed Dedication of water supply.
3. Allowing the Town of Lyons to decide itself whether or not to include its C-BT shares in the Northern Water fixed quota program.
4. Transferring a short segment of the City of Longmont's abandoned South St. Vrain Creek Pipeline to the Town of Lyons. This section previously connected Longmont's south treatment plant to its north water treatment plant, which are no longer used.

After further discussion, a motion was made by Board member Caldwell to recommend that City Council approve the IGA in substantially the form before them, allowing for an amendment to the agreement for the City of Longmont to provide water treatment services for the Town of Lyons; the motion was seconded by Board member Davis. The motion passed 4-0.

9. ITEMS FROM STAFF

A. Water Conservation Program Update

Staff member Francie Jaffe provided the Board with an update on Longmont's current and upcoming water conservation programs. Programs encourage conservation in both indoor and outdoor practices. Discussion followed with comments from the Board and staff.

10. ITEMS FROM BOARD

A. Review of Major Project Listing

A review of major project listing was provided in the agenda packet.

B. Raw Water Demand Evaluation

Chairperson Williams re-opened discussion on the Raw Water Demand Evaluation report recently presented by staff. He proposed that the Board do some work to develop a more robust plan for future water supply, examining all potential options with their benefits and consequences to make a recommendation from the Board to the Council. After additional comments from Board and Staff alike, Chair Williams and Board member Davis will work to bring a draft recommendation to Water Board for review and further delineation.

11. INFORMATIONAL ITEMS AND WATER BOARD CORRESPONDENCE

Informational items were included in the packet distributed for this meeting.

12. ITEMS TENTATIVELY SCHEDULED FOR FUTURE BOARD MEETINGS

The next cash-in-lieu review is scheduled for September's meeting.

13. ADJOURN

There being no further business to come before Water Board, Chairperson Williams adjourned the meeting at 4:48 pm.

The next regular meeting of the Longmont Water Board will be held on August 21, 2019, at 3:00 pm at the Service Center, 1100 South Sherman Street, Longmont, CO 80501.

Todd Williams, Water Board Chair

Date

Maureen Wallace, Recording Secretary

Date



WATER BOARD

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Meeting Date: August 19, 2019

Item Number: 6

Type of Item: Development Activity

From: Wes Lowrie, Water Resources Analyst, (303) 651-8814
wes.lowrie@longmontcolorado.gov

As the Board will recall, City Council approved Ordinance O-2012-73 on October 23, 2012 which requires Water Board action during annexation review and when further raw water deficit satisfaction is required pursuant to a particular development activity. Listed below are two development activity categories; Development Activity Requiring Water Board Action and Development Activity Submitted for Water Board Information Only.

- 6a Development Activity Requiring Water Board Action
 - i) None

- 6b Development Activity Submitted for Water Board Information Only
 - i) None



WATER BOARD
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Meeting Date: August 19, 2019

Item Number: 8a

Subject: 2018 Raw Water Tour

Type of Item: Items From Staff

From: Wes Lowrie, Water Resources Analyst, (303) 651-8814
wes.lowrie@longmontcolorado.gov

The City's Water Resources staff would like to invite you to attend the 2019 Fall Raw Water System Tour hosted by the Water Resources staff on Friday, September 13, 2019. An informative discussion and light refreshments will begin the day at 8:30 am at the Longmont Service Center located at 1100 S. Sherman Street. The tour will include a visit to Longmont's historical hydro power plant and Button Rock Preserve. Enjoy a boxed lunch at the beautiful preserve and then be taken to the Nelson Flanders blending structure to view how water from different sources enters the treatment plant. The tour buses will be returning to the Service Center around 2:30 pm for closing remarks and time for additional questions. Please be prepared for the day by wearing comfortable clothing, walking shoes and a light rain jacket.

You may make your reservation with Heather McIntyre by August 31, 2019 by phone (303) 651-8817 or email heather.mcintyre@longmontcolorado.gov. Please let Heather know of any special assistance or have special dietary needs, by Friday, August 31st.



WATER BOARD
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Meeting Date: August 19, 2019

Item Number: 8b

Subject: Windy Gap Firing Project Update

Type of Item: Items from Staff

From: Ken Huson (303)651-8340
(Ken.huson@longmontcolorado.gov)

Suggested Action: N/A – Informational Update

Current Status of Project:

State Water Court Filings: Negotiations with final objector (Schmuck Family Trust) still on-going, however a final settlement on the trust property immediately downstream of the Windy Gap Reservoir should allow this issue to be resolved soon.

Project Financing: No new status, separate financing committee formed in Nov. 2016

Project Final Design: MWH hired summer 2016, design efforts complete and awaiting final approval from Colorado State Engineers Office

Grand Lake Clarity: No new status

Windy Gap Reservoir Connectivity Channel: Negotiations for property and contract rights have successfully concluded with the Schmuck Family Trust, with closing on the property set for October. This is a significant milestone to allow this connectivity project to move forward.

Federal Suit: Plaintiffs and interveners final briefs files July 25, 2019.

Prior Project Milestones:

Final Purpose and Needs Study: Completed September 2005

Final EIS: Completed November 2011

HB-1041 Permit, Grand County: Received December 2012

Bureau ROD, Project Permit and Amendatory Carriage Contract: Issued Dec. 2014

401 Certification: Received March 2016

Shoshone Outage Protocol: Final signature June 2016

Windy Gap Firming Project IGA: July 2016

404 Permit: Permit issued May 16, 2017

Project Participation: All 90,000 AF of permitted storage capacity has been subscribed.



WATER BOARD
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Item Number: 9a

Subject: Review of Major Projects Listing and Items Tentatively Scheduled for Future Board Meetings

Type of Item: Informational

From: Water Board

Suggested Action: N/A

Attached is a copy of the most recent Water Board project status report. Please note the report now includes expected future review date information for each item.

WATER BOARD PROJECT STATUS REPORT

<u>ITEM</u>	<u>MOST RECENT WATER BOARD REVIEW DATE</u>	<u>PROJECTED NEXT WATER BOARD REVIEW DATE</u>	<u>MOST RECENT ACTION TAKEN AND/OR PROPOSED FUTURE ACTION</u>
1 Union Reservoir Enlargement Land Acquisition Program	February 25, 2019	February 24, 2020	Annual update was presented to Water Board February 25, 2019.
2 Water Supply and Drought Management Plan	April 15, 2019	April 14, 2020	2019 Plan presented to Water Board in April 2019 with recommendation to City Council to remain at a Sustainable Conservation Level.
3 Windy Gap Firing Project	June 17, 2019	August 19, 2019	Review of Longmont's 5th Interim Agreement.
4 Water Legislation & Guiding Water Principles	May 20, 2019	January 27, 2020	Review of current legislation.
5 Cash-In-Lieu Review	June 17, 2019	September 16, 2019	Currently at \$16,840 per Acre-Foot. Resolution R-2019-78.
6 Button Rock Preserve & Forest Stewardship	May 20, 2019	January 27, 2020	Review the Button Rock Preserve visitation policy.
7 Longmont Water System Yield	July 15, 2019	TBD	Ongoing discussion of future water projects and projected future water yields.

Tentative Future Event Schedule	
Event	Date
Water Board Monthly Meeting	September 19, 2019
COL Raw Water Tour	September 13, 2019
Water Board Monthly Meeting	October 21, 2019

Water Board Member Terms

John Caldwell - 2020
 Kathy Peterson - 2021
 Todd Williams - 2022
 Roger Lange - 2023
 Renee Davis - 2024

Updated: August 2019



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Meeting Date: August 19, 2019

Item Number: 10

Type of Item: Informational Items & Water Board Correspondence

Attached are information items and Water Board correspondence.



WATER BOARD

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Meeting Date: August 19, 2019

Item Number:

Subject: Update on 2019 Water Legislation

Type of Item: Informational Item

From: Francie Jaffe, Water Conservation & Sustainability Specialist, 303-774-4468, francie.jaffe@longmontcolorado.gov

The Alliance for Water Efficiency (AWE) monitors U.S. federal and state-level legislation related to water conservation and efficiency. This is provided as an informational item and requires no action.

The following are AWE legislative summaries from http://www.allianceforwaterefficiency.org/Legislative-Watch.aspx#HR_2313.

H.R. 34 - Energy and Water Research Integration Act of 2019

Status: This bill passed in the House on July 23, 2019 and goes to the Senate next for consideration. Senate - 07/24/2019 Received in the Senate and Read twice and referred to the Committee on Energy and Natural Resources

Purpose: To require the Department of Energy to consider water use in energy research and development.

Sponsor: Rep. [Eddie Bernice Johnson](#) (D-TX)

Summary: This bill would require the Energy Department to consider water conservation and efficiency in the development of new energy technologies. It would also encourage the use of alternative water sources that do not compete with drinking water supplies, including brackish water or oilfield waste water along with the use of demonstration programs to help guarantee efficient, reliable, and sustainable delivery of energy and clean water resources. ([Full Text](#))

History: This bill was introduced on January 3, 2019 and referred to the House Committee on Science, Space and Technology. This bill passed in the House on July 23, 2019 and goes to the Senate next for consideration. Senate - 07/24/2019 Received in the Senate and Read twice and referred to the Committee on Energy and Natural Resources

H.R. 105 - Energy Efficiency Free Market Act of 2019

Status: Introduced in the House and referred to committee.

Purpose: To repeal all federal energy and water conservation standards.

Sponsor: Rep. [Michael Burgess](#) (R-TX)

Summary: This bill would repeal Section 325 of the Energy Policy and Conservation Act, which imposes energy and water conservation standards for consumer products, including toilets, faucets and showerheads. It would also prohibit state or federal agencies from adopting

or continuing to enforce “any requirement to comply with a standard for energy conservation or water efficiency with respect to a product.” ([Full Text](#))

History: This bill was introduced on January 3, 2019 and referred to the House Committee on Energy and Commerce. It is similar to bills introduced by Rep. Burgess in each of the past two Congresses. Those measures were not acted on in committee.

H.R. 1420 - The Energy Efficient Government Technology Act

Status: Introduced February 28, 2019 and referred to the House Committee on Energy and Commerce.

Purpose: To amend the Energy Independence and Security Act of 2007 to promote energy efficiency via information and computing technologies, and for other purposes.

Sponsor: Rep. [Anna Eshoo](#) (D-CA)

Summary: This legislation would direct the Secretary of Energy and the Administrator of the Environmental Protection Agency to develop new standards for energy and water conservation used in government and privately operated data centers and to monitor energy and water usage in those data centers. ([Full Text](#))

History: Similar legislation was introduced by Rep. Eshoo in the 113th and 115th Congress and was incorporated in related legislation that passed the House in both 2016 and 2017. But those bills were not considered by the Senate.

H.R. 2019 - Smart Energy and Water Efficiency Act of 2019

Status: Introduced April 2, 2019 and referred to the House Committee on Energy and Commerce.

Purpose: To create an innovative water and energy resource management pilot program.

Sponsor: Rep. [Jerry McNerney](#) (D-CA)

Summary: This legislation would direct the Secretary of Energy to create a new federal pilot program to demonstrate innovative technology to increase and improve the energy efficiency of water, wastewater, and water reuse systems, to support the implementation of automated systems that provide real-time data on energy and water and to improve energy and water conservation, water quality, and predictive maintenance of energy and water systems through the use of Internet-connected technologies. The legislation would authorize a total of \$15 million for such pilot programs. ([Full Text](#))

History: This bill was referred on April 2, 2019 to the House Energy and Commerce Committee and was one of several bills discussed at a hearing April 10 before the Energy Subcommittee. A similar bill was introduced by Rep. McNerney in the 114th and 115th Congresses, but those bills died in committee.

H.R. 2313 - Water Conservation Rebate Tax Parity Act

Status: Introduced April 12, 2019 in the House.

Purpose: To make rebates for water conservation and storm water runoff measures tax exempt.

Sponsor: Reps. [Jared Huffman](#) (D-CA) and [Paul Gosar](#) (R-AR)

Summary: This bill would amend Section 136 of the Internal Revenue Code, which makes energy conservation rebates provide by utilities exempt from federal income taxes, to include rebates provided by water utilities for water conservation and storm-water management. Currently, the Internal Revenue Service (IRS) insists that rebates for homeowners who replace water-thirsty lawns, install “gray water” capture systems or purchase new water-efficient appliances are considered income to the recipient and subject to federal taxes. The IRS and Treasury Department have stated that they cannot grant administrative relief from taxing such rebates and that Congress must act to amend the Internal Revenue Code. ([Full Text](#))

History: This bill was introduced on April 12, 2019 and is expected to be referred to the House Committee on Ways and Means. It is similar to a bill introduced by Reps. Huffman in the 114th Congress and 115th Congress. Those measures were not acted on in committee.

From: [Heather McIntyre](#)
To: [Heather McIntyre](#)
Cc: [Ken Huson](#); [Wes Lowrie](#); [Kevin Boden](#); [Nelson Tipton](#); [Jason Elkins](#); [Francie Jaffe](#)
Subject: Longmont's 2019 Raw Water System Tour - September 13, 2019
Date: Thursday, July 25, 2019 11:43:36 AM

Hello Water Board members,

The City of Longmont Water Resources Division is pleased to invite you on a tour of the City of Longmont's Raw Water system. This tour will provide tour participants with a chance to learn about the history and development of the City's raw water supply system. The tour will start at the City's Water Utility Service Center where you will be presented with some history of the development of the city's raw water supply. After that presentation we will tour a majority of the raw water system, including the City's first diversion structure location on the South Saint Vrain Creek, Longmont's still operational hydro-power plant, Button Rock Dam and Preserve, as well as where Longmont gets its water from the west slope via the Colorado-Big Thompson system.

Following are highlights of this tour:

Tour Date: Friday, September 13th

Tour Times: 8:30 AM – 3:00 PM

**Tour Meeting Location: City of Longmont
Service Center** (1100 S. Sherman Street)

Lunch and refreshments will be provided.

The tour is free, but please **reserve your place by Friday, August 30th**. Contact Heather McIntyre to sign up (heather.mcintyre@longmontcolorado.gov or 303-651-8817). A light jacket and good walking shoes are recommended. If any special accommodations are necessary, please let Heather McIntyre know that as soon as possible.



Longmont's South Saint Vrain Creek Diversion Structure

Thank you,

Heather McIntyre | *Administrative Assistant*

City of Longmont | Public Works & Natural Resources
1100 South Sherman Street, Longmont, CO 80501

(303) 651-8817 | longmontcolorado.gov

From: [Ken Huson](#)
To: [Heather McIntyre](#)
Subject: Water Rate Study update
Date: Wednesday, August 7, 2019 7:23:02 AM
Attachments: [Water Rate Study Council comm August 6 2019.pdf](#)

Board members,

FYI

Last night staff presented to City Council an update on the current electric and water rates study. As part of the water rate portion of that presentation, City Council directed staff to prepare a rate evaluation at both the 6,000 and 8,000 AF range for the Windy Gap Firming Project. Current estimates for the rate impacts at both levels are included in the attached council communication. The water rate discussion starts on page 7. We can further discuss at the August Water Board meeting.

Thanks, Ken

Ken Huson | *Water Resources Manager*

City of Longmont | Public Works & Natural Resources
1100 South Sherman Street, Longmont, CO 80501

(303) 651-8340 | ken.huson@longmontcolorado.gov

CITY COUNCIL COMMUNICATION



MEETING DATE: August 06, 2019 **ITEM NUMBER:** 5.A.
SECOND READING: N/A
TYPE OF ITEM: Study Session
PRESENTED BY: Dale Rademacher, Deputy City Manager, (303) 651-8355
David Hornbacher, Director of Electric Services, (303) 651-8385
Becky Doyle, PWN Rate Analyst/Manager, (303) 651-8379
Brian McGill, LPC Utility Rate Analyst, (303) 774-4356

SUBJECT/AGENDA TITLE: Electric & Water Rate Studies: Cost of Service Analysis

EXECUTIVE SUMMARY:

In April and June (communications and presentations attached), staff provided Council with introductory information on the current electric and water rate studies. These presentations included general background on rate study methodology, operating and capital costs, and rate design.

This communication presents the results from the cost of service models from both utilities, which show the revenue requirements for each customer class. The indicated increases shown within are increases required for the entire customer class, and are not necessarily equivalent to the rate increase that will be recommended.

Staff is seeking Council direction on three options of annual rate adjustments, which are primarily driven to fund the Advanced Metering Infrastructure (AMI) investment to include in the electric utility cost of service analysis.

The next communication will address rate design alternatives for each customer class that will collect the required revenue in alignment with Council and utility goals.

Link to Council Work Plan: There is no direct link to the Council Work Plan. Electric and water service are core services.

History of Previous Council Direction: During the June 11, 2019 meeting, Council directed staff to bring cost of service analysis for: 1) electric including various funding levels associated with the AMI project; and 2) water including participation in the Windy Gap Firming Project at the current level of 8,000 acre-feet or at a level of 6,000 acre-feet, with both scenarios including bond financing of the Nelson-Flanders Water Treatment Plant expansion.

The following is a tentative schedule of past and future presentations regarding the rate studies:

<i>Month</i>	<i>Topic</i>
<i>April</i>	Rate Study Intro & Operating Expenses
<i>June</i>	Capital Programs & Asset Management



<i>August</i>	Cost of Service
<i>August</i>	Rate Alternatives
<i>Sept/Oct</i>	Electric and Water Rate Ordinances – 1 st & 2 nd Readings

Staff plans a presentation of approximately 20 minutes.

- COUNCIL OPTIONS:**
- Electric:
1. Direct development of rates to collect cost of service presented in Scenario A
 2. Direct development of rates to collect cost of service presented in Scenario B
 3. Direct development of rates to collect cost of service presented in Scenario C
- Water Rate Study:
1. Direct development of rates to collect cost of service presented in Scenario A
 2. Direct development of rates to collect cost of service presented in Scenario B

RECOMMENDED OPTIONS:

Electric: Options 1 or 2 (Scenarios A or B)
Water: Option 1 (Scenario A)

FISCAL IMPACT & FUND SOURCE FOR RECOMMENDED ACTION: No action is currently required – future Council actions will impact the Electric and Water utility funds and customer rates.

BACKGROUND AND ISSUE ANALYSIS:

Electric Cost of Service

Operating and capital expenses developed during the recent budget process have been entered into the cost of service model and are used to determine the revenue requirements for the electric utility. The costs were then unbundled by function: power supply, distribution, and customer related. The final step was to allocate the unbundled costs to the various customer classes. The methodology utilized for cost of service follows current industry practices and incorporates wholesale rate structure changes from Platte River Power Authority.

The electric utility is proposing a two-year rate schedule (2020 & 2021). This will allow staff to revisit rate setting for 2022 and beyond to take advantage of renewable sources that continue to increase (beyond 50% of the energy mix), emerging advanced energy monitoring and control technologies (AMI and related), and incorporation into the City’s new Customer Information System (CIS) that is expected to be online late 2021/early 2022.

The electric cost of service model has identified a revenue requirement of \$77.3 million (average of 2020 and 2021 annual estimated expenses). Electric sales revenue, at the current rates, is estimated to be \$71.3 million, leaving \$6 million to be raised. To cover this, the electric utility needs an overall average rate increase of approximately 8.3%; however, the actual costs of each rate class vary as reflected in the table below. This table shows the percentage increase needed to meet the revenue requirements for each customer class. These would be one-time increases, with the exception of the residential class, which would be spread over two years.

Customer Class	Cost of Service	Revenue Under Existing Rates	Estimated Revenue Increases	
			2020	2021
Residential	\$ 36,909,000	\$ 32,502,000	8-9%	8-9%
Commercial - Energy	\$ 8,090,000	\$ 7,714,000	4-5%	
Commercial - Demand	\$ 22,618,000	\$ 21,277,000	6-7%	
Commercial - Coincident	\$ 8,828,000	\$ 9,027,000	0.0%	
General Fund –Energy/Demand	\$ 811,000	\$ 785,000	3-4%*	
Total	\$ 77,256,000	\$ 71,305,000	8.3%	

*City financial policy states that full cost of service is not recovered from the General Fund classes; instead, these rates reflect only wholesale energy costs. The distribution system and customer related costs attributable to the General Fund classes (\$68,000) have been allocated to all other customer classes.

Major factors affecting the cost of service shown above are:

- \$2 million included per year for Advanced Metering Infrastructure (AMI). This is allocated based on the number of electric meters in each customer class. Two alternate scenarios are outlined below, in which this funding is raised to \$2.5 million and \$3 million per year.
- \$2.3 million for the electric utility’s share of the cost of the new Customer Information System (CIS). This is also allocated based on the number of electric meters in each customer class.
- \$2 million for increased wholesale energy costs from PRPA. This increase is due to projected growth of 1% in 2020 & 0.6% in 2021 in combination with expected wholesale energy rate increases of 1.1% for 2020 & 2% for 2021. Although PRPA’s wholesale energy rates are increasing, they have the lowest rates of any wholesale provider in the region. Wholesale energy costs are allocated based on system use.

Because 88% of electric meters serve the residential rate class, this class is most impacted by the AMI and CIS costs.

The chart below shows the impact to the residential rate class for these major factors:

Expense Type	Cost of Service	Attributable Portion of Average Annual Estimated Increase
		2020/2021
Base O&M and Capital excluding PP Increase	\$ 33,209,000	1.5%
Increase in Purchased Power Costs	\$ 884,000	1.7%
CIS	\$ 1,015,000	2.0%
AMI	\$ 1,760,000	3.5%
Total	\$ 36,909,000	8.7%

Investment in AMI

The scenarios presented below use a combination of rate revenue and use of operating reserves to fund the AMI project. The reserve balance is projected to be approximately \$9 million at the end of 2019. Reserves enable the electric utility to cover expenses with cash instead of debt and serve as a rate stabilization tool. For instance, the restoration to electric facilities required for the 2011 fall snow storm (approximately \$250,000) and the 2013 flood (approximately \$450,000) were covered by reserves and did not require a directly related rate increase or the need to borrow funds. Other potential uses for reserves could include unanticipated replacements of major infrastructure items such as transformers at the substation level or electric cable replacements.

The benefit of using the Electric Utility's operating reserves to complete the AMI project is that the project can be funded and completed quickly, while the costs are spread out over a longer term. For example, if the AMI project were funded through rates at \$2 million per year (Scenario A), it would take eight years to raise the \$16 million needed. Using reserves would mean the project could be completed in the range of 3 to 3 ½ years, with the funding through rates then replenishing the reserves. A potential risk would be a low reserve balance, potentially insufficient to cover costs associated with a significant emergency. Alternatively, Scenario B would increase revenues by \$2.5 annually, which would result in a shortened time period to fully fund the AMI with a lower drawdown on fund reserves. Higher fund reserves would also position the Electric Utility with financial resources to address costs associated with the transition to 100% renewable energy sources. The Electric Community Investment Fee (ECIF) Fund is projected to have a reserve balance of \$3.7 to \$4.3 million over the next five years, which could be a back-up source of emergency funding.

On June 11, 2019, Council directed that cost of service analysis be developed for different funding levels associated with the AMI project. Three different funding level scenarios have been developed: \$2 million per year, \$2.5 million per year, and \$3 million per year. All three scenarios include the use of Electric Utility reserves to complete the \$16 million AMI project by the end of 2023.

Scenario A: Funding AMI at \$2 million per year

Customer Class	Estimated Revenue Increases	
	2020	2021
Residential	8-9%	8-9%
Commercial - Energy	4-5%	
Commercial - Demand	6-7%	
Commercial - Coincident	0%	
General Fund – Energy/Demand	3-4%	
Unmetered Energy	6-7%	

	2020	2021
Beginning Reserve Balance	\$9,144,000	\$5,842,000

Total Revenue	\$80,067,000	\$83,951,000
Total Expense	\$83,369,000	\$83,644,000
Addition To/(Use of) Reserves	(\$3,302,000)	\$307,000
Ending Reserve Balance	\$5,842,000	\$6,149,000

Scenario B: Funding AMI at \$2.5 million per year

Customer Class	Estimated Revenue Increases	
	2020	2021
Residential	9-10%	9-10%
Commercial - Energy	5-6%	
Commercial - Demand	6-7%	
Commercial - Coincident	0%	
General Fund – Energy/Demand	3-4%	
Unmetered Energy	6-7%	

	2020	2021
Beginning Reserve Balance	\$9,144,000	\$6,178,000
Total Revenue	\$80,432,000	\$84,668,000
Total Expense	\$83,398,000	\$83,701,000
Addition To/(Use of) Reserves	(\$2,966,000)	\$967,000
Ending Reserve Balance	\$6,178,000	\$7,145,000

Scenario C: Funding AMI at \$3 million per year

Customer Class	Estimated Revenue Increases	
	2020	2021
Residential	10-11%	10-11%
Commercial - Energy	6-7%	
Commercial - Demand	6-7%	
Commercial - Coincident	0%	
General Fund – Energy/Demand	3-4%	
Unmetered Energy	6-7%	

	2020	2021
Beginning Reserve Balance	\$9,144,000	\$6,524,000
Total Revenue	\$80,808,000	\$85,441,000
Total Expense	\$83,428,000	\$83,762,000
Addition To/(Use of) Reserves	(\$2,620,000)	\$1,679,000
Ending Reserve Balance	\$6,524,000	\$8,203,000

Water Cost of Service

The rate study for the water utility is intended to propose a five-year rate schedule, and uses a “test year” of 2024. Based on the operating and capital expenses previously discussed with Council, the water utility has a revenue requirement in 2024 of just under \$29 million. Compared to the current year’s rate revenue budget of \$20.5 million, meeting this level of revenue would require an overall increase of 40% over the five-year period. Understanding this total need, the costs associated with each customer class have been developed using industry standard cost of service methods.

First, all the expenses are allocated to categories for base water demands, peak day and peak hour, and customer charges. A total cost for each category is established, which is then broken down to a cost per unit (either gallons or number of meters, depending on which is the cost driver). These unit costs are allocated to customer classes based on their historic use of water and number of accounts. Most of the costs are allocated to the base water demands, or the total use of the system:

Customer Class	Annual Water Use (1,000 gallons)	Percent
Single Family	2,251,000	48.6%
Duplex	116,000	2.5%
Multi-Family	535,000	11.5%
Small Commercial	927,000	20.0%
Irrigation	392,000	8.5%
Mixed Use	6,000	0.1%
City	302,000	6.5%
Wholesale Lyons	103,000	2.2%
Total	4,632,000	

The next largest cost component is tied to peak system use. The water system must be sized to provide service not only at the average level of use, but also at the highest level of use. Different customer classes have different peaking behavior, which in turn indicates differing responsibility for the cost of various components of the infrastructure including treatment capacity, transmission lines, and storage tanks. This table shows ratios of the highest day and hour of water use to average water use:

Customer Class	Max Day Peaking Factor	Max Hour Peaking Factor
Single Family	2.30	3.30
Duplex	1.90	2.70
Multi-Family	1.70	2.40
Small Commercial	2.00	2.80
Irrigation	3.40	4.90
Mixed Use	1.70	2.40

City	2.90	4.10
Wholesale Lyons	2.20	3.10

This table shows that irrigation customers have the highest ratio of peak use to average use, so the per-unit cost is highest for this user class. Another class of note is the Duplex class, which is separate from the Single Family class for the first time in this rate study. The peaking factors for duplexes are lower than for single-family users, so the indicated increase for this class is fairly low.

Council directed on June 11, 2019 that cost of service analysis be developed for two scenarios: participating in the Windy Gap Firing Project at the current level of 8,000 acre-feet, or participating at a level of 6,000 acre-feet. Both scenarios include bond financing of the Nelson-Flanders Water Treatment Plant Expansion, which will require a bond election in 2020.

Scenario A: Fund proposed 2020 – 2024 CIP; maintain 8,000 acre-foot participation in Windy Gap Firing Project

Customer Class	Cost of Service	Revenue Under Existing Rates	Indicated Revenue Increase
Single Family	\$ 15,328,000	\$ 10,896,000	41%
Duplex	\$ 475,000	\$ 427,000	11%
Multi-Family	\$ 3,510,000	\$ 2,539,000	38%
Small Commercial	\$ 5,183,000	\$ 3,728,000	39%
Irrigation	\$ 3,253,000	\$ 2,372,000	37%
Mixed Use	\$ 41,000	\$ 30,000	37%
Wholesale Lyons	\$ 295,000	\$ 191,000	54%
Outside City Users	\$ 795,000	\$ 574,000	39%
Total	\$ 28,880,000	\$ 20,757,000	39%

Scenario B: Fund proposed 2020 – 2024 CIP; move to 6,000 acre-foot participation in Windy Gap Firing Project

Customer Class	Cost of Service	Revenue Under Existing Rates	Indicated Revenue Increase
Single Family	\$ 15,159,000	\$ 10,896,000	39%
Duplex	\$ 470,000	\$ 427,000	10%
Multi-Family	\$ 3,467,000	\$ 2,539,000	37%
Small Commercial	\$ 5,121,000	\$ 3,728,000	37%
Irrigation	\$ 3,214,000	\$ 2,372,000	35%
Mixed Use	\$ 40,000	\$ 30,000	33%
Wholesale Lyons	\$ 295,000	\$ 191,000	54%
Outside City Users	\$ 786,000	\$ 574,000	37%
Total	\$ 28,552,000	\$ 20,757,000	38%

Results in Scenario A and Scenario B are very similar in the five-year period. This is primarily due to the cost leveling effect of debt servicing the two major projects in this utility. Additionally, a significant portion of the debt payment for the Windy Gap Firming Project is covered by development fee revenue from the Water Construction Fund, instead of being covered by rate revenue. The Water Construction Fund is reserved for use on projects that expand system capacity or meet new regulatory requirements. When fund balance is available, it can be used to cover a share of bond payments equivalent to the percent of bond-financed projects that meet those requirements. Because firming existing water supply expands the water supply available for future growth and development, it is reasonable to assign a portion of the costs of this project to the Water Construction Fund. Over the twenty-year life of the bonds, however, development fee revenues are expected to decline due to slowing growth, and rate revenue will be required to cover a greater share of the bond payment. The difference in bond costs is approximately \$1 million, which would indicate a 5% increase if fully covered from rate revenue.

Staff recommends moving forward with Scenario A. This retains the City's ability to modify participation levels in the Windy Gap Firming Project as the project moves toward construction.

Analysis of Alternatives

In the event the bond issue is not approved by voters, cash financing of the capital program as currently proposed would necessitate a 75% increase in revenue for 2021. Rates could then be reduced gradually over the next few years, resulting in a final level of revenue that is similar to that indicated in the scenarios that assume a successful bond election. Though the extreme impact to rates would be short term, this is not a recommended approach due to the impact to ratepayers.

Another course of action following an unsuccessful bond election would be to modify the capital plan. An example of a set of changes that would result in a cost of service calculation similar to Scenario A above would be:

- Council reduces the level of participation in Windy Gap Firming Project to 6,000 ac. ft.
- Council authorizes the sale of additional bonds in the amount of \$6 million¹
- Delay replacement of the Price Park tank from 2021 to 2023
- Delay replacement of the North St Vrain Pipeline from 2023 to 2025

There are significant risks associated with delaying replacement of key water system assets, as well as with reducing participation in the Windy Gap Firming Project. The capital program has been proposed in its current form to provide the best opportunity for reliable and high quality water service.

Next Steps

¹ Under Section 10.2 of the Longmont City Charter, Council can issue revenue bonds for any public purpose without a vote of the public, provided that the aggregate amount of the revenue bonds outstanding at any time, issued without being authorized by such vote, does not exceed one-half of one percent of the assessed valuation of taxable property within the city.

Council direction is requested on the level of AMI investment, and the desired scenario for the water study. Rate alternatives will be developed for all selected scenarios and brought back for consideration later in August.

ATTACHMENTS:

April 16 Council Communication

April 16 Council Presentation

June 11 Council Communication

June 11 Council Presentation

From: [Ken Huson](#)
To: [Heather McIntyre](#)
Cc: [Wes Lowrie](#); [Nelson Tipton](#); [Kevin Boden](#); [Jason Elkins](#)
Subject: Cash in lieu
Date: Wednesday, August 14, 2019 8:22:37 AM

Water Board members,

FYI

Last night, as recommended by Water Board, City Council unanimously passed a resolution increasing the Cash-in-lieu fee to \$16,840./AF.

Also, there are no action items for August, so the August Water Board meeting will be cancelled. We will send out an information packet later this week. Enjoy the time off and see you all in September.

Thanks, Ken

Ken Huson | *Water Resources Manager*

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