LOVELAND UTILITIES COMMISSION

April 18, 2018 – 4:00pm

Service Center Willow Room – 200 N. Wilson Ave.

REGULAR MEETING AGENDA

CALL TO ORDER

NEW EMPLOYEE INTRODUCTIONS

APPROVAL OF MINUTES – 3/21/2018

CITIZENS REPORT (*See procedural instructions on the following page.)

INFORMATIONAL ITEMS

1. Electric Legislative Update – Kim O'Field
2. Water Legislative Update – Ryan Van Pelt
3. Water Supply Update – Ryan Van Pelt

CONSENT AGENDA

4. Quarterly Goal Updates – Joe Bernosky
5. WWTP - Water Quality Lab Phase II Design, Contract Amendment (#2) with HDR Engineering – Tom Greene

REGULAR AGENDA

6. Wastewater Treatment Plant Biological Nutrient Removal & Digester Project – Package 3 Construction Contract – Brian Gandy
7. Proposed 10-Year Capital Improvement Plan – Jim Lees

STAFF REPORTS

8. 2017 Levels of Service Update for Water and Wastewater Utilities – Michelle Erickson
9. 2017 Water Loss Audit Update – Michelle Erickson
10. Quarterly Financial Report Update – Jim Lees

COMMISSION & COUNCIL REPORTS

DIRECTOR'S REPORT

ADJOURN

The password to the public access wireless network (colguest) is accesswifi

City of Loveland

* Citizens Report Procedures

Anyone in the audience may address the LUC on any topic relevant to the commission. If the topic is a Consent Agenda item, please ask for that item to be removed from the Consent Agenda; pulled items will be heard at the beginning of the Regular Agenda. If the topic is a Regular Agenda item, members of the public will be given an opportunity to speak to the item during the Regular Agenda portion of the meeting before the LUC acts upon it. If the topic is a Staff Report item, members of the public should address the LUC during this portion of the meeting; no public comment is accepted during the Staff Report portion of the meeting.

Anyone making comment during any portion of tonight's meeting should identify himself or herself and be recognized by the LUC chairman. Please do not interrupt other speakers. Side conversations should be moved outside the Service Center Board Room. Please limit comments to no more than three minutes.

Notice of Non-Discrimination

The City of Loveland is committed to providing an equal opportunity for services, programs and activities and does not discriminate on the basis of disability, race, age, color, national origin, religion, sexual orientation or gender. For more information on non-discrimination or for translation assistance, please contact the City's Title VI Coordinator at TitleSix@cityofloveland.org or 970-962-2372. The City will make reasonable accommodations for citizens in accordance with the Americans with Disabilities Act (ADA). For more information on ADA or accommodations, please contact the City's ADA Coordinator at adacoordinator@cityofloveland.org or 970-962-3319.

Notificación en Contra de la Discriminación

"La Ciudad de Loveland está comprometida a proporcionar igualdad de oportunidades para los servicios, programas y actividades y no discriminar en base a discapacidad, raza, edad, color, origen nacional, religión, orientación sexual o género. Para más información sobre la no discriminación o para asistencia en traducción, favor contacte al Coordinador Título VI de la Ciudad al TitleSix@cityofloveland.org o al 970-962-2372. La Ciudad realizará las acomodaciones razonables para los ciudadanos de acuerdo con la Ley de Discapacidades para americanos (ADA). Para más información sobre ADA o acomodaciones, favor contacte al Coordinador de ADA de la Ciudad en adacoordinator@cityofloveland.org o al 970-962-3319".

The password to the public access wireless network (colguest) is accesswifi

Commission Members Present: Dan Herlihey (Vice Chair), Dave Kavanagh, David Schneider, Gary Hausman (Chairman), Gene Packer, Larry Roos, John Butler, Randy Williams, Sean Cronin

Commission Members Absent: Stephanie Fancher-English (excused)

Council Liaison Present: Steve Olson

City Staff Members Present: Alan Krcmarik, Allison Bohling, Bob Miller, Brieana Reed-Harmel, Chris Carlson, Christine Schraeder, Daniel Daneshka, Derek Turner, Frank Lindauer, Garth Silvernale, Jim Lees, Joe Bernoksy, John Beckstrom, Kim O'Field, Lindsey Bashline, Larry Howard, Nathan Alburn, Roger Berg, Ryan Greene, Ryan Van Pelt, Tanner Randall, Tracey Hewson

Guest Attendance: Adam Perry, Bruce Croissant, Gayle Bernhardt, Paul Davis

CALL TO ORDER: Gary Hausman called the meeting to order at 4:00 pm.

APPROVAL OF MINUTES: Hausman asked for a motion to approve the minutes of the February 21, 2018 meeting.
Motion: Dave Schneider made the motion.
Second: Dan Herlihey seconded the motion. The minutes were approved unanimously.

CITIZEN REPORTS: Bruce Croissant mentioned that he would like the Power department to provide power from a power pole in his neighborhood so it can be used for a Memorial Day display. Bernosky stated that if possible LWP will take care of the issue.

INFORMATION ITEMS

Item 1: Electric Legislative Update – Kim O'Field
This item and the attachment are intended to give a brief update on electric-related legislation at both the state and federal level. Loveland Water and Power works closely with Platte River Power Authority (PRPA) and its sister cities but relies primarily on the Colorado Association of Municipal Utilities (CAMU) for information on electric-related legislation.

Information item only. No action required.

Item 2: Water Legislative Update – Ryan Van Pelt
This item is intended to give a brief update on water-related legislation being contemplated by the Colorado General Assembly. Loveland Water and Power relies primarily on the Colorado Water Congress (CWC) for information on water-related legislation.

Information item only. No action required.

Item 3: Water Supply Update – Ryan Van Pelt Title
Raw water supply update.

Information item only. No action required.

Item 4: Financial Report Update – Jim Lees
This item summarizes the monthly and year-to date Preliminary financials for February 2018.

Information item only. No action required.

CONSENT AGENDA

Item 5: Contract Amendment for HDR Engineering – Tanner Randall
This item is for the approval of the second amendment to the contract that HDR has for the Boyd Parallel Interceptor (W1601H) and Morning Drive 30" Waterline Phase 1 & 2 (W1705D) projects. HDR is currently finishing the Final Design phase services for both of the projects. This amendment will cover the construction management services that HDR will provide for both projects.

Recommendation: Adopt a motion recommending that the LUC approve the change order to the contract for Final Design of the Boyd Parallel Interceptor and Morning Drive 30" Waterline Phase 2 with HDR to increase the not-to-exceed amount to $749,975 and authorize the City Manager to sign the change order on behalf of the City.

Dan Herlihey abstained from the vote.
Motion: John Butler made the motion to accept consent agenda items as written.
Second: Dave Schneider seconded the motion. The motion was approved unanimously.

REGULAR AGENDA

Item 6: Raw Water 10-Year Financial Plan Update – Jim Lees
The purpose of this item is to seek direction from the LUC on changes to make to the Raw Water 10-Year Financial Plan in response to a significant increase in the estimated cost of the Windy Gap Firming Project.

Recommendation: Give direction to Staff to develop the 2019 Raw Water 10-Year Financial Plan with C-BT purchases only built in for 2020-2022 at $500,000 per year, in order to address the reduction in fund balance caused by higher debt service payments as a result of the increased estimated cost for the Windy Gap Firming Project.

Motion: Dan Herlihey made the motion.
Second: Dave Schneider seconded the motion. The motion was approved 6 to 3.

STAFF REPORTS

Item 7: 2017 Efficiency Works Program Results & Third Party Evaluation Results – Adam Perry, Platte River Power Authority
Platte River Power Authority staff will present Loveland's 2017 energy efficiency (aka Efficiency Works) program results and the findings of their third party evaluation of energy efficiency programs.

Staff report only. No action required.

Item 8: LED Streetlights – Christine Schraeder
A brief description of why we made the choice to switch, a discussion of the technology differences, where we are with our build-out, and the challenges posed by information and miss-information.

Staff report only. No action required.

Item 9: Leak Detection Program – Roger Berg
Leak detection program update and review of new equipment.

Staff report only. No action required.

Item 10: Big Thompson River Corridor Master Plan – Chris Carlson
In April 2017, the City of Loveland began preparing a Big Thompson River Corridor Master Plan with the primary purpose of capturing a long-term vision for nine miles of river corridor through the Loveland area. The Master Plan is intended to do the following: recommend projects that mitigate flood hazards and protect infrastructure, improve resiliency, restore natural river and floodplain functions, improve public recreation and interaction with nature, recommend how the City can better capitalize on its river as a valuable public amenity, and recommend how the City can best manage and maintain the river corridor. The entire master planning process was science based but driven by extensive community input. The Master Plan was completed in December and is now proceeding through a formal review, comment, and adoption process.

Staff report only. No action required.

COMMISSION/COUNCIL REPORTS

Item 11: Commission/Council Reports

- Activity board members attended since last meeting – February 21, 2018
    - Boards and Commission Summit - March 8, 2018

Dan Herlihey: Nothing to Report
Dave Kavanagh: Mentioned he noticed Larimer County Conservation Corps marketing at local King Soopers.
Dave Schneider: Nothing to Report
Gene Packer: Nothing to Report
Gary Hausman: Nothing to Report
John Butler: Nothing to Report
Larry Roos: Nothing to Report
Randy Williams: Nothing to Report
Sean Cronin: Nothing to Report

Council Report:
City Council Study Session - February 27
Nothing of Interest
City Council Regular Meeting - March 6
Third Amendment to the Fifth Interim Agreement between the Municipal Subdistrict, Northern Colorado Water Conservancy District Windy Gap Firming Project Water Activity Enterprise, and the City of Loveland for participation in the Windy Gap Firming Project
Meeting Cancelled - March 13
Meeting cancelled
City Council Regular Meeting - March 20
Nothing of interest

DIRECTOR'S REPORT

Item 12: Director's Report – Joe Bernosky

ADJOURN The meeting was adjourned at 7:29 pm. The next LUC Meeting will be April 18, 2018 at 4:00 pm.

Respectfully submitted,

Allison Bohling
Recording Secretary
Loveland Utilities Commission

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 1
MEETING DATE: 4/18/2018
SUBMITTED BY: Kim O'Field
STAFF TITLE: Technical Specialist

ITEM TITLE:

Electric Legislative Update

DESCRIPTION:

This item and the attachment are intended to give a brief update on electric-related legislation at both the state and federal level. Loveland Water and Power works closely with Platte River Power Authority (PRPA) and its sister cities but relies primarily on the Colorado Association of Municipal Utilities (CAMU) for information on electric-related legislation.

SUMMARY:

State Update:

Please see Attachment A for the Legislative Tracking Sheet of current state bills from CAMU.

RECOMMENDATION:

Information item only. No action required.

ATTACHMENTS:

- Attachment A: Legislative Tracking Sheet
- Attachment B: HB18-1345 Information Sheet

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Attachment A

Colorado Association of Municipal Utilities
2018 State Legislative Tracking Sheet

HB18-1061	No Encryption Of Dispatch Radio Communications
Comment:	
Position:	**Monitor**
Short Title:	No Encryption Of Dispatch Radio Communications
Sponsors:	K. Van Winkle
Summary:	The bill states that each entity of the state government and each entity of the government of each city, county, and city and county (government entity) shall broadcast its dispatch radio communications without encryption such that the communications may be monitored by commercially available radio receivers and scanners; except that:

- A government entity may encrypt tactical radio communications or investigative radio communications so long as the encryption is necessary to preserve the tactical integrity of an operation, protect the safety of law enforcement officers or other emergency responders, or prevent the destruction of property; and
- An investigative unit of a government entity engaged in the investigation of criminal conduct or potential criminal conduct may encrypt its radio communications.

Any government entity that encrypts any of its dispatch radio communications shall disclose on its public website and make available for public inspection a list of its radio communication channels, a description of the functions allocated to those channels, and an indication of which of the channels are always encrypted or sometimes encrypted. In describing the functions of the channels, the government entity shall indicate whether each channel is used for

tactical radio communications or investigative radio communications.

Any person has standing to bring an action for injunctive relief in district court against any sheriff, chief of police, fire chief, or other administrative head of any government entity for an allegedly unlawful encryption of dispatch radio communications.

Any person who monitors dispatch radio communications of a government entity for the purpose of perpetrating or attempting to perpetrate criminal activity or assisting another person in the furtherance of criminal activity commits a class 3 misdemeanor.

(Note: This summary applies to this bill as introduced.)

Status: 1/10/2018 Introduced In House - Assigned to State, Veterans, & Military Affairs
1/18/2018 House Committee on State, Veterans, & Military Affairs Postpone Indefinitely

Amendments:

Bill Version: Introduced

HB18-1085 Health Effects Industrial Wind Turbines

Comment:

Position: **Monitor**

Short Title: Health Effects Industrial Wind Turbines

Sponsors: P. Lundeen

Summary: The bill requires the department of public health and environment to research and compile information on the health effects of noise and stray voltage from industrial wind energy turbines on humans and animals. The department must report research results to the general assembly by January 1, 2020, and present the report to a joint legislative committee of reference. The research and reporting requirements are repealed July 1, 2020.
(Note: This summary applies to this bill as introduced.)

Status: 1/18/2018 Introduced In House - Assigned to Transportation & Energy
2/8/2018 House Committee on Transportation & Energy Postpone Indefinitely

Amendments:

Bill Version: Introduced

HB18-1107	Prewire Residence For Electric Vehicle Charging Port
Comment:	
Position:	**Monitor**
Short Title:	Prewire Residence For Electric Vehicle Charging Port
Sponsors:	M. Weissman / K. Priola
Summary:	Under existing law, builders must offer a 'solar prewire' option to purchasers of certain newly constructed residences. The bill applies a similar requirement to facilitate the installation of electric vehicle charging systems by purchasers of new residences, both in traditional detached, single-family homes and also in buildings that contain owner-occupied condominium units. *(Note: This summary applies to the reengrossed version of this bill as introduced in the second house.)*
Status:	1/18/2018 Introduced In House - Assigned to Transportation & Energy 2/8/2018 House Committee on Transportation & Energy Refer Unamended to House Committee of the Whole 2/13/2018 House Second Reading Passed - No Amendments 2/14/2018 House Third Reading Passed - No Amendments 2/21/2018 Introduced In Senate - Assigned to Transportation 3/20/2018 Senate Committee on Transportation Postpone Indefinitely
Amendments:	
Bill Version:	Reengrossed

HB18-1128	Protections For Consumer Data Privacy
Comment:	
Position:	**Monitor**
Short Title:	Protections For Consumer Data Privacy
Sponsors:	C. Wist | J. Bridges / K. Lambert | L. Court
Summary:	Except for conduct in compliance with applicable federal, state, or local law, the bill requires public and private entities in Colorado that maintain paper or electronic documents (documents) that contain personal identifying information (personal information) to develop and maintain a written policy for the destruction and proper disposal of those documents. Entities that maintain, own, or license personal information, including those that use a nonaffiliated third party as a

service provider, shall implement and maintain reasonable security procedures for the personal information. The notification laws governing disclosure of unauthorized acquisitions of unencrypted and encrypted computerized data are expanded to specify who must be notified following such unauthorized acquisition and what must be included in such notification.
(Note: This summary applies to this bill as introduced.)

Status: 1/19/2018 Introduced In House - Assigned to State, Veterans, & Military Affairs
2/14/2018 House Committee on State, Veterans, & Military Affairs Refer Amended to Appropriations

Amendments: Amendments

Bill Version: Pre-Amended

HB18-1215 Safe Disposal Naturally Occur Radioactive Material

Comment:

Position: **Monitor**

Short Title: Safe Disposal Naturally Occur Radioactive Material

Sponsors: J. Arndt

Summary: Current law allows the state board of health to adopt rules concerning the disposal of naturally occurring radioactive materials (NORM) only after the federal environmental protection agency (EPA) has adopted rules concerning the disposal of NORM. The EPA has not adopted the rules. The bill:

- ★ Requires the state board to adopt rules for the disposal of NORM and technologically enhanced NORM (TENORM); and
- ★ While the state board is conducting its rule-making investigation, temporarily prohibits the disposal of oil and gas exploration and production waste (EP waste) with potentially high concentrations of radionuclides at a facility that is not specifically approved and designated to receive the waste unless:
- ★ The generator of the waste has sampled and tested the EP waste on a per-shipment basis or in a representative and statistically valid manner approved by the state board; and
- ★ The results of the test indicate that the EP waste contains low levels of TENORM.

A generator of EP waste must file reports with the state board.

(Note: This summary applies to this bill as introduced.)

Status:	2/5/2018 Introduced In House - Assigned to Health, Insurance, & Environment 3/22/2018 House Committee on Health, Insurance, & Environment Refer Amended to Finance
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1239 Sunset Environmental Management System Permit Program

Comment:	
Position:	**Monitor**
Short Title:	Sunset Environmental Management System Permit Program
Sponsors:	L. Landgraf / R. Scott
Summary:	**Sunset Process - House Health, Insurance, and Environment Committee.** The bill implements the recommendations of the sunset review and report on the environmental management system permit program by allowing the program to repeal. *(Note: This summary applies to the reengrossed version of this bill as introduced in the second house.)*
Status:	2/12/2018 Introduced In House - Assigned to Health, Insurance, & Environment 2/22/2018 House Committee on Health, Insurance, & Environment Refer Unamended to House Committee of the Whole 2/27/2018 House Second Reading Laid Over to 02/28/2018 - No Amendments 2/28/2018 House Second Reading Passed - No Amendments 3/1/2018 House Third Reading Laid Over to 03/02/2018 - No Amendments 3/2/2018 House Third Reading Laid Over to 03/05/2018 - No Amendments 3/5/2018 House Third Reading Passed - No Amendments 3/12/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 3/22/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended - Consent Calendar to Senate Committee of the Whole 3/27/2018 Senate Second Reading Passed - No Amendments 3/28/2018 Senate Third Reading Passed - No Amendments 4/2/2018 Signed by the Speaker of the House 4/3/2018 Sent to the Governor 4/3/2018 Signed by the President of the Senate

Amendments:

Bill Version: Final Act

HB18-1270 **Public Utilities Commission Evaluation Of Energy Storage Systems**

Comment:

Position: **Monitor**

Short Title: Public Utilities Commission Evaluation Of Energy Storage Systems

Sponsors: C. Hansen | J. Becker / J. Tate

Summary: The bill directs the public utilities commission to adopt rules establishing mechanisms for the procurement of energy storage systems by investor-owned electric utilities, based on an analysis of costs and benefits as well as factors such as grid reliability and a reduction in the need for additional peak generation capacity. The information supplied by the utilities must include appropriate data and must specify interconnection points to enable independent evaluation.

(Note: This summary applies to the reengrossed version of this bill as introduced in the second house.)

Status: 3/6/2018 Introduced In House - Assigned to Transportation & Energy
3/22/2018 House Committee on Transportation & Energy Refer Unamended to House Committee of the Whole
3/27/2018 House Second Reading Laid Over to 03/28/2018 - No Amendments
3/28/2018 House Second Reading Laid Over to 03/29/2018 - No Amendments
3/29/2018 House Second Reading Laid Over to 04/03/2018 - No Amendments
4/3/2018 House Second Reading Laid Over to 04/04/2018 - No Amendments
4/4/2018 House Second Reading Passed with Amendments - Floor
4/5/2018 House Third Reading Passed - No Amendments
4/5/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy

Amendments: Amendments

Bill Version: Reengrossed

HB18-1271 Public Utilities Commission Electric Utilities Economic Development Rates

Comment:

Position: Monitor

Short Title: Public Utilities Commission Electric Utilities Economic Development Rates

Sponsors: M. Gray | Y. Willett / J. Tate

Summary: The bill allows the public utilities commission to approve, and electric utilities to charge, economic development rates, which are lower rates for commercial and industrial users who locate or expand their operations in Colorado so as to increase the demand by at least 3 megawatts. To qualify for the economic development rates, these users must demonstrate that the cost of electricity is a critical consideration in their decision where to locate or expand their business and that the availability of lower rates is a substantial factor. The rates may be offered for up to 10 years.

The bill also authorizes the expansion of a voluntary renewable energy program or service offering as necessary to meet the needs of a commercial or industrial customer that makes a capital investment of $250 million or more, requires the expansion in order to remain as a customer of a utility, or is a new customer.

Utilities that offer economic development rates shall not cross-subsidize the economic development rates by raising rates on other customers, and a utility bears the burden of proof on this issue in any proceeding before the commission.

(Note: This summary applies to this bill as introduced.)

Status: 3/6/2018 Introduced In House - Assigned to Transportation & Energy
4/5/2018 House Committee on Transportation & Energy Refer Amended to House Committee of the Whole
4/10/2018 House Second Reading Passed with Amendments - Committee

Amendments: Amendments

Bill Version: Pre-Amended

HB18-1274 Reduce Greenhouse Gas Emissions by 2050

Comment:

Position: Monitor

Short Title: Reduce Greenhouse Gas Emissions by 2050

Sponsors: K. Becker | J. Bridges / A. Kerr

Summary: The bill requires that, by the year 2050, statewide greenhouse gas emissions be reduced by at least 80% of the levels of greenhouse gas emissions that existed in the year 2005.

(Note: This summary applies to the reengrossed version of this bill as introduced in the second house.)

Status: 3/7/2018 Introduced In House - Assigned to Transportation & Energy
3/21/2018 House Committee on Transportation & Energy Refer Unamended to House Committee of the Whole
3/26/2018 House Second Reading Laid Over to 03/27/2018 - No Amendments
3/27/2018 House Second Reading Laid Over to 03/28/2018 - No Amendments
3/28/2018 House Second Reading Laid Over to 03/29/2018 - No Amendments
3/29/2018 House Second Reading Laid Over to 04/02/2018 - No Amendments
4/2/2018 House Second Reading Passed - No Amendments
4/3/2018 House Third Reading Passed - No Amendments
4/3/2018 Introduced In Senate - Assigned to State, Veterans, & Military Affairs + Agriculture, Natural Resources, & Energy + Transportation

Amendments:

Bill Version: Reengrossed

HB18-1281 Public Utilities Commission Ethics And Improved Public Information Reporting

Comment:

Position: Monitor

Short Title: Public Utilities Commission Ethics And Improved Public Information Reporting

Sponsors: D. Esgar

Summary: **Section 2** of the bill prohibits a person from serving on the public utilities commission if he or she:

- ★ Has, within the immediately preceding 4 years, served as an officer or director of a regulated utility; or

★ Has or acquires any official relation to, or financial interest in, a regulated utility.

Section 3 encourages the director of the commission to assign employees to temporary training and development sessions with other state agencies, particularly those with which the commission has frequent interaction, to improve the employees' substantive expertise and familiarity with the operations of those agencies. Section 3 also requires the director to keep written and audio records of the commission's proceedings and make them publicly available online.

In addition, section 3 expressly authorizes the executive director of the department of regulatory agencies (of which the commission is a part) to request that the state auditor conduct performance audits of the commission and its staff and operations.

Section 4 directs the commission to adopt rules concerning conflicts of interest, incompatible activities, and ex parte communications.

Section 1 makes conforming amendments.
(Note: This summary applies to this bill as introduced.)

Status: 3/7/2018 Introduced In House - Assigned to Transportation & Energy
4/4/2018 House Committee on Transportation & Energy Refer Unamended to Finance

Amendments:

Bill Version: Introduced

HB18-1297 **Climate Change Preparedness And Resiliency**

Comment:

Position: **Monitor**

Short Title: Climate Change Preparedness And Resiliency

Sponsors: F. Winter | B. Pettersen / K. Donovan

Summary: The bill adopts the following greenhouse gas emission reduction goals:

★ Statewide greenhouse gas emissions should be reduced by 26% by 2025 when compared with 2005 levels; and
★ Carbon dioxide emissions from electrical generation, when compared with 2012 levels, should be reduced by 25% by 2025 and by 30% by 2030.

The Colorado resiliency and recovery office in the division of local government in the department of local affairs is required to, on an ongoing basis:

- ★ Collect and analyze data regarding the economic and environmental impacts of not addressing climate change and calculate the economic costs of climate change;
- ★ Develop a model to estimate the future impacts of climate change on Colorado;
- ★ Analyze the results of the modeling on regional and Colorado-specific climatic conditions currently and the expected future conditions under a variety of climate change scenarios;
- ★ Update the Colorado resiliency framework, taking into account the goals, the rules, and the data and analysis; and
- ★ Develop tools and resources to support locally led climate resilience initiatives.

(Note: This summary applies to this bill as introduced.)

Status: 3/16/2018 Introduced In House - Assigned to Transportation & Energy
3/21/2018 House Committee on Transportation & Energy Refer Unamended to Appropriations

Amendments:

Bill Version: Introduced

HB18-1345 **Electric Transmission Lines Right Of First Refusal**

Comment: **CAMU voted to support PRPA efforts on ROFR legislation**

Position: **Support**

Short Title: Electric Transmission Lines Right Of First Refusal

Sponsors: J. Arndt | C. Hansen / D. Coram | D. Moreno

Summary: The federal energy regulatory commission requires each public utility transmission provider to participate in a regional transmission planning process to produce a regional transmission plan. If construction of an electric transmission line (line) in Colorado has been approved in a regional transmission plan or by another applicable federal regional transmission planning requirement, the bill affords an incumbent electric utility owning the existing transmission facilities to which the line will connect up to 180 days after the line has been approved to give written notice to the public utilities commission (commission) that the incumbent electric utility intends to construct, own, and maintain the line. If the incumbent electric utility does not provide notice to the commission, the incumbent electric utility surrenders its right of first refusal to

construct, own, and maintain the line. If the incumbent electric utility provides the notice, the incumbent electric utility, if it is subject to the commission's regulation, shall, within 24 months after filing the notice, file an application with the commission for a certificate of public convenience and necessity to construct the line.
(Note: This summary applies to this bill as introduced.)

Status: 3/27/2018 Introduced In House - Assigned to Transportation & Energy

Amendments:

Bill Version: Introduced

SB18-003 Colorado Energy Office

Comment:

Position: **Monitor**

Short Title: Colorado Energy Office

Sponsors: R. Scott / C. Hansen | J. Becker

Summary: The Energy Office has negotiated compromise language with Senate sponsors and the measure passed the Senate Committee with bipartisan support. Discussion will now focus on funding solutions. However, we are anticipating additional challenges to making changes to the CEO mission once the bill reaches the House.

Status: 1/10/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy
1/18/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Amended to Appropriations
2/14/2018 Senate Committee on Appropriations Refer Unamended to Senate Committee of the Whole
2/16/2018 Senate Second Reading Laid Over Daily - No Amendments
2/21/2018 Senate Second Reading Passed with Amendments - Committee, Floor
2/22/2018 Senate Third Reading Passed - No Amendments
2/27/2018 Introduced In House - Assigned to Transportation & Energy

Amendments: Amendments

Bill Version: Pre-Amended

SB18-009 Allow Electric Utility Customers Install Energy Storage Equipment

Comment:	**The bill only applies to IOUs.**
Position:	**Monitor**
Short Title:	Allow Electric Utility Customers Install Energy Storage Equipment
Sponsors:	S. Fenberg | K. Priola / F. Winter | P. Lawrence
Summary:	The bill declares that consumers of electricity have a right to install, interconnect, and use energy storage systems on their property, and that this will enhance the reliability and efficiency of the electric grid, save money, and reduce the need for additional electric generation facilities. The bill directs the Colorado public utilities commission to adopt rules governing the installation, interconnection, and use of customer-sited energy storage systems. *(Note: This summary applies to the reengrossed version of this bill as introduced in the second house.)*
Status:	1/10/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 1/25/2018 Senate Committee on Agriculture, Natural Resources, & Energy Lay Over Unamended - Amendment(s) Failed 2/1/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Amended to Senate Committee of the Whole 2/7/2018 Senate Second Reading Passed with Amendments - Committee, Floor 2/8/2018 Senate Third Reading Passed - No Amendments 2/13/2018 Introduced In House - Assigned to Transportation & Energy 2/21/2018 House Committee on Transportation & Energy Refer Unamended to House Committee of the Whole 2/26/2018 House Second Reading Passed - No Amendments 2/27/2018 House Third Reading Laid Over to 02/28/2018 - No Amendments 2/28/2018 House Third Reading Laid Over to 03/01/2018 - No Amendments 3/1/2018 House Third Reading Laid Over to 03/02/2018 - No Amendments 3/2/2018 House Third Reading Laid Over to 03/05/2018 - No Amendments 3/5/2018 House Third Reading Passed - No Amendments 3/9/2018 Signed by the President of the Senate 3/12/2018 Sent to the Governor 3/12/2018 Signed by the Speaker of the House 3/22/2018 Governor Signed
Amendments:	Amendments

Bill Version: Signed Act

SB18-047 Repeal Tax Credits Innovative Vehicles

Comment:

Position: **Monitor**

Short Title: Repeal Tax Credits Innovative Vehicles

Sponsors: V. Marble / L. Saine

Summary: The bill repeals the income tax credits for innovative motor vehicles and innovative trucks for purchase and leases entered into on or after January 1, 2019.

For the 2018-19 state fiscal year and each fiscal year thereafter through the 2020-21 state fiscal year, the bill requires the state controller to credit an amount of tax revenue estimated to be retained by the repeal of the income tax credits to the highway users tax fund.

(Note: This summary applies to the reengrossed version of this bill as introduced in the second house.)

Status: 1/10/2018 Introduced In Senate - Assigned to Finance
2/6/2018 Senate Committee on Finance Refer Unamended to Appropriations
3/13/2018 Senate Committee on Appropriations Refer Amended to Senate Committee of the Whole
3/15/2018 Senate Second Reading Laid Over to 03/20/2018 - No Amendments
3/20/2018 Senate Second Reading Laid Over Daily - No Amendments
3/21/2018 Senate Second Reading Passed with Amendments - Committee
3/22/2018 Senate Third Reading Laid Over Daily - No Amendments
3/23/2018 Senate Third Reading Passed - No Amendments
3/27/2018 Introduced In House - Assigned to Transportation & Energy

Amendments: Amendments

Bill Version: Pre-Amended

SB18-064 Require 100% Renewable Energy By 2035

Comment:

	This bill is a messaging bill and CAMU will oppose. The rate setting language pertaining to municipal net metering violates the State Constitution.
Position:	**Oppose**
Short Title:	Require 100% Renewable Energy By 2035
Sponsors:	M. Jones / M. Foote
Summary:	The bill updates the renewable energy standard to require that all electric utilities, including cooperative electric associations and municipally owned utilities, derive their energy from 100% renewable sources by 2035. It also eliminates the installation caps on customer DG and infringes upon municipal rate making in the Net Metering language.
Status:	1/12/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 2/1/2018 Senate Committee on Agriculture, Natural Resources, & Energy Postpone Indefinitely
Amendments:	
Bill Version:	Introduced

SB18-117 Collect Long-term Climate Change Data

Comment:	
Position:	**Monitor**
Short Title:	Collect Long-term Climate Change Data
Sponsors:	K. Donovan / C. Hansen
Summary:	The bill requires the department of public health and environment to collect and report on greenhouse gas emissions data. *(Note: This summary applies to this bill as introduced.)*
Status:	1/29/2018 Introduced In Senate - Assigned to State, Veterans, & Military Affairs 2/13/2018 Senate Committee on State, Veterans, & Military Affairs Postpone Indefinitely
Amendments:	
Bill Version:	Introduced

SB18-128 Legislative Approval For State Agency Fee Increase

Comment:

Position: **Monitor**

Short Title: Legislative Approval For State Agency Fee Increase

Sponsors: B. Gardner / L. Liston

Summary: Beginning September 1, 2018, the bill requires all state agency fee increases to start on July 1 of a given year, with the exception of an emergency fee increase. A state agency shall not increase a fee unless:

- On or before the February 1 prior to the starting date of the increase, the state agency submits a fee increase proposal, which includes specified information, to the joint budget committee;
- A majority of the members on the joint budget committee approve the fee increase as it is described in the fee increase proposal and without alteration; and
- A grant of authority to the state agency for the fee increase is included in authorizing legislation, which is enacted and becomes law.

A state agency may adopt an emergency fee increase that does not meet these conditions, but on or before the next February 1 the state agency is required to submit a fee increase proposal for the emergency fee. If this fee increase proposal is approved by the joint budget committee and included in authorizing legislation, then the state agency may continue to impose the increased fee.

If a grant of authority for the associated emergency fee increase is not included in the next possible authorizing legislation, then the state agency is required to lower the fee to the amount it was prior to the increase and refund the increased amount of the fee to the fee payer. If a refund is impossible, then the state agency is required to immediately reduce the fee from its original amount by an amount equal to the emergency fee increase and keep it at that level until the amount of the lost revenue offsets the additional revenue from the increased fee. Thereafter, the fee may return to its original amount.

If a state agency adopts a fee increase after April 1, 2018, but prior to September 1, 2018, the fee increase is treated like an emergency fee for which the state agency is required to submit a fee increase proposal.

(Note: This summary applies to the reengrossed version of this bill as introduced in the second house.)

Status: 1/29/2018 Introduced In Senate - Assigned to Finance
2/13/2018 Senate Committee on Finance Refer Unamended to Senate Committee of the Whole

2/16/2018 Senate Second Reading Laid Over Daily - No Amendments
2/20/2018 Senate Second Reading Passed - No Amendments
2/21/2018 Senate Third Reading Passed - No Amendments
2/26/2018 Introduced In House - Assigned to State, Veterans, & Military Affairs
3/14/2018 House Committee on State, Veterans, & Military Affairs Postpone Indefinitely

Amendments:

Bill Version: Reengrossed

SB18-167 **Enforce Requirements 811 Locate Underground Facilities**

Comment:

Position: **Neutral**

Short Title: Enforce Requirements 811 Locate Underground Facilities

Sponsors: R. Scott | K. Donovan / F. Winter | L. Saine

Summary: Current law requires a person, before conducting an excavation, to contact a nonprofit notification association (comprised of all owners and operators of underground facilities) by dialing '811' to learn the location of underground facilities in the excavation project area. The owners and operators must then accurately mark the location of their facilities. Violations of the excavation damage prevention law are enforced exclusively through civil actions initiated by damaged parties to collect specified civil penalties and damages. In 2016, the United States department of transportation's pipeline and hazardous materials safety administration (PHMSA) conducted an adequacy evaluation of Colorado's enforcement of its excavation damage prevention law and determined that the enforcement is inadequate, which may eventually result in the withholding of federal funds from Colorado.

The bill creates the underground damage prevention safety commission (commission) as an independent agency within the department of labor and employment. The commission has rule-making and enforcement authority regarding the excavation damage prevention law and is required to enter into a memorandum of understanding with the notification association to facilitate implementation and administration of the law. The notification association is required to provide administrative support to the commission in performing its duties.

A review committee of the commission initially determines whether a violation of the law has occurred and, if appropriate, recommends remedial action, potentially including a fine. Fines

range from $250 for a single minor violation within the previous 12 months to $75,000 for a fourth major violation within the previous 12 months. The full commission is bound by the review committee's determination of facts but determines the final agency action regarding alleged violations. Fines are credited to the damage prevention fund, which the commission will use to develop educational programming, including by making grants, that is designed to improve worker and public safety relating to excavation and underground facilities.

Current law allows only an excavator to submit a location request to the notification association. The bill authorizes a licensed professional engineer designing excavation to submit a location request. The engineer is required to ensure that the engineering plans meet certain standards established by the American Society of Civil Engineers for defining the accuracy of an underground facility location. The notification association will collect a fee for each location request, which is deposited in the safety commission fund and used to pay the commission's expenses.

Current law creates 2 tiers of membership in the notification association. Tier 2 members are limited members with limited benefits and include certain special districts, local governments, cable television providers, and small telecommunications providers; tier 1 members are full members with full benefits, and tier 1 consists of all other owners and operators. If, after receiving a location request, the notification association determines that a tier 1 member owns or operates the underground facilities, the notification association contacts the tier 1 member to arrange for the marking of the underground facilities. If a tier 2 member owns or operates the underground facilities, the excavator must contact the tier 2 member to arrange for the marking of the underground facilities. Effective January 1, 2021, all underground facility owners and operators are full members of the notification association with full benefits, and excavators will no longer need to contact the owners or operators to arrange for the marking.

All new underground facilities installed on or after January 1, 2020, must be electronically locatable when installed. Home rule local governments are not subject to the commission's enforcement authority, but the governing body of a home rule local government is required to either adopt a similar enforceable damage prevention safety program or waive its exemption and delegate its damage prevention enforcement authority to the commission.

Information regarding the location of underground facilities is exempt from the 'Colorado Open Records Act', pursuant to the existing exemption for specialized details of critical infrastructure.

(Note: This summary applies to this bill as introduced.)

Status: 2/12/2018 Introduced In Senate - Assigned to Transportation
2/22/2018 Senate Committee on Transportation Refer Amended to Finance
3/1/2018 Senate Committee on Finance Refer Amended to Appropriations

Amendments: Amendments

Bill Version: Pre-Amended

SB18-216 Alternative Fuel Vehicles Public Utilities

Comment:

Position: **Monitor**

Short Title: Alternative Fuel Vehicles Public Utilities

Sponsors: K. Priola | A. Williams

Summary: Currently, resellers of electricity and natural gas may provide charging ports or fueling stations for motor vehicles as unregulated services. The bill authorizes public utilities to provide these services as regulated or unregulated services and allows cost recovery.

The bill allows a utility to apply to build facilities to support alternative fuel vehicles. Standards are set for approval. When a facility is built, the rate and charges for the services:

- ★ May allow a return on any investment made by an electric or natural gas public utility at the utility's weighted average cost of capital at the public utility's most recent rate of return on equity approved by the public utilities commission; and
- ★ Must be recovered from all customers of an electric or natural gas public utility in a manner that is similar to the recovery of distribution system investments.

(Note: This summary applies to this bill as introduced.)

Status: 3/19/2018 Introduced In Senate - Assigned to Transportation
3/27/2018 Senate Committee on Transportation Postpone Indefinitely

Amendments:

Bill Version: Introduced

SB18-226 Prohibit Colorado Involvement Climate Alliance

Comment:

Position:	**Monitor**
Short Title:	Prohibit Colorado Involvement Climate Alliance
Sponsors:	K. Lundberg | J. Cooke
Summary:	The bill prohibits the governor from involving Colorado in any state-level climate collaboration that attempts to reduce carbon dioxide emissions or to otherwise promote the goals of the Paris Agreement within the United Nations Framework Convention on Climate Change. *(Note: This summary applies to this bill as introduced.)*
Status:	4/2/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy
Amendments:	
Bill Version:	Introduced

SJM18-002 Eliminate Energy Subsidies

Comment:	
Position:	**Monitor**
Short Title:	Eliminate Energy Subsidies
Sponsors:	M. Jones / M. Foote
Summary:	*** No bill summary available ***
Status:	1/12/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 1/25/2018 Senate Committee on Agriculture, Natural Resources, & Energy Postpone Indefinitely
Amendments:	
Bill Version:	Introduced

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Attachment B

PLEASE SUPPORT HB18-1345: ELECTRIC TRANSMISSION LINES RIGHT OF FIRST REFUSAL

(Reps. Arndt & Hansen; Sens. Coram & Moreno)

BACKGROUND: A group of Colorado utility providers are evaluating new regional planning opportunities to reduce cost, promote efficiency across our state's transmission system and provide access to competitive wholesale energy markets.

This legislation proactively clarifies that local utilities in Colorado retain first right to construct and maintain transmission on their systems within a federally-approved transmission plan; thereby, protecting the interests of Colorado energy customers within prospective regional markets.

The need for state legislation – Local v. Federal Control

- In 2011, the Federal Energy Regulatory Commission (FERC) issued Order No. 1000, which directs electric transmission providers to participate in regional planning. In doing so, the federal order removed a local utility's first right to construct transmission projects within a regional plan, but it will defer to state law if it exists – hence the need for a bill.

Cost, Quality, Workforce and Expertise

The integrity of the state's transmission system is managed by utilities across Colorado that have decades of local experience building and maintaining transmission on their systems.

- Absent legislation, transmission costs under FERC 1000 are set by federal criteria imposed on Colorado's energy customers.

- Absent legislation, construction and maintenance on future sections of the state's energy transmission system could be left to companies regulated elsewhere, and who are not ultimately accountable for end use service to Colorado energy customers.

- Allowing out-of-state companies to "cherry pick" bids among only certain projects may create a patchwork of additional cost and responsibility on local systems.

- Local utilities understand the many nuances of their system, as well as the quality of materials and workforce needed to construct and maintain it.

- This legislation ensures a safe, reliable and cost-effective "backbone" when entering modern, competitive wholesale energy markets.

- This legislation maintains state oversight and accountability, including - for rate-regulated utilities - a statutory Certificate of Public Convenience and Necessity (CPCN) granted by the PUC. A CPCN requires a robust public process, including a full analysis of cost and public hearings, as well consideration to impacts on customers and local government authority on siting facilities. Absent legislation, a third party developer could build an RTO-approved project in Colorado without any state approval or local consideration of cost impact to customers.

Contacts: Platte River Power Authority - Sandra Solin (303-810-1914) ● Public Service Company of Colorado - Wes Parham (303-596-5938)/Michelle Stermer (720-289-5070) ● Colorado Assoc. Municipal Utilities - Dan Hodges (719-323-4976) ● IREA - Jaclyn Terwey (720-413-0353)

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LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 2
MEETING DATE: 4/9/2018
SUBMITTED BY: Ryan Van Pelt
STAFF TITLE: Civil Engineer II

ITEM TITLE:

Water Legislative Update

DESCRIPTION:

This item is intended to give a brief update on water-related legislation being contemplated by the Colorado General Assembly. Loveland Water and Power relies primarily on the Colorado Water Congress (CWC) for information on water-related legislation.

SUMMARY:

The Second Regular Session of the 71st Colorado General Assembly convened on January 10, 2018 and will run through May 9, 2018. The Colorado Water Congress, through its State Affairs Committee, is currently tracking Colorado state house and senate bills related to water. This committee meets each Monday morning during the legislative session. After a bill is introduced, they cover that bill at the next committee meeting to learn about it. Usually, this committee votes on whether to take a position on the bill at the following State Affairs Committee meeting. The voting may be delayed another week if more time is needed on a bill. For CWC to take a position on a bill, the bill must have at least a 2/3 vote from the State Affairs Committee. Once CWC takes a position, they then advocate on behalf of their members to policy makers. Of the state bills that CWC takes a position, their success rate in either killing bills that they oppose or passing bills that they support is eight-five percent.

While the state legislature is in session, each month in the LUC packet there will be a Bill Summary Sheet (See Attachment A) which gives a brief summary of each bill being tracked by CWC and a Bill Status Sheet (See attachment B) that will show how far along each bill is that CWC has taken a position to support, oppose or monitor. For additional information on a particular bill, please click on the hyperlink in the left most column of the Bill Status Report. Once a bill is killed in a committee or lost in a floor vote, it will be removed from this list.

The Colorado Water Congress, through its Federal Affairs Committee, provides the principal voice of Colorado's water community on federal issues that may affect Colorado or that are important to its members. The Federal Affairs Committee works closing with the National Water Resource Association (NWRA), a federation of state water organizations concerned with appropriate management, conservation and use of water resources. In the Federal Affairs section of the CWC website it lists a brief description of some key federal legislative items they are tracking such as infrastructure funding, water transfer rule legislation, endangered species, and the water rights protection act. They are also interested in the following Colorado priorities: U.S. Bureau of Reclamation Colorado River Basin Study, Colorado River Drought Contingency Planning, and National Resource Conservation Service (NRCS) Funding for Manual Snow Course Measurement.

This year, the Colorado Water Congress Federal Affairs Committee held its annual CWC Water Issues Briefing on Monday, April 9 in Washington D.C. The Committee briefed Colorado's Congressional Delegation on the state's 2018 Federal Priorities, and further strengthened CWC's relationship with legislative staff.

The Committee anticipated there would be at least one representative from each office at this year's meeting.

The Colorado Municipal League provides a voice to Colorado's cities and towns.

Please visit www.cowatercongress.org if you would like additional information regarding federal or state bills related to water and www.cml.org for state and federal bills related to municipal cities and towns.

RECOMMENDATION:

Information item only. No action required.

ATTACHMENTS:

- Attachment A: CWC, State Affairs Committee, Water Bill Status Sheet
- Attachment B: Colorado Water Bill Summary

Colorado Water Congress 2018 Bill Status Sheet

			First House					Second House							
Bill No.	Short Title	CWC Position	Introduced	1st Committee	2nd Committee	2nd Reading	3rd Reading	Introduced	1st Committee	2nd Committee	2nd Reading	3rd Reading	First House Repass	Conference Committee	Governor
HB18-1008	Mussel-Free Colorado Act	16-Jan	10-Jan	22-Jan	31-Jan	26-Feb	27-Feb	5-Mar	8-Mar F	27-Mar Ap	2-Apr	3-Apr	5-Apr		
HB18-1053	Reclaimed Water Use for Marijuana Cultivation	16-Jan	10-Jan	28-Jan Ag	Ap										
HB18-1069	Reclaimed Water Use for Toilet Flushing	22-Jan	10-Jan	29-Jan	16-Mar	20-Mar	21-Mar	26-Mar	28-Mar Ag	10-Apr Ap					
HB18-1073	Water District Ability Contract Water Assets	5-Feb	16-Jan	29-Jan	7-Feb	12-Feb	13-Feb	21-Feb	1-Mar Ag		6-Mar	8-Mar	14-Mar		22-Mar
HB18-1093	Reclaimed Water Use for Edible Crops	5-Feb	18-Jan	29-Jan	23-Feb Ap	27-Feb	5-Mar	12-Mar	22-Mar Ap	3-Apr Ap	4-Apr	5-Apr			
HB18-1147	Sunset Process Weather Modification	5-Mar	31-Jan	22-Feb HIE	16-Mar	20-Mar	21-Mar	26-Mar	28-Mar Ag	10-Apr Ap					
HB18-1151	Colorado Water Conservation Board Approve Deficit Irrigation Pilot Projects	5-Mar	31-Jan	26-Feb Ag	1-Mar	5-Mar	6-Mar	12-Mar	SVMA						
HB18-1199	Aquifer Storage-and-recovery Plans	26-Feb	5-Feb	26-Feb Ag	1-Mar	5-Mar	6-Mar	12-Mar	22-Mar Ag	28-Mar	28-Mar	29-Mar			4-Apr
HB18-1201	Severance Tax Voter-approved Revenue Change	26-Feb	5-Feb	9-Apr F											
HB18-1215	Safe Disposal Naturally Occur Radioactive Material		5-Feb	22-Mar HIE	18-Apr F										
HB18-1278	Apprentice Utilization in Public Projects	19-Mar	7-Mar	20-Mar BLEW		26-Mar	2-Apr	2-Apr	16-Apr SVMA						

Attachment A

			First House					Second House							
Bill No.	Short Title	CWC Position	Introduced	1st Committee	2nd Committee	2nd Reading	3rd Reading	Introduced	1st Committee	2nd Committee	2nd Reading	3rd Reading	First House Repass	Conference Committee	Governor
HB18-1301	Protect Water Quality Adverse Mining Impacts	2-Apr	19-Mar	2-Apr Ag	4-Apr F; Ap										
HB18-1338	Reduced Revenue Severance Tax Operational Fund Transfers	2-Apr	26-Mar	27-Mar Ap		28-Mar	29-Mar	2-Apr	3-Apr Ap		4-Apr	5-Apr			
SB18-019	Expanded Duration for CWRPDA Revolving Loans	16-Jan	10-Jan	18-Jan Ag		23-Jan	24-Jan	26-Jan	12-Feb	15-Feb		16-Feb			1-Mar
SB18-038	Reclaimed Water Use on Industrial Hemp	16-Jan	10-Jan	18-Jan Ag	Ap										
SB18-041	Authorize Water Use Incidental Sand & Gravel Mines	16-Jan	10-Jan	18-Jan Ag		23-Jan	24-Jan	26-Jan	12-Feb	15-Feb		16-Feb			1-Mar
SB18-116	Capitol Identification Card	19-Mar	29-Jan	13-Feb F	6-Mar Ap	13-Mar	14-Mar	15-Mar	SVMA						
SB18-134	Public Utilities Commission Deregulate Nonprofit Water Utilities	20-Feb	29-Jan	8-Feb Ag	13-Feb	13-Feb	14-Feb	20-Feb	12-Mar Ag		15-Mar	16-Mar			2-Apr
SB18-143	Parks and Wildlife Measures to Increase Revenue	26-Feb	29-Jan	13-Feb	6-Mar Ap	8-Mar	12-Mar	15-Mar	26-Mar Ag	2-Apr F; Ap					
SB18-167	Enforce Requirements 811 Locate Underground Facilities		12-Feb	22-Feb TE; 1-Mar F	3-Apr Ap										
SB18-170	Reservoir Releases for Fish and Wildlife Mitigation	26-Feb	21-Feb	28-Feb Ag		5-Mar	8-Mar	13-Mar	19-Mar Ag	22-Mar	26-Mar	29-Mar			
SB18-176	Board Meeting Dates Southwestern Water Conservation District	5-Mar	21-Feb	28-Feb Ag		5-Mar	8-Mar	12-Mar	19-Mar Ag		26-Mar	2-Apr			

			First House					Second House							
Bill No.	**Short Title**	**CWC Position**	**Introduced**	**1st Committee**	**2nd Committee**	**2nd Reading**	**3rd Reading**	**Introduced**	**1st Committee**	**2nd Committee**	**2nd Reading**	**3rd Reading**	**First House Repass**	**Conference Committee**	**Governor**
SB18-218	**Colorado Water Conservation Board Construction Fund Project**	2-Apr	26-Mar	28-Mar Ag	10-Apr Ap										
SJM18-004	**Memorialize Former Congressman Ray Kogovsek**	12-Feb	5-Feb				6-Feb	6-Feb				9-Feb			12-Feb
SJR18-003	**Water Projects Eligibility Lists**	16-Jan	12-Jan				17-Jan	26-Jan					2-Feb		13-Feb

BILL STATUS	ABBREVIATIONS
Bill scheduled for action at next SA meeting (yellow)	Ag = Agriculture and Natural Resources Committee
Bill not calendared (no fill)	Ap = Appropriations Committee

Bill Passed, date of action (green)	BLEW = Business, Labor, Economic and Workforce Development Committee
Bill no longer active (gray)	CC = Conference Committee
Bill Postponed Indefinitely, Lost or Laid Over to end of session, date of action (orange)	F = Finance Committee
Bill did not go to second committee or no action required (black)	HIE= Health, Insurance, and Environment
	J = Judiciary
CWC POSITION	LG = Local Governement Committee
Bill scheduled for activity in CWC State Affairs (yellow)	SVMA = State, Veterans, and Military Affairs Committee
Support (green)	TE = Transportation and Energy Committee
Oppose (orange)	UA = Upon Adjournment
Amend (blue)	UR = Upon Recess
Monitor, Neutral, No Position	

Attachment B

Colorado Water Congress

HB18-1008	Mussel-free Colorado Act
Position:	Support
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	D. Esgar | J. Arndt / K. Donovan | D. Coram
Status:	1/10/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 1/22/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Amended to Finance 1/31/2018 House Committee on Finance Refer Unamended to Appropriations 2/23/2018 House Committee on Appropriations Refer Unamended to House Committee of the Whole 2/26/2018 House Second Reading Special Order - Passed with Amendments - Committee 2/27/2018 House Third Reading Passed - No Amendments 3/5/2018 Introduced In Senate - Assigned to Finance 3/8/2018 Senate Committee on Finance Refer Amended to Appropriations 3/27/2018 Senate Committee on Appropriations Refer Unamended to Senate Committee of the Whole 3/29/2018 Senate Second Reading Laid Over Daily - No Amendments 4/2/2018 Senate Second Reading Passed with Amendments - Committee 4/3/2018 Senate Third Reading Passed - No Amendments 4/5/2018 House Considered Senate Amendments - Result was to Concur - Repass
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-10
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1053	Reclaimed Water Use For Marijuana Cultivation
Position:	Support
Calendar Notification:	NOT ON CALENDAR
News:	

Audio, Floors and Committees:	
Sponsors:	J. Arndt | C. Hansen / K. Donovan
Status:	1/10/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 1/22/2018 House Committee on Agriculture, Livestock, & Natural Resources Lay Over Unamended - Amendment(s) Failed 1/29/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Amended to Appropriations
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-10
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1069 Reclaimed Water Use For Toilet Flushing

Position:	**Support**
Calendar Notification:	Tuesday, April 10 2018 SENATE APPROPRIATIONS COMMITTEE 8:35 AM SCR 357 (1) in senate calendar.
News:	
Audio, Floors and Committees:	
Sponsors:	J. Arndt | D. Thurlow / D. Coram
Status:	1/10/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 1/29/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Amended to Appropriations 3/16/2018 House Committee on Appropriations Refer Amended to House Committee of the Whole 3/20/2018 House Second Reading Passed with Amendments - Committee 3/21/2018 House Third Reading Passed - No Amendments 3/26/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 3/28/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended to Appropriations
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-10
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1073 Water District Ability Contract Water Assets

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	M. Gray / B. Gardner
Status:	1/16/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources + Finance 1/29/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to Finance 2/7/2018 House Committee on Finance Refer Unamended to House Committee of the Whole 2/12/2018 House Second Reading Passed with Amendments - Floor 2/13/2018 House Third Reading Passed - No Amendments 2/21/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 3/1/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended - Consent Calendar to Senate Committee of the Whole 3/6/2018 Senate Second Reading Passed - No Amendments 3/7/2018 Senate Third Reading Laid Over Daily - No Amendments 3/8/2018 Senate Third Reading Passed - No Amendments 3/14/2018 Signed by the Speaker of the House 3/15/2018 Sent to the Governor 3/15/2018 Signed by the President of the Senate 3/22/2018 Governor Signed
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-16
Amendments:	Amendments
Bill Version:	Signed Act

HB18-1093 Reclaimed Water Use For Edible Crops

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	J. Arndt / D. Coram
Status:	1/18/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 1/29/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Amended to Appropriations 2/23/2018 House Committee on Appropriations Refer Amended to House Committee of the Whole

	2/27/2018 House Second Reading Laid Over to 02/28/2018 - No Amendments 2/28/2018 House Second Reading Passed with Amendments - Committee 3/1/2018 House Third Reading Laid Over to 03/02/2018 - No Amendments 3/2/2018 House Third Reading Laid Over to 03/05/2018 - No Amendments 3/5/2018 House Third Reading Passed - No Amendments 3/12/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 3/22/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended to Appropriations 4/3/2018 Senate Committee on Appropriations Refer Unamended - Consent Calendar to Senate Committee of the Whole 4/4/2018 Senate Second Reading Special Order - Passed - No Amendments 4/5/2018 Senate Third Reading Passed - No Amendments
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-18
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1147 Sunset Process Weather Modification

Position:	**Support**
Calendar Notification:	Tuesday, April 10 2018 SENATE APPROPRIATIONS COMMITTEE 8:35 AM SCR 357 (3) in senate calendar.
News:	
Audio, Floors and Committees:	
Sponsors:	J. Ginal | K. Ransom / D. Coram
Status:	1/31/2018 Introduced In House - Assigned to Health, Insurance, & Environment 2/22/2018 House Committee on Health, Insurance, & Environment Refer Unamended to Appropriations 3/16/2018 House Committee on Appropriations Refer Unamended to House Committee of the Whole 3/20/2018 House Second Reading Passed - No Amendments 3/21/2018 House Third Reading Passed - No Amendments 3/26/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 3/28/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended to Appropriations
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-31
Amendments:	
Bill Version:	Reengrossed

HB18-1151	Colorado Water Conservation Board Approve Deficit Irrigation Pilot Projects
Position:	**Neutral**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	J. Arndt | M. Catlin / L. Crowder
Status:	1/31/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 2/26/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Amended to House Committee of the Whole 3/1/2018 House Second Reading Laid Over to 03/02/2018 - No Amendments 3/2/2018 House Second Reading Laid Over to 03/05/2018 - No Amendments 3/5/2018 House Second Reading Passed with Amendments - Committee 3/6/2018 House Third Reading Passed - No Amendments 3/12/2018 Introduced In Senate - Assigned to State, Veterans, & Military Affairs 3/20/2018 Senate Committee on State, Veterans, & Military Affairs Postpone Indefinitely
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-31
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1199	Aquifer Storage-and-recovery Plans
Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	M. Catlin | B. McLachlan / D. Coram
Status:	2/5/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 2/26/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Amended to House Committee of the Whole 3/1/2018 House Second Reading Laid Over to 03/02/2018 - No Amendments 3/2/2018 House Second Reading Laid Over to 03/05/2018 - No Amendments 3/5/2018 House Second Reading Passed with Amendments - Committee 3/6/2018 House Third Reading Passed - No Amendments

	3/12/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 3/22/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended to Senate Committee of the Whole 3/27/2018 Senate Second Reading Laid Over Daily - No Amendments 3/28/2018 Senate Second Reading Passed - No Amendments 3/29/2018 Senate Third Reading Passed - No Amendments 4/4/2018 Sent to the Governor 4/4/2018 Signed by the President of the Senate 4/4/2018 Signed by the Speaker of the House
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-02-05
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1201 Severance Tax Voter-approved Revenue Change

Position:	**Deliberating**
Calendar Notification:	Monday, April 9 2018 Finance 1:30 p.m. Room LSB-A (2) in house calendar.
News:	
Audio, Floors and Committees:	
Sponsors:	D. Thurlow / D. Coram
Status:	2/5/2018 Introduced In House - Assigned to Finance + Appropriations
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-02-05
Amendments:	
Bill Version:	Introduced

HB18-1215 Safe Disposal Naturally Occur Radioactive Material

Position:	**Deliberating**
Calendar Notification:	Wednesday, April 18 2018 Finance Upon Adjournment Room LSB-A (2) in house calendar.
News:	
Audio, Floors and Committees:	

Sponsors:	J. Arndt
Status:	2/5/2018 Introduced In House - Assigned to Health, Insurance, & Environment 3/22/2018 House Committee on Health, Insurance, & Environment Refer Amended to Finance
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-02-05
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1278 Apprentice Utilization In Public Projects

Position:	**Monitor**
Calendar Notification:	Monday, April 16 2018 SENATE STATE, VETERANS, & MILITARY AFFAIRS COMMITTEE 1:30 PM SCR 357 (1) in senate calendar.
News:	Benavidez Bill Boosting Construction Jobs Passes House
Audio, Floors and Committees:	
Sponsors:	A. Benavidez / D. Moreno
Status:	3/7/2018 Introduced In House - Assigned to Business Affairs and Labor 3/20/2018 House Committee on Business Affairs and Labor Refer Amended to House Committee of the Whole 3/23/2018 House Second Reading Laid Over to 03/26/2018 - No Amendments 3/26/2018 House Second Reading Passed with Amendments - Committee 3/27/2018 House Third Reading Laid Over to 03/28/2018 - No Amendments 3/28/2018 House Third Reading Laid Over to 03/29/2018 - No Amendments 3/29/2018 House Third Reading Laid Over to 04/02/2018 - No Amendments 4/2/2018 House Third Reading Passed with Amendments - Floor 4/2/2018 Introduced In Senate - Assigned to State, Veterans, & Military Affairs
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-03-07
Amendments:	Amendments
Bill Version:	Pre-Amended

HB18-1301 Protect Water Quality Adverse Mining Impacts

Position:	**Monitor**
Calendar Notification:	NOT ON CALENDAR
News:	Making Clean Water a Higher Priority Legislation seeks to prevent environmental harm from new mining in Colorado

Audio, Floors and Committees:	
Sponsors:	D. Roberts | B. McLachlan
Status:	3/19/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 4/2/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to Finance 4/4/2018 House Committee on Finance Refer Unamended to Appropriations
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-03-19
Amendments:	
Bill Version:	Introduced

HB18-1338 Reduced Revenue Severance Tax Operational Fund Transfers

Position:	**Support**
Calendar Notification:	Monday, April 9 2018 CONSIDERATION OF SENATE AMENDMENTS TO HOUSE (5) in house calendar.
News:	
Audio, Floors and Committees:	
Sponsors:	B. Rankin / K. Lambert
Status:	3/26/2018 Introduced In House - Assigned to Appropriations 3/27/2018 House Committee on Appropriations Refer Unamended to House Committee of the Whole 3/28/2018 House Second Reading Special Order - Passed with Amendments - Floor 3/29/2018 House Third Reading Passed - No Amendments 4/2/2018 Introduced In Senate - Assigned to Appropriations 4/3/2018 Senate Committee on Appropriations Refer Amended to Senate Committee of the Whole 4/4/2018 Senate Second Reading Special Order - Passed with Amendments - Committee 4/5/2018 Senate Third Reading Passed - No Amendments 4/9/2018 House Considered Senate Amendments - Result was to Laid Over to 04/09/2018 4/9/2018 House Considered Senate Amendments - Result was to Not Concur - Request Conference Committee
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-03-26
Amendments:	Amendments
Bill Version:	Pre-Amended

SB18-019	**Expanded Duration For Colorado Water Resources And Power Development Authority Revolving Loans**
Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	K. Donovan | D. Coram / C. Hansen | J. Arndt
Status:	1/10/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 1/18/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended to Senate Committee of the Whole 1/23/2018 Senate Second Reading Passed - No Amendments 1/24/2018 Senate Third Reading Passed - No Amendments 1/26/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 2/12/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to House Committee of the Whole 2/15/2018 House Second Reading Passed - No Amendments 2/16/2018 House Third Reading Passed - No Amendments 2/22/2018 Signed by the President of the Senate 2/23/2018 Sent to the Governor 2/23/2018 Signed by the Speaker of the House 3/1/2018 Governor Signed
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-10
Amendments:	
Bill Version:	Signed Act

SB18-038	**Reclaimed Water Use On Industrial Hemp**
Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	K. Donovan | D. Coram / D. Esgar | Y. Willett
Status:	1/10/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 1/18/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Amended to Appropriations
Fiscal Notes:	Fiscal Note

Date Introduced:	2018-01-10
Amendments:	Amendments
Bill Version:	Pre-Amended

SB18-041 Authorize Water Use Incidental Sand And Gravel Mines

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	D. Coram | R. Baumgardner / L. Saine | J. Arndt
Status:	1/10/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 1/18/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Amended - Consent Calendar to Senate Committee of the Whole 1/23/2018 Senate Second Reading Passed with Amendments - Committee 1/24/2018 Senate Third Reading Passed - No Amendments 1/26/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 2/12/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to House Committee of the Whole 2/15/2018 House Second Reading Passed with Amendments - Committee 2/15/2018 House Second Reading Passed - No Amendments 2/16/2018 House Third Reading Passed - No Amendments 2/22/2018 Signed by the President of the Senate 2/23/2018 Sent to the Governor 2/23/2018 Signed by the Speaker of the House 3/1/2018 Governor Signed
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-10
Amendments:	Amendments
Bill Version:	Signed Act

SB18-116 Capitol Identification Card

Position:	**Monitor**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	J. Cooke / D. Williams | K. Van Winkle

Status:	1/29/2018 Introduced In Senate - Assigned to Finance 2/13/2018 Senate Committee on Finance Refer Amended to Appropriations 3/6/2018 Senate Committee on Appropriations Refer Amended to Senate Committee of the Whole 3/8/2018 Senate Second Reading Laid Over to 03/12/2018 - No Amendments 3/12/2018 Senate Second Reading Laid Over Daily - No Amendments 3/13/2018 Senate Second Reading Passed with Amendments - Committee, Floor 3/14/2018 Senate Third Reading Passed - No Amendments 3/15/2018 Introduced In House - Assigned to State, Veterans, & Military Affairs 4/4/2018 House Committee on State, Veterans, & Military Affairs Postpone Indefinitely
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-29
Amendments:	Amendments
Bill Version:	Pre-Amended

SB18-134 Public Utilities Commission Deregulate Nonprofit Water Utilities

Position:	**Monitor**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	J. Cooke / J. Arndt
Status:	1/29/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 2/8/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Amended - Consent Calendar to Senate Committee of the Whole 2/13/2018 Senate Second Reading Passed with Amendments - Committee 2/14/2018 Senate Third Reading Passed - No Amendments 2/20/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 3/12/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to House Committee of the Whole 3/15/2018 House Second Reading Passed - No Amendments 3/16/2018 House Third Reading Passed - No Amendments 3/21/2018 Signed by the President of the Senate 3/22/2018 Sent to the Governor 3/22/2018 Signed by the Speaker of the House 4/2/2018 Governor Signed
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-29

Amendments:	Amendments
Bill Version:	Signed Act

SB18-143 Parks And Wildlife Measures To Increase Revenue

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	Next Step for Relief for CO Parks & Wildlife Fee hike for Colorado hunting, fishing licenses and state parks clears Senate in unanimous vote
Audio, Floors and Committees:	
Sponsors:	S. Fenberg | D. Coram / J. Arndt | J. Wilson
Status:	1/29/2018 Introduced In Senate - Assigned to Finance 2/13/2018 Senate Committee on Finance Refer Amended to Appropriations 3/6/2018 Senate Committee on Appropriations Refer Unamended to Senate Committee of the Whole 3/8/2018 Senate Second Reading Passed with Amendments - Committee 3/9/2018 Senate Third Reading Laid Over Daily - No Amendments 3/13/2018 Senate Third Reading Passed - No Amendments 3/15/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 3/26/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to Finance 4/2/2018 House Committee on Finance Refer Unamended to Appropriations
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-01-29
Amendments:	Amendments
Bill Version:	Pre-Amended

SB18-167 Enforce Requirements 811 Locate Underground Facilities

Position:	**Deliberating**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	R. Scott | K. Donovan / F. Winter | L. Saine
Status:	2/12/2018 Introduced In Senate - Assigned to Transportation 2/22/2018 Senate Committee on Transportation Refer Amended to Finance 3/1/2018 Senate Committee on Finance Refer Amended to Appropriations
Fiscal Notes:	Fiscal Note

Date Introduced:	2018-02-12
Amendments:	Amendments
Bill Version:	Pre-Amended

SB18-170 Reservoir Releases For Fish And Wildlife Mitigation

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	J. Sonnenberg / C. Hansen | H. McKean
Status:	2/21/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 2/28/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Amended to Senate Committee of the Whole 3/5/2018 Senate Second Reading Passed with Amendments - Committee 3/6/2018 Senate Third Reading Laid Over to 03/08/2018 - No Amendments 3/8/2018 Senate Third Reading Passed - No Amendments 3/13/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 3/19/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to House Committee of the Whole 3/22/2018 House Second Reading Laid Over to 03/23/2018 - No Amendments 3/23/2018 House Second Reading Laid Over to 03/26/2018 - No Amendments 3/26/2018 House Second Reading Passed - No Amendments 3/27/2018 House Third Reading Laid Over to 03/28/2018 - No Amendments 3/28/2018 House Third Reading Laid Over to 03/29/2018 - No Amendments 3/29/2018 House Third Reading Passed - No Amendments 4/4/2018 Signed by the President of the Senate 4/6/2018 Signed by the Speaker of the House 4/9/2018 Sent to the Governor
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-02-21
Amendments:	Amendments
Bill Version:	Pre-Amended

SB18-176 Board Meeting Dates Southwestern Water Conservation District

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR

News:	
Audio, Floors and Committees:	
Sponsors:	D. Coram / B. McLachlan | M. Catlin
Status:	2/21/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 2/28/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended - Consent Calendar to Senate Committee of the Whole 3/5/2018 Senate Second Reading Passed - No Amendments 3/6/2018 Senate Third Reading Laid Over to 03/08/2018 - No Amendments 3/8/2018 Senate Third Reading Passed - No Amendments 3/12/2018 Introduced In House - Assigned to Agriculture, Livestock, & Natural Resources 3/19/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to House Committee of the Whole 3/22/2018 House Second Reading Laid Over to 03/23/2018 - No Amendments 3/23/2018 House Second Reading Laid Over to 03/26/2018 - No Amendments 3/26/2018 House Second Reading Passed - No Amendments 3/27/2018 House Third Reading Laid Over to 03/28/2018 - No Amendments 3/28/2018 House Third Reading Laid Over to 03/29/2018 - No Amendments 3/29/2018 House Third Reading Laid Over to 04/02/2018 - No Amendments 4/2/2018 House Third Reading Passed - No Amendments
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-02-21
Amendments:	
Bill Version:	Final Act

SB18-218	**Colorado Water Conservation Board Construction Fund Project**
Position:	**Support**
Calendar Notification:	Tuesday, April 10 2018 SENATE APPROPRIATIONS COMMITTEE 8:35 AM SCR 357 (16) in senate calendar.
News:	
Audio, Floors and Committees:	
Sponsors:	D. Coram / J. Arndt
Status:	3/26/2018 Introduced In Senate - Assigned to Agriculture, Natural Resources, & Energy 3/28/2018 Senate Committee on Agriculture, Natural Resources, & Energy Refer Unamended to Appropriations
Fiscal Notes:	Fiscal Note
Date Introduced:	2018-03-26

Amendments:	
Bill Version:	Introduced

SJM18-004 Memorialize Former Congressman Ray Kogovsek

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	L. Garcia / D. Esgar
Status:	2/5/2018 Senate Third Reading Laid Over Daily - No Amendments 2/5/2018 Introduced In Senate - Assigned to 2/6/2018 Senate Third Reading Passed - No Amendments 2/6/2018 House Third Reading Laid Over Daily - No Amendments 2/6/2018 Introduced In House - Assigned to 2/7/2018 House Third Reading Laid Over to 02/08/2018 - No Amendments 2/8/2018 House Third Reading Laid Over to 02/09/2018 - No Amendments 2/9/2018 House Third Reading Passed - No Amendments 2/12/2018 Signed by the Speaker of the House 2/12/2018 Signed by the President of the Senate
Fiscal Notes:	
Date Introduced:	2018-02-05
Amendments:	
Bill Version:	Resolution/Memorial

SJR18-003 Water Projects Eligibility Lists

Position:	**Support**
Calendar Notification:	NOT ON CALENDAR
News:	
Audio, Floors and Committees:	
Sponsors:	R. Baumgardner / J. Arndt
Status:	1/12/2018 Senate Third Reading Laid Over Daily - No Amendments 1/12/2018 Introduced In Senate - Assigned to 1/17/2018 Senate Third Reading Passed - No Amendments 1/22/2018 Introduced In House - Assigned to 1/24/2018 House Committee on Agriculture, Livestock, & Natural Resources Refer Unamended to House Committee of the Whole 1/29/2018 House Third Reading Passed - No Amendments 2/1/2018 Signed by the President of the Senate 2/2/2018 Signed by the Speaker of the House

2/6/2018 Sent to the Governor
2/13/2018 Governor Signed

Fiscal Notes:

Date Introduced: 2018-01-12

Amendments:

Bill Version: Resolution/Memorial

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 3
MEETING DATE: 3/13/2018
SUBMITTED BY: Ryan Van Pelt
STAFF TITLE: Civil Engineer II

ITEM TITLE:

Water Supply Update

DESCRIPTION:

Raw water supply update.

SUMMARY:

NRCS Colorado SNOTEL Snow Water Equivalent (SWE) Map:

- Indicates the South Platte Basin is at 92% of Median SWE (1981-2010)
- Overall Statewide we are currently at 71% of Median SWE

Locations of Bear Lake & Lake Irene SNOTEL Sites:

- Bear Lake SNOTEL site is in the upper Big Thompson River Basin
- Lake Irene SNOTEL site is in the upper Colorado River Basin

Bear Lake NRCS SNOTEL Site:

- First Graph shows the SWE from October 2017 through March 13, 2018 (red) compared to 2002, 2015, 2016, 2017, and the 30-year Median (1981-2010)
- As of April 9, 2018, the SWE was 14.1 inches
- Second Graph shows the entire snow accumulation and melt-off period from October through mid-June
- For 2018 thus far, the SWE accumulation is approaching the 30-year median SWE and is showing a steep increase over the last week.
- SWE usually peaks out sometime in April, so we could still more snow accumulation from Spring snow events.

Northern Native Supplies Report:

- SWSI – Northern Water Surface Water Supply Index (consolidates reservoir storage, SWE, and precipitation).
- The SWSI graph and the chart - "Departure from Normal Precipitation (in.)", have not been updated since it was presented as an information item during the last LUC meeting.

Next Table – Northern Water - Snow Pack & Streamflow Comparisons as of April 1, 2018

- South Platte Tributaries at 77% of Average (based on 1981-2010 data)
- Big Thompson River SWE at 9.9 inches, 69% of average
- Big Thompson River April – July 2018 Most Probable Streamflow Forecast 78,000 AF, 87% of average

Next Two Tables - NRCS SNOTEL as of April 9, 2018

- Lake Irene SWE at 22.1 inches, or 89% of Median
- Bear Lake SWE at 14.1 inches, or 80% of Median

RECOMMENDATION:

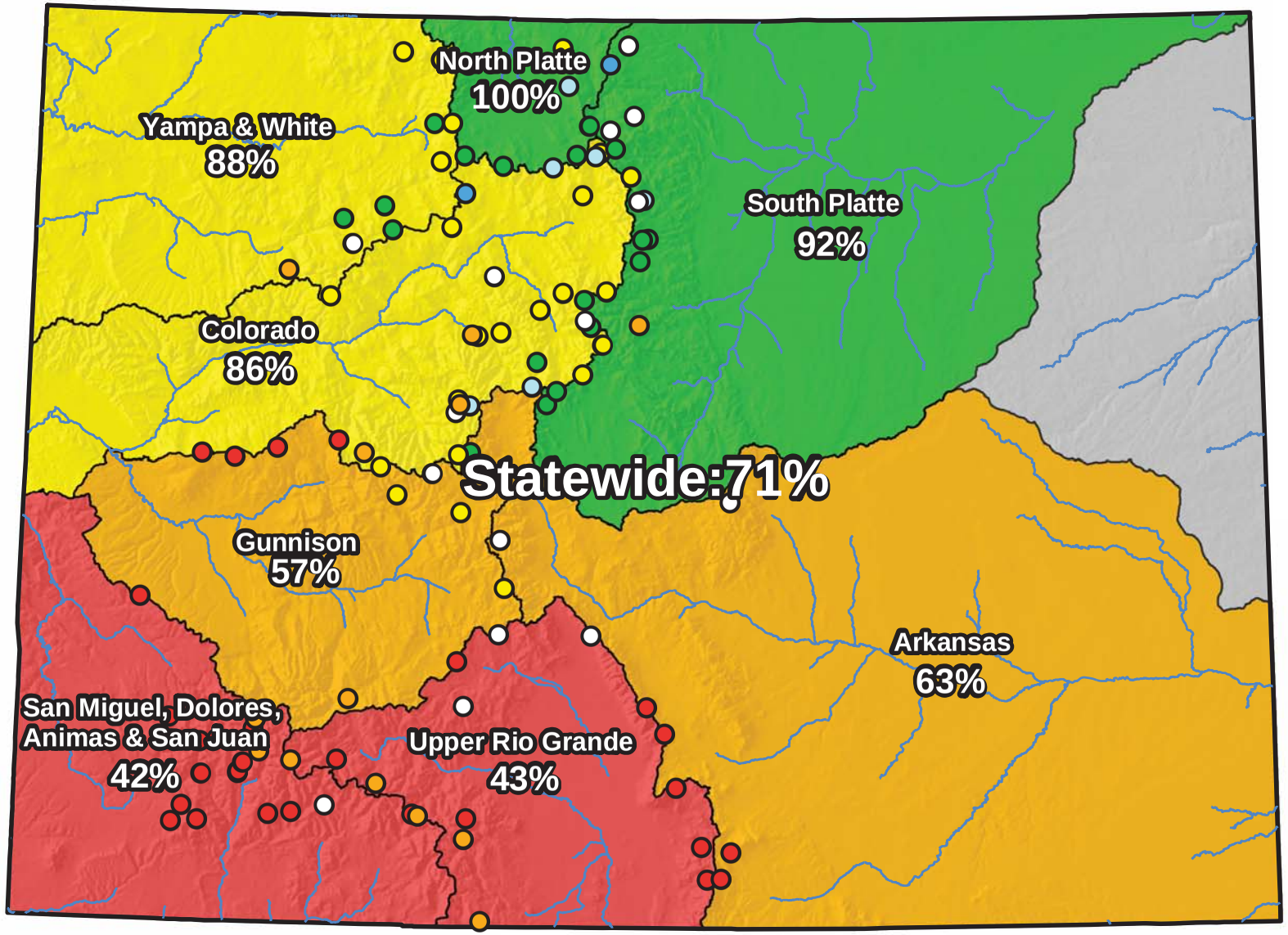
Information item only. No action required.

ATTACHMENTS:

- Attachment A: Colorado SNOTEL Update Map
- Attachment B: Snow-Water Equivalent at Bear Lake
- Attachment C: Native Water Supplies Report
- Attachment D: Snowpack and Streamflow Comparisons from Northern Water

Colorado SNOTEL Snow Water Equivalent (SWE) Update Map with Site Data

Current as of Apr 09, 2018



SWE

Percent of Median

- Missing or Invalid
- < 50
- 50 - 69
- 70 - 89
- 90 - 109
- 110 - 129
- 130 - 149
- >= 150
- SNOTEL

N

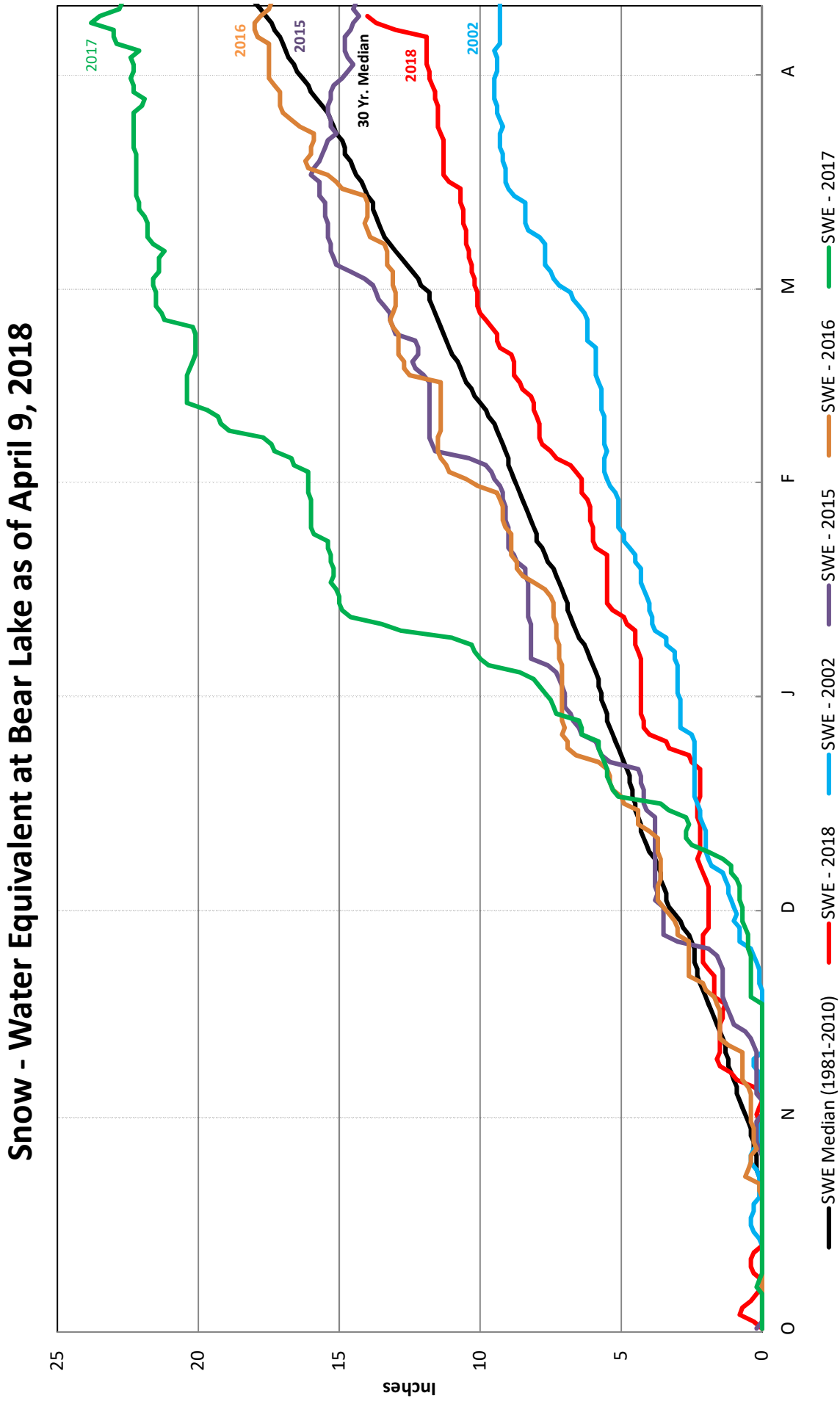
0 25 50 100 150 200 Miles

USDA United States Department of Agriculture

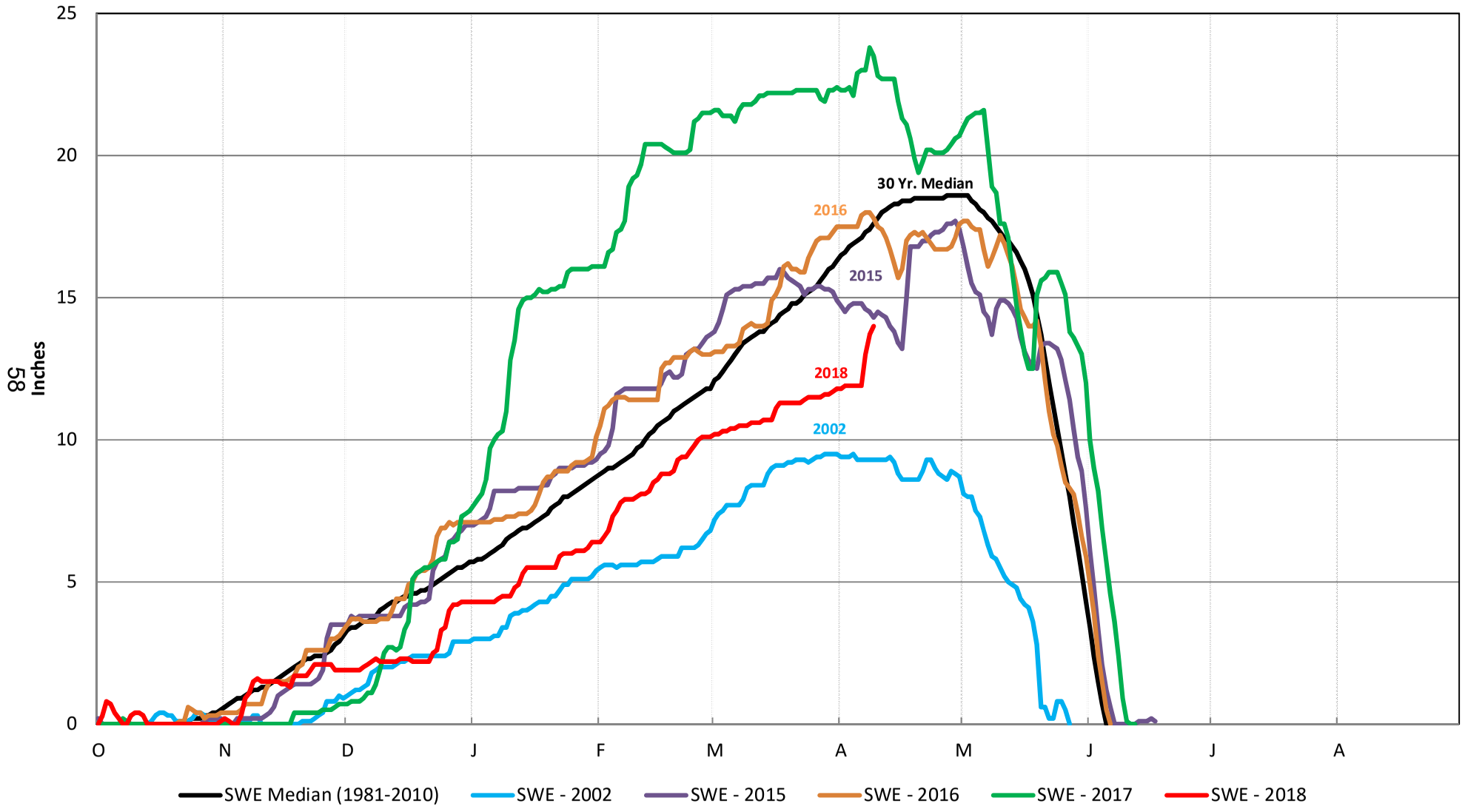
Natural Resources Conservation Service

Attachment A

Attachment B



Snow - Water Equivalent at Bear Lake as of April 9, 2018

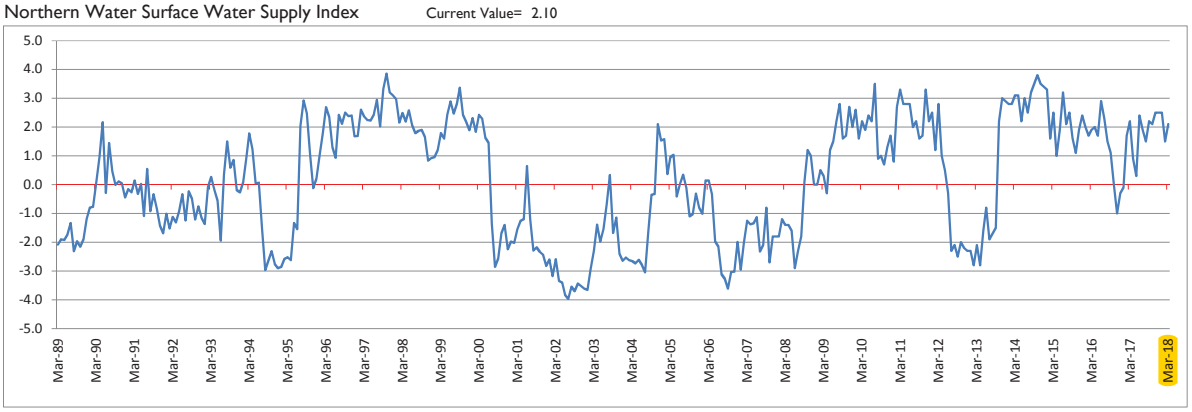


V:\Water & Power\Water and Power Shared_Water Resources__Snow Pack (SNOTEL)\2018 SWE

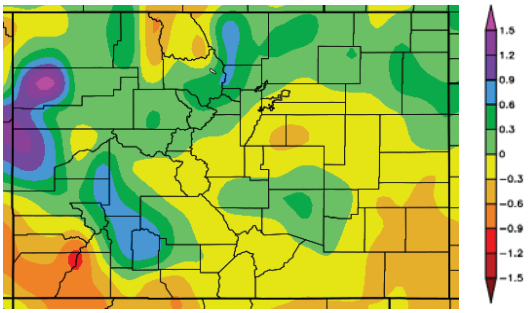
Attachment C

Native Water Supplies Report
March 1, 2018

Northern Water Surface Water Supply Index Current Value= 2.10



Departure from Normal Precipitation (in.) - February 2018



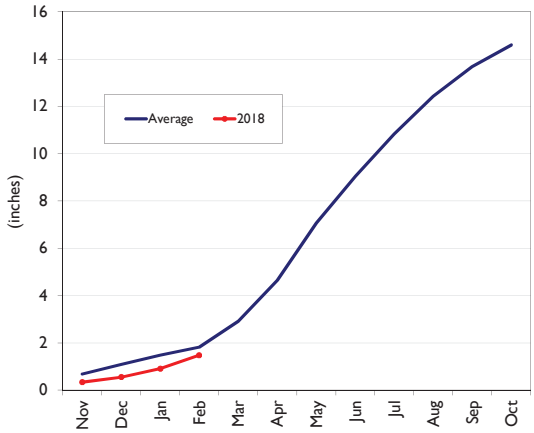
map source: NOAA Regional Climate Center

The Northern Water Surface Water Supply Index (SWSI) consolidates reservoir storage, streamflow (or Snow Water Equivalent during the winter), and precipitation into a single index value which ranges between -4.2 and +4.2.

The SWSI scale can be subjectively described as follows:

SWSI	Designation
+4	Abundant Supply
+2	Above Normal Supply
0	Near Normal
-2	Moderate Drought
-4	Severe Drought

District Mean Areal Precipitation - Cumulative Year to Date



Local Storage Summary

(acre-feet)	March 1	Average	% Average
Districts 1, 2 & 64 (So Platte)	263,941	233,171	113%
District 3 (Poudre)	162,218	128,801	126%
District 4 (Thompson)	85,666	69,725	123%
District 5 (St. Vrain & Left Hand)	44,920	41,655	108%
District 6 (Boulder Creek)	23,807	18,969	126%
Total Native Storage	580,552	492,320	118%

February Precipitation Summary

(inches)	Feb	YTD
District Mean Areal Precipitation*	0.57	1.48
Key Northern Water Weather Stations		
Fort Collins	0.57	1.48
Greeley	0.67	2.07
Longmont	0.76	2.18
Fort Morgan	0.37	0.81
Sterling	0.54	1.37

*computed using CoCoRaHS and Northern Water stations.

Attachment D

Snowpack and Streamflow Comparisons
April 1, 2018

Snow Water Content — **% of Average**

Colorado's Statewide Snowpack	68%
Upper Colorado River (1)	78%
South Platte Tributaries (2)	77%

Snow-Water Content Comparisons (inches)

	April 1, 2018 Snow-Water Content			April 1 Comparative Snow-Water Content			
Watershed	**2018**	**Average**	**% Avg**	**2017**	**2016**	**2015**	**2002**
Blue River	10.9	13.8	79%	112%	105%	98%	69%
Upper Colorado River	11.3	15.2	75%	108%	106%	81%	64%
Willow Creek	8.4	10.2	82%	120%	110%	72%	68%
Fraser River	11.1	14.6	76%	94%	113%	84%	60%
Poudre River	12.0	13.7	88%	92%	107%	78%	65%
Big Thompson River	9.9	14.3	69%	116%	106%	88%	62%
St. Vrain River	7.8	10.7	73%	109%	110%	91%	49%
Boulder Creek	8.9	11.3	78%	109%	117%	89%	56%

Apr-Jul Maximum, Minimum and Most Probable Streamflow Forecasts (1000 af)

Watershed	Forecast Minimum	Most Probable	Forecast Maximum	Apr-Jul Avg (3)	Most Prob % Average
Blue River	160	225	293	275	82%
Upper Colorado River	145	191	243	220	87%
Willow Creek	27	40	57	47	85%
Fraser River	70	96	129	117	82%
Poudre River	134	216	299	225	96%
Big Thompson River	52	78	116	90	87%
St. Vrain River	46	74	112	88	84%
Boulder Creek	35	49	66	54	91%
South Platte Tributaries		417		457	91%

Precipitation within District Boundaries (4)

	Totals	Average	% Average
March	0.74	1.10	67%
Nov-Mar	2.22	2.91	76%

(1) Includes the Colorado, Willow Creek, Fraser and Blue River Watersheds
(2) Includes the Poudre, Big Thompson, Saint Vrain and Boulder Creek Watersheds
(3) Average for the period 1981-2010
(4) Computed using CoCoRaHS and Northern Water Stations

Snow Update

Based on Data from NRCS SNOTEL Sites

4/9/2018

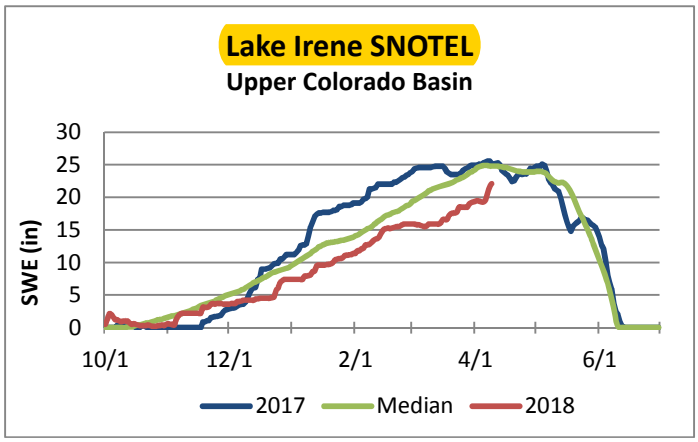
Upper Colorado River Basin						
			Snow Water Equivalent (SWE)			
Station Name	Basin	Elevation (ft)	Current (in)	Last Year (in)	Median (in) [1]	Current as % of Median
Berthoud Summit	Fraser	11,300	18.1	18.3	20.2	90%
Fool Creek	Fraser	11,150	23.1	21.7	--	--
Fremont Pass	Blue	11,400	18.3	18.4	16.4	112%
Grizzly Peak	Blue	11,100	17.7	22.0	16.9	105%
High Lonesome	Upper Colorado	10,620	17.4	17.6	--	--
Hoosier Pass	Blue[2]	11,400	15.4	17.1	15.3	101%
Jones Pass	Fraser[2]	10,400	14.1	14.5	13.9	101%
Lake Irene	Upper Colorado	10,700	22.1	25.2	24.8	89%
Never Summer	Willow Creek[2]	9,540	21	21.0	20.4	103%
Phantom Valley	Upper Colorado	9,030	10.4	7.8	8.5	122%
Stillwater Creek	Upper Colorado	8,720	4.8	1.5	5.5	87%
Willow Creek Pass	Willow Creek	9,540	14.1	18.0	12.3	115%

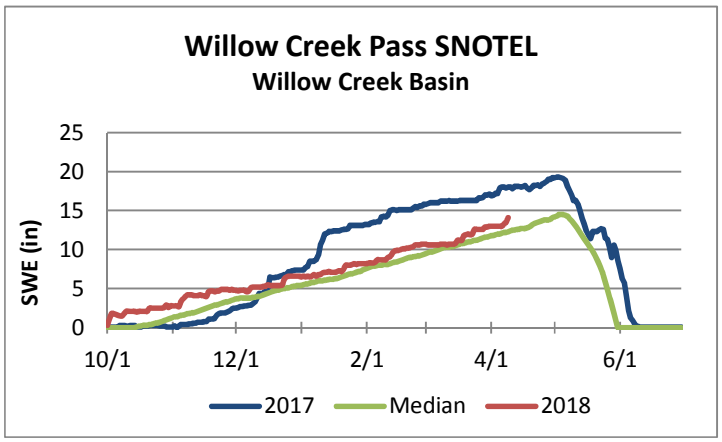
[1] Median Snow Water Equivalent (1981-2010)

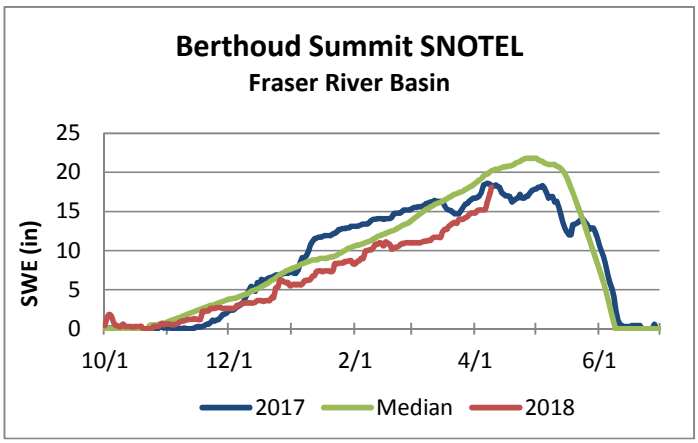
[2] SNOTEL stations are outside of, but near the basin.

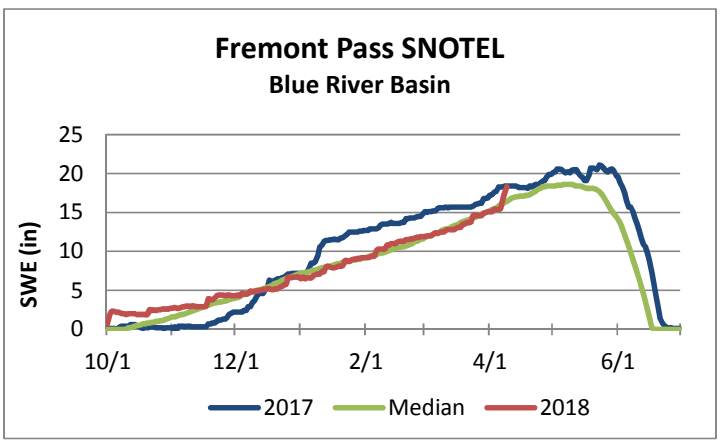
Notes:

- Fool Creek Station began data collection October 2011; there is not enough data to compute a median.
- High Lonesome Station began data collection October 2013; there is not enough data to compute a median.









Snow Update

Based on Data from NRCS SNOTEL Sites

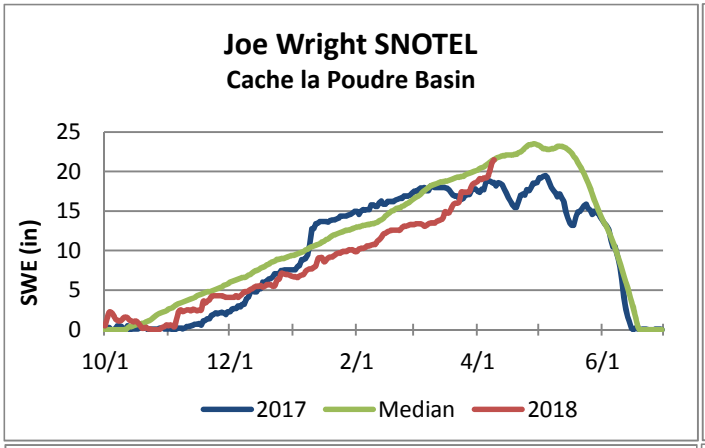
4/9/2018

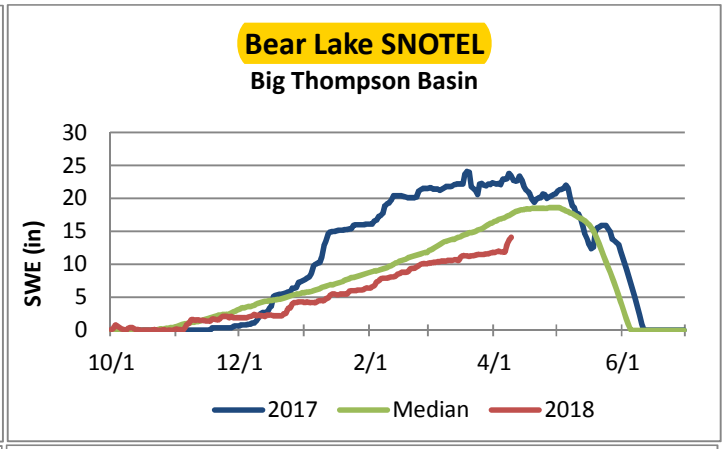
South Platte River Basin						
			Snow Water Equivalent (SWE)			
Station Name	Basin	Elevation (ft)	Current (in)	Last Year (in)	Median (in) [1]	Current as % of Median
Bear Lake	Big Thompson	9,500	14.1	23.4	17.6	80%
Copeland Lake	Saint Vrain	8,600	0.6	0.4	0.6	100%
Deadman Hill	Cache la Poudre	10,220	21.6	21.3	16.3	133%
Hourglass Lake	Cache la Poudre	9,380	12.3	13.6	--	--
Joe Wright	Cache la Poudre	10,120	21.5	18.6	21.5	100%
Lake Eldora	Boulder Creek	9,700	11.6	11.8	11.9	97%
Niwot	Boulder Creek	9,910	12	14.7	12.1	99%
University Camp	Boulder Creek	10,300	16.6	20.7	16.4	101%
Wild Basin	Saint Vrain	9,560	14.8	24.3	15.6	95%
Willow Park	Big Thompson	10,700	16.8	17.8	18.3	92%

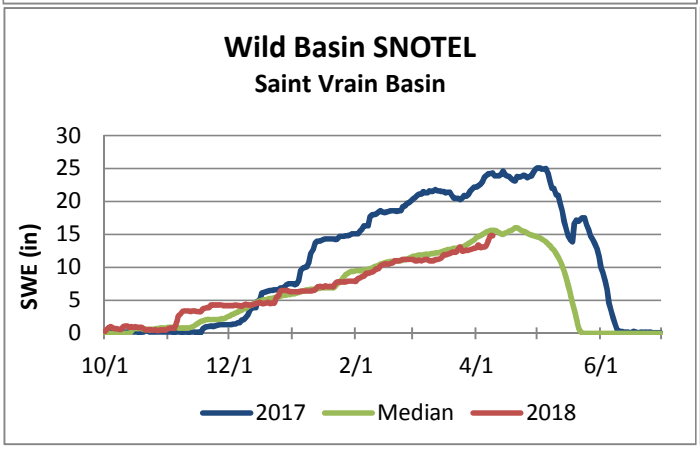
[1] Median Snow Water Equivalent (1981-2010)

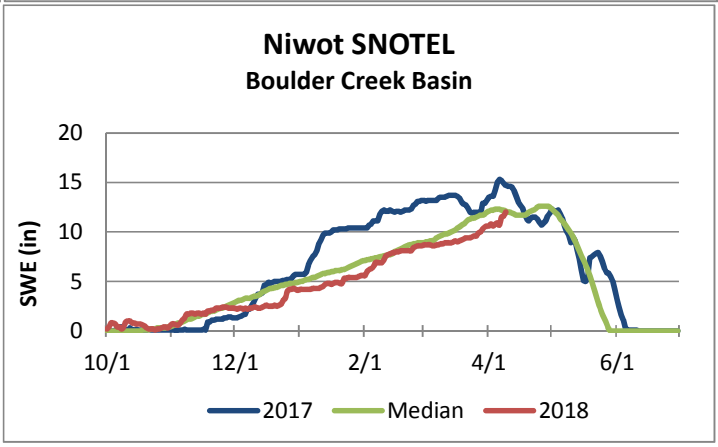
Notes:

-Hourglass Lake Station began data collection October 2008; there is not enough data to compute a median.









LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 4
MEETING DATE: 4/18/2018
SUBMITTED BY: Joe Bernosky
STAFF TITLE: Director

ITEM TITLE:

1st Quarter 2018 Goal Update Report

DESCRIPTION:

This is a quarterly review of our progress on our 2018 utility goals.

SUMMARY:

This item is to review the attached 2018 utility goals and the 1st quarter goal updates.

RECOMMENDATION:

Review the presented information and approve the 2018 1st Quarter Goals Update Report.

ATTACHMENTS:

- Attachment A: 2018 1st Quarter Goal Update Report

Attachment A

	2018 Goals & Quarterly Updates	Est. Completion	Actual Completion
1	**Complete a cost-of-service rate study for the Water and Wastewater Utilities whose output ensures consistency with the Department's mission.**	**12/31/2018**	
	Q1 Update: Great volumes of data have been sent to Jason Mumm of FCS, our Water and Wastewater rate consultant. A rate study kickoff meeting with staff occurred in early March. Meetings with FCS, staff and LUC liaisons will be occurring on June 5th and July 9th. Jason will be presenting study results at the June and July LUC meetings and to City Council at a Study Session on August 14th.		
2	**Participate with the City's Budget Division in the implementation of the new city-wide budgeting software, PowerPlan.**	**06/30/2018**	
	Q1 Update: Staff has been attending training sessions on PowerPlan, as well as having representatives from the Budget Division come to the Service Center for some very effective hands-on training and working through submittal logistics. The 10-Year CIPs for Water, Raw Water, Wastewater and Power will be submitted in PowerPlan to the Budget Office on Friday, April 13.		
3	**Continue customer outreach regarding the following programs:** **• Zero Net Carbon** **• Community solar** **• Energy Efficiency** **• Demand Side Manager** **• Water Efficiency**	**Ongoing**	
	Q1 Update: Staff coordinated with PRPA to publish ZNC information through press releases and social media posts. Staff continues to meet about community solar with Platte River and our sister cities. Efficiency Works just launched the online store to offer residential customers opportunities to purchase energy saving items at a reduced cost.		
4	**Support customer outreach in the Big Thompson Canyon as the Circuit 911 project continues to completion.**	**Ongoing**	
	Q1 Update: Staff continues to help customers with damage claims. We provide press releases, social media posts, emails and web postings for each planned outage. We also send regular updates to canyon customers via email.		
5	**Work with the LUC's Council Liaison to determine the appropriate media to work collaboratively with the Mayor and City Council on messaging rates, efficiency programs, and growth challenges.**	**Ongoing**	
	Q1 Update: No progress here. This is a goal that was recently assigned to our division. We will move forward in Q2.		
6	**Support the implementation efforts an Economic Development and Customer Relations Customer Relationship Management (CRM) tool.**	**Q2**	
	Q1 Update: Staff attended five training sessions online. We are importing customer contacts and becoming familiar with the software platform.		
7	**Continue WWTP Expansion.**	**07/2019**	
	Q1 Update: Garney Construction continues to make good progress on the WWTP improvements. Concrete work is nearing completion for the two new digester tanks. The roof deck is in place for digester 3 and concrete will be placed at the digester 4 roof deck during the week of 4/9. Under-slab mechanical and plumbing piping continues at the digester mechanical room and boiler rooms. Renovations continue inside aeration basin no. 2 which includes new fine bubble aeration equipment and a new large bubble mixing system. Excavation activities are complete and the concrete slab and wall construction continues for the new Return Activated Sludge (RAS) Anoxic tank along the northwest side of the existing aeration basins. The Package 3 contract will be presented to LUC on April 18th followed by City Council on May 1st. The project continues to be on schedule and on budget.		

	2018 Goals & Quarterly Updates	Est. Completion	Actual Completion
8	**Complete and present to LUC an updated raw water master plan. Work through any issues that come up with the engineering work on the Lawn Irrigation Return Flow (LIRF) study and see to the studies completion in the near future.**	**in 2018**	
	Q1 Update: Spronk Water Engineers has recently presented a draft presentation of the native raw water yield analysis. Staff plans to bring the updated model to the LUC in the near future for comment. Upon finalizing the model, staff plans to take the model results and complete the text for the updated raw water master plan. Once the LIRF study is completed, the staff will be working with our legal counsel to look at the next steps involved in order to implement the study and start taking advantage of the quantified, reusable return flows.		
9	**Complete final design and bidding for new water quality laboratory.**	**Dec. 2018**	
	Q1 Update: The WWTP Water Quality Lab (WQL) Phase I conceptual design was completed in November of 2017. HDR Engineering/Architects has submitted a scope of services and fee proposal for the WQL Phase II final design and bidding service, which will be presented to LUC on April 18, 2018 for recommendation of approval allowing the City Manager to execute the contract. The WQL Phase II design contract with HDR Engineering will allow the COL team to work with the consultant to develop final/complete construction plans and specifications for the project by late November or December of 2018. Construction will start in 2019 and has a budget of $5.0M.		
10	**Continue aggressive algal mitigation efforts at Green Ridge Glade Reservoir.**	**On-going**	
	Q1 Update: The Water Quality Lab is increasing its source water monitoring to prepare and monitor for algal growth. This includes utilizing new monitoring equipment that can enumerate and detect different algal species earlier than before and increasing taste and odor testing frequencies. This taste and odor data can be utilized in a newly formed carbon dosing calculator to further optimize water quality leaving the WTP. At the end of 2017, an additional SolarBee mixer was installed to increase mixing efficiency to further reduce algal growth in Green Ridge Glade Reservoir (GRGR). There now is a total of five mixers to mitigate algal growth in GRGR. In addition to the physical mixing strategy Colorado Parks and Wildlife is working in conjunction with Water Quality staff to evaluate species of fish that could potentially help bio-regulate algal growth. LWP is also renewing its contract with SOLitude Lake Management for backup algaecide application if necessary.		
11	**Continue refining Water Loss Audit processes and associated procedures including meter calibration, water account reconciliation, and water use estimation methods to more accurately account for true system loss and to help develop appropriate programs and projects that address non-revenue water.**	**On-going**	
	Q1 Update: We are in the process of finalizing the water audit for 2017 and the results will be presented at the April 2018 LUC meeting. Below is a brief summary of recent changes made to either improve the audit validity or that help to reduce non-revenue water: • **Source Meter Accuracy:** We are in the process of getting contracts in place to calibrate the source water meters at the Water Treatment Plant. Staff is set to meet in April to discuss how to perform a draw down test to verify the accuracy of the WTP effluent meter. • **Meter Readings:** Prorated consumption that overlapped with non-audit periods. Applied the meter accuracy ratings to readings based on size and meter make and model where available. • **Reducing Non-Revenue Water:** Starting in 2018, Storm Water is now billed for the irrigation of 2 drainage areas off 1st Street and around the Louden Siphon (995,151 gallons in 2017). Began billing the WWTP for water that was previously unmetered near the head of the plant that was discovered during the excavations of the WWTP expansion project (Approximately 27.7 MG in 2017). We have budgeted in 2019 to begin having the Wastewater Utility reimburse the Water Utility for sanitary sewer jetting water (Approximately 6.0 MG in 2017).		

	2018 Goals & Quarterly Updates	Est. Completion	Actual Completion
12	**Complete Circuit 911 (Big Thompson Canyon) upgrade work.**	**3/2019**	
	Q1 Update: Phase 2 is under construction with crews currently working in the Sylvan Dale Ranch area. Preparations are being made for the pole line replacement over Ute Pass with a helicopter pole set scheduled for June 14, 2018. Phase 3A (Cherry Store to Viestenz-Smith Mountain Park) is in design.		
13	**Begin initial evaluation of new substation location (I25/402 corridor).**	**On-going**	
	Q1 Update: City Staff are looking into available properties in the vicinity of 402 and I-25. There is a 90 acre property at the southwest corner of this intersection that the City currently owns. We are evaluating the properties based on accessibility, visual security, proximity to electrical transmission, and safety from flood zones. We have spoken with Parks and Rec about the properties that they are interested in purchasing just to the north of this intersection and are working with them to identify possibilities.		
14	**Support the City's municipal broadband effort.**	**On-going**	
	Q1 Update: City Staff have been working to implement the items Identified by City Council in Resolution #R-15-2018 on February 6, 2018. These actions include a RFP for a build-ready network design, a detailed business implementation plan, evaluate financing options, and implement a community outreach and education effort. During the first quarter of 2018, the RFP for the build-ready network design was prepared and released. Planning for community outreach and education has also started with planning and structuring of a communications plan for City staff and the community.		
15	**Evaluate power asset ages and conditions to support a replacement schedule.**	**On-going**	
	Q1 Update: The Power Division is in process of correlating the outage database to the asset age database. This will allow staff to start evaluating trends of equipment failures based on asset type, age, location and other data points to start determining a asset management and replacement plan and schedule.		
16	**Support the efforts of new software systems including: a citywide Customer Information Systems (CIS) and an Economic Development and Customer Relations Customer Resource Management (CRM) tool.**	**On-going**	
	Q1 Update: Contract negotiations with the CIS vendor are being wrapped up now. Schedule shows project kick off on 6/1.		
17	**Expand use of Cityworks and related platforms into all Utility Department Divisions.**	**On-going**	
	Q1 Update: We are getting a 30 day license from Cityworks to use the mobile app out in the field. This will be used by the Electric trouble truck, Electric Meter shop, and technical services.		
18	**Collaborating with the Water Division, deploy new leak detection hardware and implement formal leak detection and valve exercising programs.**	**On-going**	
	Q1 Update: Leak detection hardware has been deployed, and the software is up and running. Program is in place and collecting data. The Valve exercising program is waiting for IT to help with local install.		
19	**LUC GOAL - Develop and transmit a letter to Platte River supporting their efforts to participate in a regional transmission organization (RTO).**	**Q2**	
	Q1 Update: This letter has been prepared and staff is working to finalize and send.		
20	**LUC GOAL - Submit a letter to the Colorado Water Conservation Board supporting the ongoing efforts of the state's water plan and pledging the Department of Water and Power's commitment to those goals.**	**Q2**	
	Q1 Update: This letter has been prepared and staff is working to finalize and send.		

	2018 Goals & Quarterly Updates	Est. Completion	Actual Completion
21	**LUC GOAL - The Zero Net Carbon (ZNC) model/study recently completed by Platte River was just that: a model to determine if, under certain conditions, Platte River could achieve ZNC status by 2030. Platte River staff will continue to run a series of portfolio models based on technologies, costs, and reliability impacts. LUC wishes to express support for Platte River's continued efforts as they develop their next Integrated Resource Plan.**	**Q2**	
	Q1 Update: This letter has been prepared and staff is working to finalize and send.		

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 5
MEETING DATE: 4/18/2018
SUBMITTED BY: Tom Greene
STAFF TITLE: Senior Project Manager

ITEM TITLE:

WWTP - Water Quality Lab Phase II Design, Contract Amendment (#2) for HDR Engineering

DESCRIPTION:

This item is for the approval for the contract amendment to HDR Engineering for the WWTP Water Quality Lab (WQL) Phase II Design, project number W1702H. HDR completed the WQL Phase I conceptual design, which is the basis of design.

SUMMARY:

The City of Loveland Water and Power Department is designing a new Water Quality Lab (WQL). Phase I of the project hired HDR engineering/architectural to work with staff to create a detailed design and conceptual pricing. The Phase I design was completed in November of 2017. W&P is now moving forward with the Phase II of the project, which will be for a final design, specifications, and bidding services. The WQL construction project budget is $5.0M and scheduled for 2019 construction.

The COL W&P Water Quality group currently has two (2) water quality labs that are State Certified by the Colorado Department of Public Health and Environment (CDPHE). The Wastewater Treatment Plant Lab (1,170 sf) was constructed in 1974, and the Water Treatment Plant Lab (125 sf) was constructed in 1981 totaling 1,295 sf.

The WQL Phase II final design proposal is to design a facility that will be roughly 6,800-7,300 square feet. The conceptual design has 9 lab modules, staff office area, a meeting/conference room and other required areas to support the facility.

The WQL Phase II design contract is $388,038. The Phase I conceptual design contract was for $158,288. We will amend the existing contract to include the services and fee's for Phase I and Phase II, totaling $546,326.

Per Municipal Code 3.12.060A and 3.12.060B, the LUC must approve Water and Power contracts above $500,000 or any change order that causes a contract to equal or exceed $500,000 and which, when combined with all previous change orders, equals or exceeds 20% of the original contract amount.

RECOMMENDATION:

Adopt a motion recommending that the LUC approve the change order to the contract for *Final Design of the WWTP Water Quality Lab Phase II* with HDR to increase the not-to-exceed amount to $546,326 and authorize the City Manager to sign the change order on behalf of the City.

ATTACHMENTS:

- Attachment A: Water Quality Lab Phase II – Scope and Fee

March 2, 2018

Tom Greene – Senior Project Manager
City of Loveland – Water and Power Department
200 N. Wilson Ave.
Loveland, CO 80537

Project: City of Loveland – Water and Power Department
Phase II – Water Quality Lab Final Design and Bidding Phase Services
Proposal for Architectural & Engineering Services

Dear Mr. Greene,

HDR is pleased to submit the following scope / fee proposal per our discussions for Professional Design Services for the new City of Loveland (COL) Water & Power Department - Water Quality Laboratory at the Boise Street Wastewater Treatment Plant. Included are our Scope of Work, Assumptions / Exclusions, Deliverables and Proposed Fee. The proposal is based on our understanding of the project as outlined herein.

HDR will provide architectural and engineering professional services for the design of a new Water Quality Laboratory (WQL) at the Boise Street Wastewater Treatment Plant (WWTP) in Loveland, Colorado. The project shall consist of a one story process laboratory building of approximately 6,800 GSF based on the December 2017 Program Plan / Concept Design deliverable. The building shall house laboratories and offices for the City of Loveland Water and Power Department.

This proposal reflects a Design-Bid-Build delivery method for the project and includes the required A&E services for this project delivery type. However, the contract documents will be submitted to the City's design/build contractor Garney at the 60 percent level for cost estimating and may be included in the WWTP CMAR project is the pricing is advantageous.

Scope of Services:

This proposal, Phase II, represents the development of the Construction Documents and bidding services. Phase III will include the Construction Administration which will be submitted later after bidding has been completed and a method of delivery is determined.

Please refer to Exhibit B for a detailed breakout of our scope of services. The following summarizes our basic services for the proposal:

- Facilitate and confirm facility program with proposed users, project management and others as appropriate.
- Lead design team meetings, documenting results and decisions made and distributing them to Design Team members, including appropriate City staff.

- Finalize schematic, develop 60 percent and 90 percent design development, and final construction documents necessary to secure approvals of the City of Loveland's Water and Power Department. Each submission shall include appropriate site, architectural, laboratory, structural, mechanical, electrical, technology and life-safety information with specifications containing appropriate detail, code analysis, narrative description of project and other materials appropriate to each phase of design.
- Provide Building Information Modeling (BIM) LOD 300 of all major building systems. This is the HDR standard for design development. No additional design cost is associated with this effort.
- Provide schematic design layout furniture plans for the Water and Power Department's use in the procurement of office furniture components for the project.
- Participate in a technical review process and respond to all comments made during the review.
- Update cost estimate at the 60 percent and 90 percent design document level.
- Participate in one formal value engineering workshop at the end of the 60 percent design deliverable, bringing multi-discipline cost estimating and design experts to evaluate alternatives.
- Provide one bid packages for the project. Additional alternates may be provided as an additional cost.
- Provide the following services in coordination with the General Contractor (GC) for the project assuming a Design-Bid-Build delivery:
    - Assist the city in conducting mandatory pre-bidding conferences for all principal bidders.
    - Respond to questions made by bidders and documenting those answers in the form of addenda.
    - Prepare conformed construction plans and specifications.

Assumptions:

1. This proposal is based on certain information provided by the COL Water and Power Department on which HDR is entitled to rely on for completeness and accuracy. HDR shall be entitled to rely on the timeliness, accuracy and completeness of all information provided by the COL Water and Power Department.
2. Site investigation is limited to non-destructive verification of existing areas and systems.
3. HDR will use the following consultants in the execution of this agreement.
    a. KL&A – Structural Engineering
    b. Lithos Geotechnical
    c. King Surveyors

d. Capstone – Cost Estimating

Exclusions:

The following services or areas of work are not included in this proposal:

1. Major changes in function or design intent beyond those of a water quality laboratory of approximately 6,800 GSF as shown in the December 2017 Program Plan / Concept Design deliverable.
2. Engineering changes to site infrastructure beyond the immediately adjacent right of ways of the proposed site.
3. Energy and life cycle analysis. Can be provided by a 3rd party consultant for additional fee if desired.
4. USGBC LEED submittal documentation. HDR can provide these services for additional fee if desired.
5. Preparation of multiple bid packages.
6. Major modifications to the documents due to third party value engineering after the design development phase.
7. Modifications to the drawings due to phasing of construction.
8. Documentation or removal of any hazardous materials.

HDR Project Team:

HDR proposes the following team to complete this project based on their experience working with the similar laboratory types:

- Matt Gough – Project Manager
- Rick Hunter – Laboratory Planner
- Christopher Kleingartner – Architectural Lead
- Amanda Owens – Project Architect
- Ted Kontonickas – Mechanical and Plumbing Lead
- Travis Moore – Electrical Lead
- Brandon Luster – Civil Lead

Deliverables:

All deliverables will be provided in accordance with the requirements of the Agreement between Owner / Architect. Final drawings, structural calculations and specifications will be submitted to COL Water and Power Department as a PDF.

Proposed Fee:

HDR proposes to provide professional architectural and engineering services outlined in this letter for a not to exceed "time and materials" in the amount of $388,038. Refer to Exhibit "A" for a breakout of the design team fee structure.

Invoicing for this project will be done monthly, in accordance with the Agreement, based on actual costs.

Proposed Schedule:

Performance of the work shall be executed expediently as anticipated per the attached schedule commencing with the acceptance of this proposal:

- Design Kick-off March 2018
- 30 percent drawings based on Schematic Design: 4 weeks
- 60 percent Design Development: 6 weeks
- 90 percent Design Development: 6 weeks
- Final Construction Documents: 6 weeks
- Bid – October 2018
- Bid Review & Verification – November 2018
- Project Award – January 2, 2019

Should you have any questions or would like to discuss any part of this proposal in further detail, please do not hesitate to contact me at 303.902.2109. Once again, thank you for the opportunity to allow HDR to submit a proposal for the City of Loveland Water and Power Department – Water Quality Laboratory. We appreciate the trust you've placed in HDR and look forward to working with you and your staff.

Sincerely,
HDR Engineering, Inc.

Matt Gough
Associate Vice President

Exhibits: A: Fee breakdown

B: Scope of services

Exhibit "A" Fee

CITY OF LOVELAND WATER AND POWER

WATER QUALITY LAB FINAL DESIGN

	Task Description	HDR																					Subconsultants				
		Architectural Lead - Kleingarner $ 165	Project Architect - Owens $ 141	Project Manager - Gough $ 230	Architectural Designer - Fang $ 136	WQL QA/QC - Wermes $ 205	MEP QA/QC - Wurmlinger $ 230	Landscape Designer - Booker $ 92	LA Design QA/QC - Nesbitt $ 230	Lab Planner - Hunter $ 165	Mechanical Lead - Kontonickas $ 224	Mechanical Engineer - $ 148	Electrical Lead - Moore $ 230	Electrical Engineer - Koehler $ 165	Mechanical CAD - Snider $ 177	Electrical CAD - Nelson $ 121	Civil Lead - Luster $ 187	Civil Engineer - Race $ 98	Civil CAD - Austin $ 115	Accounting - Fuller $ 117	Hours	Labor	Total Expenses	HDR Fee	Structural	Survey	Cost Estimating	Geotech	Total Fee (With Subconsultatnts)
WATER QUALITY LAB DETAILED DESIGN																												
Task Series 100 - Project and Contract Administration																												
101	Conduct Team Workshops and Coordination Meetings	24	24	18						8											74	$ 12,804	$ -	$ 12,804					$ 12,804
102	Project Management and Administration			42																28	70	$ 12,937	$ -	$ 12,937					$ 12,937
Task Series 200 - Finalize Schematic Design																					0							
201	Finalize Schematic Design	10	10	4	10					32											66	$ 10,622	$ 2,250	$ 12,872					$ 12,872
Task Series 300 - Design Development																					0							
301	60 Percent Design Development	30	40	6	20	8	4	10	2	40	20	30	10	20	30	20	5	10	10		315	$ 50,543	$ 2,250	$ 52,793	$ 3,375	$ 4,300	$ 7,000	$ 8,799	$ 77,441
302	90 Percent Design Development	40	80	6	40	8	4	20	2	20	20	50	10	40	30	10	5	20	10		415	$ 64,205	$ 2,250	$ 66,455	$ 3,375		$ 5,000		$ 75,249
Task Series 400 - Final Construction Documents																					0							
401	Final Construction Documents	60	120	12	120	8	8	32	2	40	80	120	40	80	140	120	10	40	60		1092	$ 169,467	$ 1,750	$ 171,217	$ 3,375		$ 5,000		$ 180,011
Task Series 500 - Bid Period																					0							
501	Bid Advertisement	2	4																		6	$ 894	$ -	$ 894					$ 894
502	Pre-Bid Conference	4	4	4																	12	$ 2,144	$ -	$ 2,144					$ 2,144
503	Addenda and Bid Assistance	4	8		2			4		16	4	4		4	1	1	2		1		51	$ 8,004	$ -	$ 8,004					$ 8,004
504	Conformed Construction Plans and Specifications	4	4	2	16							2		2	4	4					38	$ 5,682	$ -	$ 5,682					$ 5,682
	Sub-total	**178**	**294**	**94**	**208**	**24**	**16**	**66**	**6**	**156**	**124**	**206**	**60**	**146**	**205**	**155**	**22**	**70**	**81**	**28**	**2,139**	**$ 337,303**	**$ 8,500**	**$ 345,803**	**$ 10,125**	**$ 4,300**	**$ 17,000**	**$ 8,799**	**$ 388,038**
	Hours	**178**	**294**	**94**	**208**	**24**	**16**	**66**	**6**	**156**	**124**	**206**	**60**	**146**	**205**	**155**	**22**	**70**	**81**	**28**	**2,139**								
	Fee	**$29,370**	**$41,454**	**$21,620**	**$28,337**	**$4,914**	**$3,680**	**$6,072**	**$1,380**	**$25,740**	**$27,787**	**$30,453**	**$13,800**	**$24,149**	**$36,246**	**$18,793**	**$4,106**	**$6,827**	**$9,298**	**$3,277**		**$337,303**	**8,500**	**$345,803**	**$10,631**	**$4,515**	**$17,850**	**$ 9,239**	
	TOTAL FEE (ROUNDED)																								**Total Fee (rounded) =**				**$ 388,038**

EXHIBIT B - SCOPE OF WORK

CITY OF LOVELAND
AND HDR ENGINEERING, INC.

AMENDMENT 1
PHASE II – WATER QUALITY LAB FINAL DESIGN AND BIDDING PHASE SERVICES

PROJECT OBJECTIVES

The City of Loveland Water and Power Department has identified a need for a new CDPHE compliant water quality laboratory to replace the outdated facilities at the Water Treatment Plant (WTP) and in the Waste Water Treatment Plant (WWTP) Administration Building. The Water Quality Laboratory (WQL) will be built on the east side of the existing WWTP. The selected site is a green field site that was acquired by the City in March 2017.

HDR completed Phase I – Preliminary Design of the new WQL at the end of 2017 with the development of the Programming Report. This amendment adds the Phase II Design and Bidding Phase Services to the contract. In general, the overall project assumptions and scope of work includes the following:

PHASE II – FINAL DESIGN

The proposed scope of work and required deliverables anticipated for the Phase II project include the following:

TASK SERIES 100 – PROJECT AND CONTRACT ADMINISTRATION

Conduct project initiation activities to include project coordination, direction, and management of schedule and budget.

Task 101 – Conduct Team Workshops and Coordination Meetings

Team coordination meetings with City staff and Consultant will be held at least once a month at a City location as directed by the City's Project Manager. The purpose of the meetings will be to discuss project status, exchange information requirements, to provide updates on the project status and for the City team to provide information and review comments. The meetings will be attended by HDR's project manager, project lead and select staff as appropriate.

Meeting minutes along with a list of action items and decisions made will be provided by HDR after every coordination meeting.

Task 102 – Project Management and Administration

Manage activities and any sub-consultants within task scope and budgets. Prepare and submit monthly invoices. Disciplines coordination/document checking consisting of coordination between the architectural work and the work of engineering and other disciplines involved in the Project, and review and checking of documents prepared for the Project.

Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, estimated cost at completion, and any additional out of scope items.

Task Series 100 Deliverables

- Task 101 – Meeting minutes, action items log, and decisions log for each coordination meeting will be prepared by HDR and distributed to all team members.
- Task 102 – Monthly invoices and progress reports.

Task Series 100 City Provided Services and/or Information

- Attendance and input at meetings.
- Provide available data and information as requested by HDR.

Task Series 100 Assumptions

- A total of six (6) meetings are anticipated to be conducted and held at the City. The meetings will be attended by HDR project manager, project lead and select staff as appropriate.

TASK SERIES 200 – FINALIZE SCHEMATIC DESIGN

Finalize schematic design developed in Phase I of the project based on City preferred building size and layout.

Task 201 – Finalize Schematic Design

- Facilitate and confirm facility layout with City staff.
- Update interior architectural space allocation and utilization plans based on functional relationships, consideration of alternate materials, systems and equipment and development of conceptual design solutions for architectural, mechanical, electrical and equipment requirements based on City comments.

Task Series 200 Deliverables

- Draft and final PDF of the updated Schematic Design lab layout drawings based on City comments.

Task Series 200 City Provided Services and/or Information

- Compiled review comments.

Task Series 200 Key Assumptions

- The City will review and provide compiled comments on the draft layout drawings within two weeks.

TASK SERIES 300 – DESIGN DEVELOPMENT

Complete design development of the new WQL. Prepare plans and specifications necessary for project implementation. Produce deliverables at the 60 percent and 90 percent design milestones.

Task 301 – 60 Percent Design Development

- Prepare design documents and update the EOPCC for the improvements for review and comment by the City. The 60 percent Design Drawings will include in progress plans, sections and layouts for the architectural, lab, civil, mechanical, structural and electrical portions of the project. The 60 percent specifications submittal will only include the

major material specifications. The other technical specifications will be submitted at the 90 percent milestone.

- The 60 percent review is the last opportunity to change the lab and building layout without impacting design fees. A key outcome of the 60 percent review is to lock in the layout. If changes to the layout are required after the 60 percent milestone, the fees associated with the additional work required to modify the design will be negotiated as Supplemental Services.
- HDR will utilize a subconsultant to perform the field work to collect geotechnical borings for the project area. The subconsultant will obtain necessary permits and approvals to perform the work. It is assumed that two (2) borings will be required. If the final project scope requires more borings then the additional scope and fee will be negotiated as Supplemental Services.
- HDR will utilize a subconsultant to perform the field work to collect the survey for the WQL area. City will provide previous survey work of the site.
- The 60 percent submittal will be electronic and a workshop will be held to review the documents with the City to collect comments. This workshop may be combined with a regularly scheduled design coordination meeting.
- Participate in one formal value engineering workshop at the 60 percent design phase, bringing multi-discipline cost estimating and design experts to evaluate alternatives. This workshop will be in conjunction with the 60 percent design development meeting.
- Provide 60 percent plans and specifications to CDPHE for preliminary review and comment. Incorporate changes as necessary for project approval.

Task 302 – 90 Percent Design Development

- Prepare design documents and update the EOPCC for the improvements for review and comment by the City. The 90 percent specifications and drawing package will be complete and include the specifications and drawings/details required for construction. City front ends (EJCDC 2013) will be utilized and prepared for City Legal review.
- The 90 percent submittal will include Grading Erosion and Sediment Control (GESC) plans and associated specifications. These documents will be utilized by the contractor to submit to the regulatory authority for review and approval. Additionally these documents, along with architectural sheets, will be utilized to go through the Special Review process.
- The 90 percent submittal will be electronic and a workshop will be held to review the documents with the City and collect final comments. This workshop may be combined with a regularly scheduled design coordination meeting.
- Assist the City with the applications for the CDPHE permits and approval required to be obtained by the City for the lab. The application fees of the permits/approvals will be paid for by the City. Provide 90 percent plans and specifications to CDPHE for preliminary review and comment. Incorporate changes as necessary for project approval.

Task Series 300 Deliverables

- 60 percent design milestone review plans and specifications and EOPCC
    - Drawings - Electronic copy (pdf format)
    - Specifications - Electronic copy (word format)
- 90 percent design milestone review plans and specifications and EOPCC
    - Drawings - Electronic copy (pdf format)

    - Specifications - Electronic copy (word format)
- Meeting minutes along with a list of action items and decisions made will be provided by HDR after each design review workshop.

Task Series 300 City Provided Services and/or Information

- Attendance and input at meetings.
- Pay all required jurisdictional agency review and permit fees.
- Compiled review comments on the draft deliverables.

Task Series 300 Key Assumptions

- The City will review and provide compiled comments on the draft deliverables within two weeks.
- The building and lab layout will not be changed after the 60 percent review by the City.
- The City's version of EJCDC front end documents will be utilized and edited by HDR.

TASK SERIES 400 – CONSTRUCTION DOCUMENTS

Finalize construction documents of the new WQL. Prepare technical and contract documents necessary for project implementation. Produce final deliverable at the Final Design milestone.

Task 401 – Construction Documents

- Update and finalize the design plans, specifications and EOPCC by addressing the City's 90 percent review comments. Deliver an electronic version of the bidding documents to the City. The City will distribute the bidding documents electronically to prospective bidders.
- Notify CDPHE of project and submit final plans and specifications.

Task Series 400 Deliverables

- Final PDF of Construction Documents including Drawings and Specifications for the new WQL.
- Updated construction document cost estimate.

Task Series 400 City Provided Services and/or Information

- Attendance and input at meetings.
- Compiled review comments on the draft deliverable.

Task Series 400 – Key Assumptions

- The City will review and provide compiled comments on the draft deliverable within two weeks.
- The project will be implemented as a design bid build project. If the City elects an alternative delivery method this scope of services will be amended to reflect the changes in scope and associated fee.

TASK SERIES 500 – BID PERIOD

Provide assistance to the City in project bidding, bid evaluation and assistance to the City in award of a construction contract.

Task 501 – Bid Advertisement

Assist the City in advertising for and obtaining bids for materials, equipment and services to be performed by a contractor for the construction contract.

Task 502 – Pre-Bid Conference

Conduct a pre-construction conference to be attended by the City, interested Contractors, and HDR. The meeting will include a presentation given by the HDR project manager, and a tour of the work site.

Task 503 – Addenda and Bid Assistance

Receive and respond to prospective contractor questions and shall assist the City in determining acceptability of substitutes.

Task 504 – Conformed Construction Plans and Specifications

Revise the construction plans and specifications to reflect modifications made by addenda. Distribute electronic copies of the final version to the City and Contractor.

Task Series 500 Deliverables

- Addenda.
- Bid tabulation.
- Pre-bid conference meeting minutes.
- Conformed construction plans and specifications.

Task Series 500 City Provided Services and/or Information

- Pre-Bid sign-in and agenda.
- Plan holders list.
- Bid check and tabulation.
- Review and concurrence with bidding questions and answers.

Task Series 500 – Key Assumptions

- A maximum of two (2) addenda will be issued.

PHASE III – CONSTRUCTION MANAGEMENT

The proposed scope of work and required deliverables anticipated for the Phase III project will be negotiated at a later date.

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 6
MEETING DATE: 4/18/2018
SUBMITTED BY: Brian Gandy
STAFF TITLE: Special Projects Manager

ITEM TITLE:

Wastewater Treatment Plant Biological Nutrient Removal & Digester Project – Package 3 Construction Contract

DESCRIPTION:

This is for the approval of the construction contract for Package 3 of the Wastewater Treatment Plant Biological Nutrient Removal & Digester Project (Project # W1604H).

SUMMARY:

The Loveland Utilities Commission previously approved Package 1 and Package 2 construction contracts with Garney Construction for work associated with the Biological Nutrient Removal and Digester project. Using 2018 budgeted funds, the balance of the project scope is to be included in Package 3.
The scope of **Package 3** includes the following:

- Manhole "A" reconstruction (junction box where all four sewer interceptors enters the plant)
- Ultraviolet Disinfection (UV) channel modifications
- Non-Potable Water Pump Station improvements
- Site restoration, asphalt paving, flat work, and irrigation

The project is being delivered via the Construction Manager-at-Risk delivery model. The Contractor, Garney Construction, prepared a Guaranteed Maximum Price (GMP) cost proposal. The GMP cost proposal is comprised of the self-performed work of Garney as well as all subcontracted trades. The subcontracted work, equipment, and materials were all competitively bid. City staff and consultants participated in the evaluation and selection of the subcontractors and most of the materials and equipment. The City utilized a third-party independent cost estimator to validate the GMP and the cost of Garney's self-performed work.

Package 1 GMP (Previously Approved):	$3,041,000
Package 2 GMP (Previously Approved):	$28,120,131
Package 3 GMP:	$3,361,416
Total GMP for Construction:	$34,522,547

Per Municipal Code 3.12.060A and 3.12.060B, the LUC may approve Water and Power contracts above $500,000 or any change order that causes a contract to equal or exceed $500,000 and which, when combined with all previous change orders, equals or exceeds 20% of the original contract amount. However, due to the Wastewater Treatment Plant Biological Nutrient Removal project being partially funded from wastewater revenue bonds, City Council must approve this contract per Ordinance No. 6077, Authorizing the Issuance and Sale of the City of Loveland, Colorado, Wastewater Enterprise Revenue Bond Series 2017.

RECOMMENDATION:

Adopt a motion to recommend that City Council approve the Construction Contract with Garney Construction in the amount of $3,361,416

ATTACHMENTS:

- Attachment A: Loveland WWTP – Bid Package 3 GMP
- Attachment B: PowerPoint Slides

Attachment A

Loveland WWTP - Bid Package 3 GMP

PACKAGE 3

No.	Description	Division	Self-Perform	Cost for 2018 GMP
G1	**General conditions**			$ 839,545
G1.01	General Conditions	GC	Yes	$ 839,545
A	**BNR upgrades**			$ 2,062,392
A8	**Sitework BNR**			$ 528,570
A8.02	Div 02 - Sitework, Flatwork, Irrigation, Site Restoration	2	Partial	$ 528,570
A9	**UV building modifications**			$ 194,000
A9.01	Div 02 - Demo, bulkheads, etc.	2	Partial	$ 24,000
A9.02	Div 03 - Structural concrete	3	Yes	$ 11,000
A9.03	Div 05 - Metals	5	Yes	$ 7,000
A9.04	Div 11 - Process equipment	11	Yes	$ 61,000
A9.05	Div 16 - Electrical I&C	16	No	$ 91,000
A10	**Manhole A replacement & Associated Yard Pipe**			$ 1,206,000
A10.01	Div 02 - Dirt, demo, dewatering	2	Partial	$ 185,000
A10.02	Bypasses, bulkheads, etc.	YP	Partial	$ 697,000
A10.03	Div 03 - Structural concrete	3	Yes	$ 97,000
A10.04	Div 05 - Metals	5	Yes	$ 118,000
A10.05	Div 09 - Finishes	9	No	$ 80,000
A10.06	Div 11 - Process equipment	11	Yes	$ 27,000
A10.08	Div 16 - Electrical I&C	16	No	$ 2,000
A11	**Not Potable Water Pump Station Budget**			$ 133,822
A11.01	Div 02 - Dirt, demo, dewatering	2	Partial	$ 7,500
A11.02	Bypasses, bulkheads, etc.	YP	Partial	$ 14,600
A11.03	Div 03 - Structural concrete	3	Yes	$ 11,950
A11.06	Div 11 - Process equipment	11	Yes	$ 74,772
A11.08	Div 16 - Electrical I&C	16	No	$ 25,000
B	**Digester Upgrades**			$ 459,479
B5	**Sitework Digesters**			$ 459,479
B5.01	Div 02 - Sitework, Flatwork, Irrigation, Site restoration	2	Partial	$ 459,479
	Total Bid Package 3 (BNR & Digesters)			$ 3,361,416

Attachment B

LOVELAND UTILITIES COMMISSION

Wastewater Treatment Plant Biological Nutrient Removal & Digester Project – Package 3 Construction Contract

Brian Gandy, Special Projects Manager

April 18, 2018

Package 3 GMP: $3,361,416

ditesco Project & Construction Services

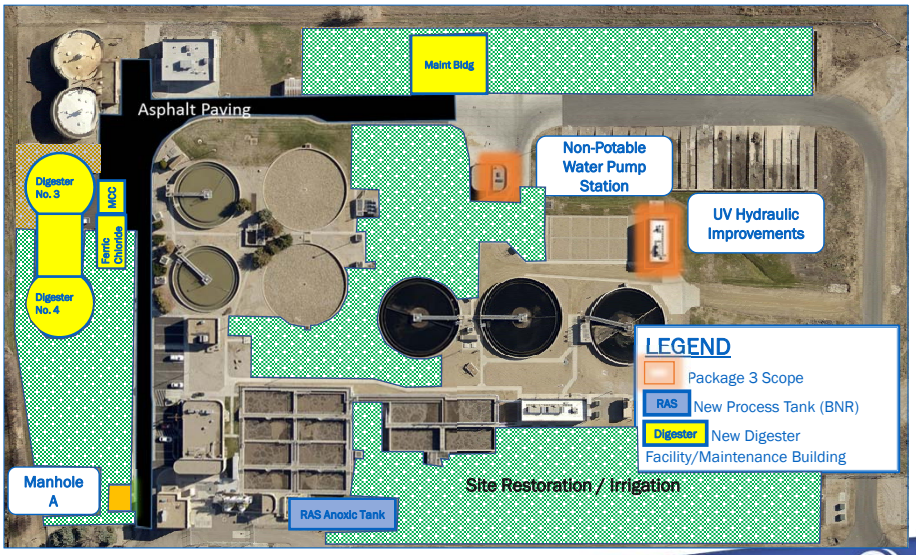
Garney Construction ADVANCING WATER

carollo Engineers...Working Wonders With Water®

Brown AND Caldwell

LOVELAND UTILITIES COMMISSION

Package 3 Scope:



LOVELAND UTILITIES COMMISSION

Construction Phase Cost Breakdown

Garney Construction Guaranteed Maximum Price (GMP):

Package 1 GMP: $ 3,041,000
Package 2 GMP: $28,120,131
Package 3 GMP: $ 3,361,416
Total: $34,522,547

City of Loveland W&P Project Budget (includes $24.9M Loan):

2017 Construction Budget: $31,421,000
2018 Construction Budget: $ 3,700,000
Total: $35,121,000

Project Contingency: $598,453

LOVELAND UTILITIES COMMISSION


LOVELAND
UTILITIES COMMISSION
QUESTIONS?

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 7
MEETING DATE: 4/18/2018
SUBMITTED BY: Roger Berg, Water Utilities Manager
Brie Reed-Harmel, Senior Electrical Engineer
Jim Lees, Utility Accounting Manager

ITEM TITLE:

Proposed 10-Year Capital Improvement Plan

DESCRIPTION:

The purpose of this item is to present an overview of the 2019 to 2028 10-year Capital Improvement Plan (CIP) for the Water, Raw Water, Wastewater, and Power Utilities. Staff is requesting that the Loveland Utilities Commission adopt a motion recommending that City Council approve the proposed 10-Year CIPs.

SUMMARY:

Staff has assembled and submitted proposed 10-Year CIPs for the Raw Water/Water, Wastewater, and Power Utilities to the Budget Office. Capital expenditures for the period from 2019-2028 are summarized below:

10-YEAR CIP TOTAL EXPENDITURES ($M) 2019-2028	General Capital	SIF / PIF Capital	Total Capital
Water	$55.7	$47.8	$103.5
Wastewater	$49.3	$29.3	$78.6
Power	$128.9	$36.5	$165.4

Raw Water capital expenditures for 2019-2028 are $58.5 million and are paid for entirely from the Raw Water Fund.

In assembling these CIPs to fit within the framework of the revenue projections and operating expenses of each of the utilities, a few challenges were encountered including projecting growth-related revenues. Staff reviewed the 2017 System Impact Fees (SIF) for Water and Wastewater and Plant Investment Fees (PIF) for Power. Based on this analysis, staff is projecting a significantly lower total of SIF and PIF revenues in the coming 10 years than was assumed in last year's plan. This created the need to program in loans for growth-related capital projects in future years.

Another challenge is the current year budget impact of Customer Information System (CIS) software and implementation. As previously reported, the estimated cost to replace the City's 31-year-old utility billing software is $6.7 million with $1.1 million (each) being assigned to Water and Wastewater, while the Power fund was assessed $2.8 million. Thus, this much-needed expenditure has had a significant impact on available 2019 fund balances.

Raw Water – With the higher level of participation in the Chimney Hollow Reservoir Project and a dramatic increase in the cost estimate for the project, and plans to purchase property for a future downstream storage reservoir, Raw Water is now looking at a $37.6 million loan in 2019. This compares to last year's 10-Year Plan, which featured a $16 million loan in 2019. As was discussed at last month's LUC meeting, planned C-BT purchases have been scaled back significantly to accommodate the higher estimated cost of the Chimney Hollow Project.

Water – In order to stay within the current rate track and within the reduced projections for SIF revenues, there are three loans programmed into the 10-Year Plan. There is a $4 million external loan in 2020 and a

$5 million external loan in 2028 to help pay for two new storage tanks; a $13 million external loan was assumed in 2024 to help fund a water line extension to Highway 402 and I-25.

Wastewater – In order to stay within the current rate track and within the reduced projections for SIF revenues, there are three loans programmed into the 10-Year Plan. There is a $1 million internal loan in 2019, a $9.5 million external loan in 2022 to help pay for the Upper Boyd Basin Wastewater Line and the 43rd Street Wastewater Line, and a $17.7 million external loan assumed in 2024 to help fund a wastewater line extension to Highway 402 and I-25.

Power – As previously referenced, funding the CIS system has impacted all funds including Power. As a result, in order to stay within the current rate track and meet the new higher target for minimum fund balance, some non-critical projects were delayed and re-budgeted in future years. Staff is currently considering mid-year supplemental appropriations for two unplanned projects (power associated with the Boyd Parallel Sewer project and the Wilson Avenue bridge project); additional information will be provided at the May LUC meeting.

The proposed 10-Year CIPs will be presented to City Council at the June 12, 2018 Study Session.

More information on noteworthy projects is included from each utility in the following paragraphs.

Raw Water

Chimney Hollow Reservoir – The permitting process is progressing and expected to be complete later this year. The Corps of Engineers is currently working on the 404 Permit. Unless the Environmental Protection Agency then has comments or issues a veto, the project can move into final design and construction. The participants are working on determining the best ways to arrange financing ($39.8M total cost for Loveland). Ongoing litigation may delay this project.

Acquisition of CBT Water -- Staff monitors sales of CBT water and has arranged for referrals to potential sellers from Northern to be sent to the City. This budget item allows flexibility and responsiveness to consider and execute purchases of CBT water should desirable opportunities occur. Staff actively monitors the markets and negotiates with potential sellers.

Future Water Court Transfer Actions – Timing for future Water Court applications varies depending on the city's acquisition of shares in ditch stock and through consultation with legal counsel and consultants depending on legal and engineering circumstances. Staff recommends filing an application in 2017. ($204,200 over 2 years).

Downstream Storage Reservoir – We are studying the feasibility of acquiring a downstream storage reservoir to increase the City's firm yield by providing a place to store reusable water sources when the exchange potential is limited, for later exchange when river flow conditions improve. Construction of the necessary piping and pump station would begin in 2028. Land acquisition, which includes an abandoned gravel pit located downstream from our wastewater treatment plant, is proposed for 2018.

Water

Water Line Replacement Program – We have various amounts budgeted annually throughout the 10-year CIP starting in 2019. Locations will be determined yearly based on the age, type, and condition of pipe, as well as leak frequency ($22M of construction over 10 years).

P2 Water Pump Station & Discharge Piping – This project includes expanding the existing pump station located on West 29th Street. The addition will include new pumps, piping and a backup generator to serve new development on the northwest side of Loveland (referred to as Pressure Zone 2). This project is development driven and will be funded approximately 75% by the developer and 25% by the City since it will serve several existing customers. Design could begin this year and the Department's share of construction is budgeted at $632,000 for 2019.

36" Transmission Main Relining – This project includes relining (or repairing) approximately four miles of the existing 36" steel transmission line west of town. This line was constructed in 1960 and is in poor condition. It is critical in conveying water to the City from the Water Treatment Plant (over $5M starting in 2027).

East Gravity Zone 24" Distribution Line – This project will be phased in over several years depending on growth. It generally includes a 24" water line around the southeast side of Loveland to improve pressure and flow to the east side of town (approximately $12.5M over 6 years starting in 2021).

Morning Drive 30" Water Line (Phase 2) – This is the second and final phase of extending a parallel 30" water line to the 29th Street Water Tank. This additional line will provide redundancy and greatly increase flow capacity to the heart of our water distribution system ($3.1M in 2018).

5.0 MG 29th Street Water Storage Tank – This tank will be located adjacent to the existing water tank on West 29th Street. It will provide much needed storage, for normal daily demands, fireflow, and emergency storage in our gravity zone ($9.6M over 2 years starting in 2019).

2.0 MG Dakota Ridge Water Storage Tank – This tank will provide storage for the P2 pressure zone located on the extreme northwest side of Loveland ($9.3M over 2 years starting in 2027).

Wastewater

Parallel Boyd Sewer Interceptor – This project includes approximately 5,000 feet of parallel 24" sewer line to increase conveyance capacity to the WWTP. The existing 24" sewer line runs at or above capacity on a regular basis. Construction is underway with $5.2M budgeted for this year.

Cured In-Place Pipe (CIPP) Sewer Rehab Program – We have various amounts budgeted every year between 2020 and 2027 to line existing sewer mains that have deteriorated or reached the end of their design life. Locations will be determined yearly based on the age, type, and condition of pipe (approximately $25M).

Wastewater Treatment Plant Expansion to 12 MGD – The majority ($27M) of this project was budgeted in 2016 and 2017, but the 2018 budget also includes an additional $4.4M. The project includes a new anaerobic digester, renovation of the existing digesters, biological nutrient removal (BNR) upgrades, and miscellaneous improvements necessary to increase the capacity from 10 MGD to 12 MGD.

Water Quality Lab – This project includes constructing a new water quality testing lab at the WWTP site ($5.3M in 2019).

WWTP - Digester 1 & 2 Rehabilitation – This work includes a complete renovation of our existing digester tanks, mixing system, heating, and control room, which was originally constructed in 1986. ($6.5M over 2 years starting in 2021)

Power

200 & 600 amp Cable Replacement Projects – These projects are located throughout the City. This cable is older and is frequently direct buried cable rather than in a conduit. The electric utility has experienced reliability issues at these location in the past due to the aging and direct buried cable.

Extension of new Conduit and Feeders from Foothills Substation – These projects will connect the new Foothills Substation with the electric distribution system and include the installing new conduit and feeder systems from Foothills Substation.

Feeder from Foothills Substaton to Hunters Run for Development– This project is for the installation of a 600 amp feeder from Foothills Substation going north to serve the Hunters Run subdivision and future development in the northwest area of Loveland.

Metering Equipment - This project is for the purchase, installation and integration of a new Meter Data Management System (MDMS). This software will replace the current meter management system which is no longer being supported. This new MDMS will also allow us to maintain asset inventory and usage history used for billing customers as well as provide integration for the metering infrastructure used for our Coincident Peak and Aggregated Metering customers

Downtown Foundry Overhead to Underground Conversion Project – This project is related to the Downtown Foundry project for the City and will convert the overhead infrastructure to underground in this area.

Extend New Feeders from Byrd Drive and Fairgrounds along Crossroads for Brands development – This project is for the extension of new feeders from Byrd Drive and Fairgrounds along Crossroads to service the new Brands development.

Valley Substation new Switchgear and Transformer – The electric utility will be purchasing and installing new transformer and switchgear at the Valley Substation. Once these are installed we will be extending the feeder from the new lineup at Valley Substation into the electric distribution system.

East Substation new Switchgear Lineup – The electric utility will be purchasing and installing a new switchgear lineup for East Substation. The current switchgear lineup has old equipment that is no longer supported by the manufacturer.

Installation of new Feeder from MCR to Kendall Parkway & I-25 – This project instaslls new 750 AL from Medical Center of the Rockies to Kendall Parkway and I-25. This will create a sub-to-sub tie between Crossroads Substation and Airport Substation.

Staff will present and seek a recommendation to City Council on all aspects of the proposed 2019 budget at the May LUC meeting.

RECOMMENDATION:

Adopt a motion recommending that City Council approve the proposed 2019 10-Year CIPs for the Raw Water, Water, Wastewater and Power Utilities.

ATTACHMENTS:

- Attachment A: 2019 Water and Raw Water 10-Year Proposed CIP
- Attachment B: 2019 Wastewater 10-Year Proposed 10-Year CIP
- Attachment C: 2019 Power 10-Year Proposed 10-Year CIP

Attachment A

2019 Water 10 Year Capital Budget - For City

Project	Proj #	Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-Year Total (2019-2028)	10-Year Total (2019-2028)	Raw Water	General Unrestricted	SIF - Restricted	Raw Water - 5 year	General Unrestricted - 5 year	SIF - Restricted - 5 year	Raw Water - 10 year	General Unrestricted - 10 year	SIF - Restricted - 10 year
TRANSMISSION/DISTRIBUTION PROJECTS																							
Water Main Replacement Projects																							
Right of Way Relocates	W1902C	Construct	75,000	78,190	81,510	84,970	88,590	92,350	96,280	100,370	104,630	109,080	408,260	910,970	0%	100%	0%	$0	$408,260	$0	$0	$910,970	$0
2019 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%	0%	$0	$0	$0	$0	$0	$0
2019 Water Line Replacement - Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%	0%	$0	$0	$0	$0	$0	$0
2020 Water Line Replacement (Sherri Mar)- Design/SDC	W1903C	Design/SDC	112,000	116,760	0	0	0	0	0	0	0	0	228,760	228,760	0%	100%	0%	$0	$228,760	$0	$0	$228,760	$0
2020 Water Line Replacement (Sherri Mar) - Construct	W1903C	Construct	0	1,459,500	0	0	0	0	0	0	0	0	1,459,500	1,459,500	0%	100%	0%	$0	$1,459,500	$0	$0	$1,459,500	$0
2021 Water Line Replacement (Taft Ave) - Design/SDC	0	Design/SDC	0	116,760	121,720	0	0	0	0	0	0	0	238,480	238,480	0%	100%	0%	$0	$238,480	$0	$0	$238,480	$0
2021 Water Line Replacement (Taft Ave) - Construct	0	Construct	0	0	1,521,530	0	0	0	0	0	0	0	1,521,530	1,521,530	0%	100%	0%	$0	$1,521,530	$0	$0	$1,521,530	$0
2022 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	217,360	226,600	0	0	0	0	0	0	443,960	443,960	0%	100%	0%	$0	$443,960	$0	$0	$443,960	$0
2022 Water Line Replacement - Construct	0	Construct	0	0	0	2,832,490	0	0	0	0	0	0	2,832,490	2,832,490	0%	100%	0%	$0	$2,832,490	$0	$0	$2,832,490	$0
2023 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	169,950	177,170	0	0	0	0	0	347,120	347,120	0%	100%	0%	$0	$347,120	$0	$0	$347,120	$0
2023 Water Line Replacement - Construct	0	Construct	0	0	0	0	2,952,870	0	0	0	0	0	2,952,870	2,952,870	0%	100%	0%	$0	$2,952,870	$0	$0	$2,952,870	$0
2024 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	0	177,170	184,700	0	0	0	0	177,170	361,870	0%	100%	0%	$0	$177,170	$0	$0	$361,870	$0
2024 Water Line Replacement - Construct	0	Construct	0	0	0	0	0	3,078,370	0	0	0	0	0	3,078,370	0%	100%	0%	$0	$0	$0	$0	$3,078,370	$0
2025 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	0	0	184,700	240,690	0	0	0	0	425,390	0%	100%	0%	$0	$0	$0	$0	$425,390	$0
2025 Water Line Replacement - Construct	0	Construct	0	0	0	0	0	0	3,209,200	0	0	0	0	3,209,200	0%	100%	0%	$0	$0	$0	$0	$3,209,200	$0
2026 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	0	0	0	240,690	250,920	0	0	0	491,610	0%	100%	0%	$0	$0	$0	$0	$491,610	$0
2026 Water Line Replacement - Construct	0	Construct	0	0	0	0	0	0	0	3,345,590	0	0	0	3,345,590	0%	100%	0%	$0	$0	$0	$0	$3,345,590	$0
2027 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	250,920	261,580	0	0	512,500	0%	100%	0%	$0	$0	$0	$0	$512,500	$0
2027 Water Line Replacement - Construct	0	Construct	0	0	0	0	0	0	0	0	3,487,780	0	0	3,487,780	0%	100%	0%	$0	$0	$0	$0	$3,487,780	$0
2028 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	261,580	272,700	0	534,280	0%	100%	0%	$0	$0	$0	$0	$534,280	$0
2028 Water Line Replacement - Construct	0	Construct	0	0	0	0	0	0	0	0	0	3,636,010	0	3,636,010	0%	100%	0%	$0	$0	$0	$0	$3,636,010	$0
2028 Water Line Replacement - Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	0	218,160	0	218,160	0%	100%	0%	$0	$0	$0	$0	$218,160	$0
24" & 48" Cathodic Protection Installation Design/SDC	0	Design/SDC	0	33,360	34,780	0	0	0	0	0	0	0	68,140	68,140	0%	100%	0%	$0	$68,140	$0	$0	$68,140	$0
24" & 48" Cathodic Protection Installation Construct	0	Construct	0	0	434,720	0	0	0	0	0	0	0	434,720	434,720	0%	100%	0%	$0	$434,720	$0	$0	$434,720	$0
34" Waterline Valve Insertions Design/SDC	0	Design/SDC	0	0	17,390	0	0	0	0	0	0	0	17,390	17,390	0%	100%	0%	$0	$17,390	$0	$0	$17,390	$0
34" Waterline Valve Insertions Construct	0	Construct	0	0	217,360	0	0	0	0	0	0	0	217,360	217,360	0%	100%	0%	$0	$217,360	$0	$0	$217,360	$0
36" Transmission Line Relining Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	417,530	435,270	0	0	852,800	0%	100%	0%	$0	$0	$0	$0	$852,800	$0
36" Transmission Line Relining Construct	0	Construct	0	0	0	0	0	0	0	0	5,440,930	0	0	5,440,930	0%	100%	0%	$0	$0	$0	$0	$5,440,930	$0
New water lines																							
16" Mtn View Discharge in Boyd Lake Ave Design/SDC	W1704D	Design/SDC	65,000	0	0	0	0	0	0	0	0	0	65,000	65,000	0%	0%	100%	$0	$0	$65,000	$0	$0	$65,000
16" Mtn View Discharge in Boyd Lake Ave Construct	W1704D	Construct	650,000	0	0	0	0	0	0	0	0	0	650,000	650,000	0%	0%	100%	$0	$0	$650,000	$0	$0	$650,000
East Gravity Zone 24" Phase 1 St Louis Design/SDC	W1016D	Design/SDC	0	0	317,350	217,540	0	0	0	0	0	0	534,890	534,890	0%	20%	80%	$0	$106,980	$427,910	$0	$106,980	$427,910
East Gravity Zone 24" Phase 1 St Louis Construct	W1016D	Construct	0	0	0	2,719,190	0	0	0	0	0	0	2,719,190	2,719,190	0%	20%	80%	$0	$543,840	$2,175,350	$0	$543,840	$2,175,350
East Gravity Zone 24" Phase 2 28th St SW Taft to Garfield Design/SDC	W1017D	Design/SDC	0	0	0	267,390	160,640	0	0	0	0	0	428,030	428,030	0%	20%	80%	$0	$85,610	$342,420	$0	$85,610	$342,420
East Gravity Zone 24" Phase 2 28th St SW Taft to Garfield Construct	W1017D	Construct	0	0	0	0	2,007,950	0	0	0	0	0	2,007,950	2,007,950	0%	20%	80%	$0	$401,590	$1,606,360	$0	$401,590	$1,606,360
East Gravity Zone 24" Phase 3 Garfield to 402 Design/SDC	0	Design/SDC	0	0	0	0	0	0	567,390	457,680	0	0	0	1,025,070	0%	20%	80%	$0	$0	$0	$0	$205,010	$820,060
East Gravity Zone 24" Phase 3 Garfield to 402 Construct	0	Construct	0	0	0	0	0	0	0	5,720,960	0	0	0	5,720,960	0%	20%	80%	$0	$0	$0	$0	$1,144,190	$4,576,770
16" in Granite (57th to 50th) (Ranch Acres) Design/SDC	0	Design/SDC	0	0	0	0	0	0	45,190	47,110	0	0	0	92,300	0%	50%	50%	$0	$0	$0	$0	$46,150	$46,150
16" in Granite (57th to 50th) (Ranch Acres) Construct	0	Construct	0	0	0	0	0	0	0	588,820	0	0	0	588,820	0%	50%	50%	$0	$0	$0	$0	$294,410	$294,410
402 Waterline Extension Design/SDC	0	Design/SDC	0	0	0	169,950	0	0	0	0	0	0	169,950	169,950	0%	0%	100%	$0	$0	$169,950	$0	$0	$169,950
402 Waterline Extension Design/SDC	0	Design/SDC	0	0	0	0	803,180	837,320	0	0	0	0	803,180	1,640,500	0%	0%	100%	$0	$0	$803,180	$0	$0	$1,640,500
402 Waterline Extension Construct	0	Construct	0	0	0	0	0	10,466,450	0	0	0	0	0	10,466,450	0%	0%	100%	$0	$0	$0	$0	$0	$10,466,450
16" P8 Extension (South of 34, Lot 1) Design/SDC	0	Design/SDC	0	0	52,170	0	0	0	0	0	0	0	52,170	52,170	0%	0%	100%	$0	$0	$52,170	$0	$0	$52,170
16" P8 Extension (South of 34, Lot 1) Construction	0	Construct	0	0	326,040	0	0	0	0	0	0	0	326,040	326,040	0%	0%	100%	$0	$0	$326,040	$0	$0	$326,040
16" P8 Extension (South of 34, Lot 2) Design/SDC	0	Design/SDC	0	0	0	54,380	0	0	0	0	0	0	54,380	54,380	0%	0%	100%	$0	$0	$54,380	$0	$0	$54,380
16" P8 Extension (South of 34, Lot 2) Construction	0	Construct	0	0	0	339,900	0	0	0	0	0	0	339,900	339,900	0%	0%	100%	$0	$0	$339,900	$0	$0	$339,900
16" P8 Extension (South of 34, Lot 3) Design/SDC	0	Design/SDC	0	0	0	0	113,390	0	0	0	0	0	113,390	113,390	0%	0%	100%	$0	$0	$113,390	$0	$0	$113,390
16" P8 Extension (South of 34, Lot 3) Construction	0	Construct	0	0	0	0	708,690	0	0	0	0	0	708,690	708,690	0%	0%	100%	$0	$0	$708,690	$0	$0	$708,690
16" P8 Extension (Under 34) Design/SDC	0	Design/SDC	0	0	0	0	70,870	73,880	0	0	0	0	70,870	144,750	0%	0%	100%	$0	$0	$70,870	$0	$0	$144,750
16" P8 Extension (Under 34) Construction	0	Construct	0	0	0	0	0	738,810	0	0	0	0	0	738,810	0%	0%	100%	$0	$0	$0	$0	$0	$738,810
Large Projects																							

2019 Water 10 Year Capital Budget - For City

Project	Proj #	Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-Year Total (2019-2028)	10-Year Total (2019-2028)	Raw Water	General Unrestricted	SIF - Restricted	Raw Water - 5 year	General Unrestricted - 5 year	SIF - Restricted - 5 year	Raw Water - 10 year	General Unrestricted - 10 year	SIF - Restricted - 10 year
5.0 MG Water Storage 29th Street Tank #2 Design/SDC	W1904D	Design/SDC	648,000	675,540	0	0	0	0	0	0	0	0	1,323,540	1,323,540	0%	20%	80%	$0	$264,710	$1,058,830	$0	$264,710	$1,058,830
5.0 MG Water Storage 29th Street Tank #2 Construct	0	Construct	0	8,444,250	0	0	0	0	0	0	0	0	8,444,250	8,444,250	0%	20%	80%	$0	$1,688,850	$6,755,400	$0	$1,688,850	$6,755,400
Morning Drive Pump Station & MCC Upgrade Design/SDC	0	Design/SDC	0	0	0	56,650	0	0	0	0	0	0	56,650	56,650	0%	100%	0%	$0	$56,650	$0	$0	$56,650	$0
Morning Drive Pump Station & MCC Upgrade Design/SDC	0	Design/SDC	0	0	0	0	177,170	184,700	0	0	0	0	177,170	361,870	0%	50%	50%	$0	$88,590	$88,590	$0	$180,940	$180,940
Morning Drive Pump Station & MCC Upgrade Construct	0	Construct	0	0	0	0	0	1,847,020	0	0	0	0	0	1,847,020	0%	50%	50%	$0	$0	$0	$0	$923,510	$923,510
3.5 MG 43rd St Tank #2 Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	0	707,420	0	707,420	0%	20%	80%	$0	$0	$0	$0	$141,480	$565,940
3.5 MG 43rd St Tank #2 Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	20%	80%	$0	$0	$0	$0	$0	$0
SW Booster Station Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	0	290,880	0	290,880	0%	50%	50%	$0	$0	$0	$0	$145,440	$145,440
SW Booster Station Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	50%	50%	$0	$0	$0	$0	$0	$0
2.0 MG Dakota Ridge Buried Concrete Tank PZ2 Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	767,310	799,920	0	1,567,230	0%	20%	80%	$0	$0	$0	$0	$313,450	$1,253,780
2.0 MG Dakota Ridge Buried Concrete Tank PZ2 Construct	0	Construct	0	0	0	0	0	0	0	0	0	8,580,970	0	8,580,970	0%	20%	80%	$0	$0	$0	$0	$1,716,190	$6,864,780
2.0 MG Crossroads Elevated Tank #2 Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	20%	80%	$0	$0	$0	$0	$0	$0
4.0 MG South Concrete Tank #2 Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	20%	80%	$0	$0	$0	$0	$0	$0
4.0 MG Chasteen Tank #2 at WTP Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	20%	80%	$0	$0	$0	$0	$0	$0
P2 Water Pump Station and Discharge Piping (General) Design/SDC	W1706D	Design/SDC	82,600	0	0	0	0	0	0	0	0	0	82,600	82,600	0%	100%	0%	$0	$82,600	$0	$0	$82,600	$0
P2 Water Pump Station and Discharge Piping (General) Construct	W1706D	Construct	632,000	0	0	0	0	0	0	0	0	0	632,000	632,000	0%	100%	0%	$0	$632,000	$0	$0	$632,000	$0
P2 Water Pump Station and Discharge Piping (Developer) Design/SDC	W1706D	Design/SDC	226,400	0	0	0	0	0	0	0	0	0	226,400	226,400	0%	0%	100%	$0	$0	$226,400	$0	$0	$226,400
P2 Water Pump Station and Discharge Piping (Developer) Construct	W1706D	Construct	2,830,000	0	0	0	0	0	0	0	0	0	2,830,000	2,830,000	0%	0%	100%	$0	$0	$2,830,000	$0	$0	$2,830,000
Mod Valve Vault Rehabilitation Design/SDC	W1802C	Design/SDC	75,000	0	0	0	0	0	0	0	0	0	75,000	75,000	0%	100%	0%	$0	$75,000	$0	$0	$75,000	$0
Mod Valve Vault Rehabilitation Construct	W1802C	Construct	750,000	0	0	0	0	0	0	0	0	0	750,000	750,000	0%	100%	0%	$0	$750,000	$0	$0	$750,000	$0
Chasteens Grove Water Booster Station Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%	100%	$0	$0	$0	$0	$0	$0
Chasteens Grove Water Booster Station Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%	100%	$0	$0	$0	$0	$0	$0
Mountain View Water Pump Station 3rd Pump Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	0%	100%	$0	$0	$0	$0	$0	$0
P1 Pump Replacement 29th Street Construct	W1910C	Construct	500,000	0	0	0	0	0	0	0	0	0	500,000	500,000	0%	100%	0%	$0	$500,000	$0	$0	$500,000	$0
Namaqua Hills Pump Station Design/SDC	W1911C	Design/SDC	10,000	50,040	0	0	0	0	0	0	0	0	60,040	60,040	0%	100%	0%	$0	$60,040	$0	$0	$60,040	$0
Namaqua Hills Pump Station Construct	W1911C	Construct	0	625,500	0	0	0	0	0	0	0	0	625,500	625,500	0%	100%	0%	$0	$625,500	$0	$0	$625,500	$0
Miscellaneous	0																						
Misc. Oversizing and Extensions	W1207D	Construct	75,000	78,190	81,510	84,970	88,590	92,350	96,280	100,370	104,630	109,080	408,260	910,970	0%	0%	100%	$0	$0	$408,260	$0	$0	$910,970
Trans/Dist Meters (Wtr Dept) (48317	WA900	Construct	115,000	119,890	124,980	130,290	135,830	141,600	147,620	153,900	160,440	167,260	625,990	1,396,810	0%	100%	0%	$0	$625,990	$0	$0	$1,396,810	$0
Contractors Meters (New Development) (48316	WA900	Construct	83,000	86,530	90,200	94,040	98,040	102,200	106,550	111,070	115,790	120,720	451,810	1,008,140	0%	100%	0%	$0	$451,810	$0	$0	$1,008,140	$0
TRANSMISSION/DISTRIBUTION TOTAL			$6,929,000	$11,884,510	$3,638,620	$7,448,310	$7,760,150	$18,024,450	$4,749,890	$11,545,240	$11,139,940	$15,012,200	37,660,590	98,132,310				0	18,387,510	19,273,090	0	50,656,870	47,475,450
TRANSMISSION/DISTRIBUTION GENERAL TOTAL =			2,564,200	4,510,488	2,925,020	4,235,814	4,151,973	4,799,780	4,177,103	6,183,993	10,421,462	6,687,032	18,387,495	50,656,865									
TRANSMISSION/DISTRIBUTION SIF TOTAL =			4,289,800	7,295,832	632,090	3,127,526	3,519,587	13,132,320	476,507	5,260,877	613,848	8,216,088	18,864,835	46,564,475									
SIF OVERSIZING =			75,000	78,190	81,510	84,970	88,590	92,350	96,280	100,370	104,630	109,080	408,260	910,970									
			0	0	0	0	0	0	0	0	0	0											
WATER TREATMENT PLANT PROJECTS																							
Expansion																							
Phase 3 Expansion (38-46 MGD) Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	0	290,880	0	290,880	0%	20%	80%	$0	$0	$0	$0	$58,180	$232,700
Phase 3 Expansion (38-46 MGD) Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	0%	20%	80%	$0	$0	$0	$0	$0	$0
Cold Storage Building Design/SDC	W1801D	Design/SDC	7,500	0	0	0	0	0	0	0	0	0	7,500	7,500	0%	50%	50%	$0	$3,750	$3,750	$0	$3,750	$3,750
Cold Storage Building Construct	0	Construct	0	156,380	0	0	0	0	0	0	0	0	156,380	156,380	0%	50%	50%	$0	$78,190	$78,190	$0	$78,190	$78,190
WTP Residual Storage Pad Design/SDC	0	Design/SDC	15,000	31,720	0	0	0	0	0	0	0	0	46,720	46,720	0%	100%	0%	$0	$46,720	$0	$0	$46,720	$0
WTP Residual Storage Pad Construct	0	Construct	0	0	130,420	0	0	0	0	0	0	0	130,420	130,420	0%	100%	0%	$0	$130,420	$0	$0	$130,420	$0
Sedimentation #2 Sludge Collection Rehab Capital Design/SDC	0	Design/SDC	0	83,400	86,940	0	0	0	0	0	0	0	170,340	170,340	0%	100%	0%	$0	$170,340	$0	$0	$170,340	$0
Sedimentation #2 Sludge Collection Rehab Capital Construct	0	Construct	0	0	869,450	0	0	0	0	0	0	0	869,450	869,450	0%	100%	0%	$0	$869,450	$0	$0	$869,450	$0
Improvements																							
WTP Admin/Office Renovation Design/SDC	0	Design/SDC	0	0	0	0	59,060	61,570	0	0	0	0	59,060	120,630	0%	100%	0%	$0	$59,060	$0	$0	$120,630	$0
WTP Admin/Office Renovation Construct	0	Construct	0	0	0	0	0	615,670	0	0	0	0	0	615,670	0%	100%	0%	$0	$0	$0	$0	$615,670	$0
Pre Soda Ash System Rehab Design/SDC	0	Design/SDC	0	0	0	27,190	28,350	0	0	0	0	0	55,540	55,540	0%	100%	0%	$0	$55,540	$0	$0	$55,540	$0
Pre Soda Ash System Rehab Construct	0	Construct	0	0	0	0	354,340	0	0	0	0	0	354,340	354,340	0%	100%	0%	$0	$354,340	$0	$0	$354,340	$0
Backwash Pumps (2) Design/SDC	0	Design/SDC	0	0	0	18,130	0	0	0	0	0	0	18,130	18,130	0%	100%	0%	$0	$18,130	$0	$0	$18,130	$0
Backwash Pumps (2) Construct	0	Construct	0	0	0	226,600	0	0	0	0	0	0	226,600	226,600	0%	100%	0%	$0	$226,600	$0	$0	$226,600	$0
PLC Processors Design/SDC	0	Design/SDC	0	0	0	39,650	0	0	0	0	0	0	39,650	39,650	0%	100%	0%	$0	$39,650	$0	$0	$39,650	$0

2019 Water 10 Year Capital Budget - For City

Project	Proj #	Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-Year Total (2019-2028)	10-Year Total (2019-2028)	Raw Water	General Unrestricted	SIF - Restricted	Raw Water - 5 year	General Unrestricted - 5 year	SIF - Restricted - 5 year	Raw Water - 10 year	General Unrestricted - 10 year	SIF - Restricted - 10 year
PLC Processors Construct	0	Construct	0	0	0	0	413,400	0	0	0	0	0	413,400	413,400	0%	100%	0%	$0	$413,400	$0	$0	$413,400	$0
WATER TREATMENT PLANT TOTALS			$22,500	$271,500	$1,086,810	$311,570	$855,150	$677,240	$0	$0	$0	$290,880	2,547,530	3,515,650				0	2,465,590	81,940	0	3,201,010	314,640
																				$0			$0
WATER TREATMENT PLANT GENERAL TOTAL =			18,750	193,310	1,086,810	311,570	855,150	677,240	0	0	0	58,176	2,465,590	3,201,006									
WATER TREATMENT PLANT SIF TOTAL =			3,750	78,190	0	0	0	0	0	0	0	232,704	81,940	314,644									
			0	0	0	0	0	0	0	0	0	0											
WATER RESOURCES PROJECTS																							
Windy Gap Firming (W038AA)	W038AA	Contract	55,560,000	0	0	0	0	0	0	0	0	0	55,560,000	55,560,000	100%	0%	0%	$55,560,000	$0	$0	$55,560,000	$0	$0
Future Water Court Transfer Actions	W1709A	Design/SDC	100,000	104,250	0	0	0	0	0	0	0	0	204,250	204,250	100%	0%	0%	$204,250	$0	$0	$204,250	$0	$0
Purchase CBT Water (W1014A) years 2020, 2021, 2022	W1014A	Contract	0	521,250	543,400	566,500	0	0	0	0	0	0	1,631,150	1,631,150	100%	0%	0%	$1,631,150	$0	$0	$1,631,150	$0	$0
Purchase CBT Water (W1014A) years 4 to 6	W1014A	Contract	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%	0%	$0	$0	$0	$0	$0	$0
Purchase CBT Water (W1014A) years 7 to 9	W1014A	Contract	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%	0%	$0	$0	$0	$0	$0	$0
Purchase CBT Water (W1014A) year 10	W1014A	Contract	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%	0%	$0	$0	$0	$0	$0	$0
Downstream Storage - Armoring Construct	W1901A	Construct	125,000	136,570	148,890	0	0	0	0	0	0	0	410,460	410,460	100%	0%	0%	$410,460	$0	$0	$410,460	$0	$0
Downstream Storage - Armoring (continued) Construct	0	Construct	0	0	0	162,020	0	0	0	0	0	0	162,020	162,020	100%	0%	0%	$162,020	$0	$0	$162,020	$0	$0
Downstream Storage - Phase 2 Design/SDC	0	Design/SDC	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%	0%	$0	$0	$0	$0	$0	$0
Downstream Storage - Phase 3 Construct	0	Construct	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%	0%	$0	$0	$0	$0	$0	$0
GRGR 18" Bypass Pipe Connections Design/SDC	0	Design/SDC	32,000	33,360	0	0	0	0	0	0	0	0	65,360	65,360	100%	0%	0%	$65,360	$0	$0	$65,360	$0	$0
GRGR 18" Bypass Pipe Connections Construc	0	Construct	0	417,000	0	0	0	0	0	0	0	0	417,000	417,000	100%	0%	0%	$417,000	$0	$0	$417,000	$0	$0
WATER RESOURCES TOTAL			$55,817,000	$1,212,430	$692,290	$728,520	$0	$0	$0	$0	$0	$0	58,450,240	58,450,240				58,450,240	0	0	58,450,240	0	0
WATER GENERAL PLANT																							
Service Center Renovations Construct	W1904C	GP	250,000	0	0	0	0	0	0	0	0	0	250,000	250,000	0%	100%	0%	$0	$250,000	$0	$0	$250,000	$0
Service Center Renovations (years 2, 3, & 4) Construct	W1904C	GP	0	101,640	105,960	110,470	0	0	0	0	0	0	318,070	318,070	0%	100%	0%	$0	$318,070	$0	$0	$318,070	$0
Service Center Renovations (years 5, 6, & 7) Construct	W1904C	GP	0	0	0	0	115,160	120,060	125,160	0	0	0	115,160	360,380	0%	100%	0%	$0	$115,160	$0	$0	$360,380	$0
Service Center Renovations (years 8, 9, & 10) Construct	W1904C	GP	0	0	0	0	0	0	0	130,480	136,020	141,800	0	408,300	0%	100%	0%	$0	$0	$0	$0	$408,300	$0
Sampling Stations (4 per year) Construct	WA930	Construct	20,000	20,850	21,740	22,660	23,620	24,630	25,670	26,760	27,900	29,090	108,870	242,920	0%	100%	0%	$0	$108,870	$0	$0	$242,920	$0
Standalone Servers - AVST Voip Mail $10,500 & DPWTP $8,090	WA930	GP	18,590	0	0	0	0	0	0	0	0	0	18,590	18,590	0%	100%	0%	$0	$18,590	$0	$0	$18,590	$0
GPS Units (3)	WA930	GP	25,000	0	0	0	0	0	0	0	0	0	25,000	25,000	0%	100%	0%	$0	$25,000	$0	$0	$25,000	$0
Locate Receiver & Transmitter	WA930	GP	9,800	0	0	0	0	0	0	0	0	0	9,800	9,800	0%	100%	0%	$0	$9,800	$0	$0	$9,800	$0
Replace Vehicle #5125 with 3/4-ton / 4WD / Crew Cab / Utility Body	WA930	GP	49,000	0	0	0	0	0	0	0	0	0	49,000	49,000	0%	100%	0%	$0	$49,000	$0	$0	$49,000	$0
Replace Vehicle #6144 with 1/2-ton / Regular Cab / 4WD Pickup	WA930	GP	32,500	0	0	0	0	0	0	0	0	0	32,500	32,500	0%	100%	0%	$0	$32,500	$0	$0	$32,500	$0
Sonde - this is an additional unit	WA930	GP	23,000	0	0	0	0	0	0	0	0	0	23,000	23,000	0%	100%	0%	$0	$23,000	$0	$0	$23,000	$0
Sonde - Replacement - this is to replace a unit every 5 years	WA930	GP	0	0	0	0	0	28,320	0	0	0	0	0	28,320	0%	100%	0%	$0	$0	$0	$0	$28,320	$0
Total Organic Carbon Analyzer - Replacement	WA930	GP	25,000	0	0	0	0	0	0	0	0	0	25,000	25,000	0%	100%	0%	$0	$25,000	$0	$0	$25,000	$0
Replace Vehicle #6143 with 1-ton / 4WD / Extended Cab / DRW with Utility Body	WA930	GP	74,000	0	0	0	0	0	0	0	0	0	74,000	74,000	0%	100%	0%	$0	$74,000	$0	$0	$74,000	$0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%	0%	$0	$0	$0	$0	$0	$0
WATER GENERAL PLANT TOTAL			$526,890	$122,490	$127,700	$133,130	$138,780	$173,010	$150,830	$157,240	$163,920	$170,890	1,048,990	1,864,880				0	1,048,990	0	0	1,864,880	0
Total Water General capital			$3,109,840	$4,826,288	$4,139,530	$4,680,514	$5,145,903	$5,650,030	$4,327,933	$6,341,233	$10,585,382	$6,916,098	$21,902,075	$55,722,751									
TOTAL WATER CIP			$63,295,390	$13,490,930	$5,545,420	$8,621,530	$8,754,080	$18,874,700	$4,900,720	$11,702,480	$11,303,860	$15,473,970	99,707,350	161,963,080			Total =	58,450,240	21,902,090	19,355,030	58,450,240	55,722,760	47,790,090
Total Water less Raw Water CIP			$7,478,390	$12,278,500	$4,853,130	$7,893,010	$8,754,080	$18,874,700	$4,900,720	$11,702,480	$11,303,860	$15,473,970	41,257,110	103,512,840						$10			$10
Wtr SIF Capital			4,368,550	7,452,212	713,600	3,212,496	3,608,177	13,224,670	572,787	5,361,247	718,478	8,557,872	19,355,035	47,790,089									
Raw Water Capital			**$55,817,000**	**$1,212,430**	**$692,290**	**$728,520**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	58,450,240	58,450,240									

Attachment B

2018 Wastewater 10 Year Capital - For City

	Project	Proj #	Design/SDC or Construct		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-Year Total (2019-2023)	10-Year Total (2019-2028)	General Unrestricted	SIF - Restricted	General Unrestricted - 5 Year	SIF - Restricted - 5 Year	General Unrestricted - 10 Year	SIF - Restricted - 10 Year
	WASTEWATER LINE REPLACEMENT PROJECTS																					
	New Wastewater Lines		0																			
1	Old / New Boyd Basin Sewer Split (1st Street) Design/SDC		0 Design/SDC		0	0	0	0	0	0	0	0	0	0	$0	$0	0%	100%	$0	$0	$0	$0
2	Old / New Boyd Basin Sewer Split (1st Street) Construct		0 Construct		0	0	0	0	0	0	0	0	0	0	$0	$0	0%	100%	$0	$0	$0	$0
3	Highway 402 Wastewater Main Extension Design/SDC		0 Design/SDC		0	0	0	0	1,358,320	1,416,050	0	0	0	0	$1,358,320	$2,774,370	0%	100%	$0	$1,358,320	$0	$2,774,370
4	Highway 402 Wastewater Main Extension Construct		0 Construct		0	0	0	0	0	14,160,490	0	0	0	0	$0	$14,160,490	0%	100%	$0	$0	$0	$14,160,490
5	East Side Discharge Trunk to WWTP Design/SDC		0 Design/SDC		0	0	0	0	0	0	0	0	0	0	$0	$0	0%	100%	$0	$0	$0	$0
6	East Side Discharge Trunk to WWTP Construct		0 Construct		0	0	0	0	0	0	0	0	0	0	$0	$0	0%	100%	$0	$0	$0	$0
7	Sewer Line Replacement (Capacity) Design/SDC		0 Design/SDC		0	0	0	0	0	0	0	0	0	0	$0	$0	50%	50%	$0	$0	$0	$0
8	Sewer Line Replacement (Capacity) Construct		0 Construct		0	0	0	0	0	0	0	0	0	0	$0	$0	50%	50%	$0	$0	$0	$0
9	Upper Boyd Basin Sanitary Sewer Design/SDC		0 Design/SDC		0	0	576,010	600,490	0	0	0	0	0	0	$1,176,500	$1,176,500	10%	90%	$117,650	$1,058,850	$117,650	$1,058,850
10	Upper Boyd Basin Sanitary Sewer Construct		0 Construct		0	0	0	6,004,880	0	0	0	0	0	0	$6,004,880	$6,004,880	10%	90%	$600,490	$5,404,390	$600,488	$5,404,392
11	Abandon WWTP Sewer Re-route Design/SDC	W1901G	Design/SDC		28,000	29,190	0	0	0	0	0	0	0	0	$57,190	$57,190	100%	0%	$57,190	$0	$57,190	$0
12	Abandon WWTP Sewer Re-route Construct	W1901G	Construct		0	364,880	0	0	0	0	0	0	0	0	$364,880	$364,880	100%	0%	$364,880	$0	$364,880	$0
13	43rd Street Sewer Solution Design/SDC		0 Design/SDC		0	0	119,550	124,630	0	0	0	0	0	0	$244,180	$244,180	10%	90%	$24,420	$219,760	$24,418	$219,762
14	43rd Street Sewer Solution Construct		0 Construct		0	0	0	1,246,300	0	0	0	0	0	0	$1,246,300	$1,246,300	10%	90%	$124,630	$1,121,670	$124,630	$1,121,670
15	East 1st Street (FM) Discharge Vault Design/SDC		0 Design/SDC		0	31,280	0	0	0	0	0	0	0	0	$31,280	$31,280	100%	0%	$31,280	$0	$31,280	$0
16	East 1st Street (FM) Discharge Vault Construct		0 Construct		0	260,630	0	0	0	0	0	0	0	0	$260,630	$260,630	100%	0%	$260,630	$0	$260,630	$0
	Rehab Wastewater Lines				0	0	0	0	0	0	0	0	0	0	$0	$0	0%	0%	$0	$0	$0	$0
17	2020 CIPP Sewer Rehab Construct		0 Construct		0	1,042,500	0	0	0	0	0	0	0	0	$1,042,500	$1,042,500	100%	0%	$1,042,500	$0	$1,042,500	$0
18	2021 CIPP Sewer Rehab Construct		0 Construct		0	0	1,630,210	0	0	0	0	0	0	0	$1,630,210	$1,630,210	100%	0%	$1,630,210	$0	$1,630,210	$0
19	2022 CIPP Sewer Rehab Construct		0 Construct		0	0	0	1,699,490	0	0	0	0	0	0	$1,699,490	$1,699,490	100%	0%	$1,699,490	$0	$1,699,490	$0
20	2023 CIPP Sewer Rehab Construct		0 Construct		0	0	0	0	2,362,300	0	0	0	0	0	$2,362,300	$2,362,300	100%	0%	$2,362,300	$0	$2,362,300	$0
21	2024 CIPP Sewer Rehab Construct		0 Construct		0	0	0	0	0	4,925,390	0	0	0	0	$0	$4,925,390	100%	0%	$0	$0	$4,925,390	$0
22	2025 CIPP Sewer Rehab Construct		0 Construct		0	0	0	0	0	0	5,134,720	0	0	0	$0	$5,134,720	100%	0%	$0	$0	$5,134,720	$0
23	2026 CIPP Sewer Rehab Construct		0 Construct		0	0	0	0	0	0	0	4,014,710	0	0	$0	$4,014,710	100%	0%	$0	$0	$4,014,710	$0
24	2027 CIPP Sewer Rehab Construct		0 Construct		0	0	0	0	0	0	0	0	4,185,330	0	$0	$4,185,330	100%	0%	$0	$0	$4,185,330	$0
	Large Projects				0	0	0	0	0	0	0	0	0	0	$0	$0	0%	0%	$0	$0	$0	$0
25	North Horseshoe Lift Station Upgrades Design/SDC		0 Design/SDC		0	104,250	108,680	0	0	0	0	0	0	0	$212,930	$212,930	100%	0%	$212,930	$0	$212,930	$0
26	North Horseshoe Lift Station Upgrades Construct		0 Construct		0	0	1,086,810	0	0	0	0	0	0	0	$1,086,810	$1,086,810	100%	0%	$1,086,810	$0	$1,086,810	$0
27	East Side Lift Station 3rd Pump Install Design/SDC		0 Design/SDC		0	31,280	32,600	0	0	0	0	0	0	0	$63,880	$63,880	0%	100%	$0	$63,880	$0	$63,880
28	East Side Lift Station 3rd Pump Install Construct		0 Construct		0	0	326,040	0	0	0	0	0	0	0	$326,040	$326,040	0%	100%	$0	$326,040	$0	$326,040
29	Southside Lift Station Generator Design/SDC		0 Design/SDC		0	0	0	45,320	47,250	0	0	0	0	0	$92,570	$92,570	100%	0%	$92,570	$0	$92,570	$0
30	Southside Lift Station Generator Construct		0 Construct		0	0	0	0	472,460	0	0	0	0	0	$472,460	$472,460	100%	0%	$472,460	$0	$472,460	$0
31	Bus Barn & Taft Lift Station Renovation Design/SDC	W1703G	Design/SDC		0	99,040	0	0	0	0	0	0	0	0	$99,040	$99,040	100%	0%	$99,040	$0	$99,040	$0
32	Bus Barn & Taft Lift Station Renovation Construct	W1703G	Construct		0	990,380	0	0	0	0	0	0	0	0	$990,380	$990,380	100%	0%	$990,380	$0	$990,380	$0
33	East Side Lift Station Overflow Vault Design/SDC		0 Design/SDC		0	0	0	0	0	0	89,860	93,680	0	0	$0	$183,540	50%	50%	$0	$0	$91,770	$91,770
34	East Side Lift Station Overflow Vault Construct		0 Construct		0	0	0	0	0	0	0	936,760	0	0	$0	$936,760	50%	50%	$0	$0	$468,380	$468,380
	Miscellaneous				0	0	0	0	0	0	0	0	0	0	$0	$0	0%	0%	$0	$0	$0	$0
35	Oversizing & Extensions Agreement Construct	W1232H	Construct		75,000	78,190	81,510	84,970	88,590	92,350	96,280	100,370	104,630	109,080	$408,260	$910,970	0%	100%	$0	$408,260	$0	$910,970
36	Mountain Pacific Oversizing Construct	W1933H	Construct		50,000	0	0	0	0	0	0	0	0	0	$50,000	$50,000	0%	100%	$0	$50,000	$0	$50,000
	WASTEWATER LINE REPLACEMENTS TOTAL				$153,000	$3,031,620	$3,961,410	$9,806,080	$4,328,920	$20,594,280	$5,320,860	$5,145,520	$4,289,960	$109,080	$21,281,030	$56,740,730			$11,269,860	$10,011,170	$30,090,156	$26,650,574
	WW LINE REPLACEMENT GENERAL TOTAL =				28,000	2,922,150	2,895,256	2,542,440	2,882,010	4,925,390	5,179,650	4,529,930	4,185,330	0	11,269,856	30,090,156						
	WW LINE REPLACEMENT SIF TOTAL =				50,000	31,280	984,644	7,178,670	1,358,320	15,576,540	44,930	515,220	0	0	9,602,914	25,739,604						
	WW SIF OVERSIZING TOTAL =				75,000	78,190	81,510	84,970	88,590	92,350	96,280	100,370	104,630	109,080	408,260	910,970						
	WASTEWATER TREATMENT PLANT PROJECTS																					
37	WWTP Final Clarifier #4 and RAS/Scum		0 Design/SDC		0	0	0	0	0	0	0	0	0	727,200	$0	$727,200	20%	80%	$0	$0	$145,440	$581,760
38	WWTP Final Clarifier #4 and RAS/Scum Construct		0 Construct		0	0	0	0	0	0	0	0	0	0	$0	$0	20%	80%	$0	$0	$0	$0
39	WWTP Primary Clarifier #3 & Trickling Filter Demo Design/SDC		0 Design/SDC		0	0	0	0	0	0	0	0	0	436,320	$0	$436,320	20%	80%	$0	$0	$87,264	$349,056
40	WWTP Primary Clarifier #3 & Trickling Filter Demo Construct		0 Construct		0	0	0	0	0	0	0	0	0	0	$0	$0	20%	80%	$0	$0	$0	$0
41	WWTP Digested Sludge Dewatering Design/SDC		0 Design/SDC		0	0	0	0	0	0	0	0	0	1,352,590	$0	$1,352,590	75%	25%	$0	$0	$1,014,443	$338,148
42	WWTP Digested Sludge Dewatering Construct		0 Construct		0	0	0	0	0	0	0	0	0	0	$0	$0	75%	25%	$0	$0	$0	$0
43	WWTP Upgrade PLC Processors Design/SDC		0 Design/SDC		0	0	38,040	0	0	0	0	0	0	0	$38,040	$38,040	100%	0%	$38,040	$0	$38,040	$0
44	WWTP Upgrade PLC Processors Construct		0 Construct		0	0	380,380	0	0	0	0	0	0	0	$380,380	$380,380	100%	0%	$380,380	$0	$380,380	$0
45	WWTP Rehabilitate Digester 1 & 2 Design/SDC		0 Design/SDC		0	0	489,060	509,850	0	0	0	0	0	0	$998,910	$998,910	100%	0%	$998,910	$0	$998,910	$0
46	WWTP Rehabilitate Digester 1 & 2 Construct		0 Construct		0	0	0	5,098,480	0	0	0	0	0	0	$5,098,480	$5,098,480	100%	0%	$5,098,480	$0	$5,098,480	$0
47	WWTP Primary Clarifier Odor Control Design/SDC		0 Design/SDC		0	0	0	84,970	0	0	0	0	0	0	$84,970	$84,970	100%	0%	$84,970	$0	$84,970	$0
48	WWTP Primary Clarifier Odor Control Design/SDC		0 Design/SDC		0	0	0	0	354,340	369,400	0	0	0	0	$354,340	$723,740	100%	0%	$354,340	$0	$723,740	$0

	Project	Proj #	Design/SDC or Construct		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-Year Total (2019-2023)	10-Year Total (2019-2028)	General Unrestricted	SIF - Restricted	General Unrestricted - 5 Year	SIF - Restricted - 5 Year	General Unrestricted - 10 Year	SIF - Restricted - 10 Year
49	WWTP Primary Clarifier Odor Control Construct		0 Construct		0	0	0	0	0	5,664,190	0	0	0	0	$0	$5,664,190	100%	0%	$0	$0	$5,664,190	$0
50	WWTP WQ Lab Remodel Design/SDC	W1702H	Design/SDC		350,000	0	0	0	0	0	0	0	0	0	$350,000	$350,000	75%	25%	$262,500	$87,500	$262,500	$87,500
51	WWTP WQ Lab Remodel Construct	W1702H	Construct		5,000,000	0	0	0	0	0	0	0	0	0	$5,000,000	$5,000,000	75%	25%	$3,750,000	$1,250,000	$3,750,000	$1,250,000
52	WWTP Admin Remodel Design/SDC		0 Design/SDC		0	52,130	0	0	0	0	0	0	0	0	$52,130	$52,130	100%	0%	$52,130	$0	$52,130	$0
53	WWTP Admin Remodel Construct		0 Construct		0	521,250	0	0	0	0	0	0	0	0	$521,250	$521,250	100%	0%	$521,250	$0	$521,250	$0
54	WWTP Blower Replacement - placeholder for	0	0		0	0	0	0	0	0	0	0	0	0	$0	$0	0%	0%	$0	$0	$0	$0
55	WWTP UV Equipment - placeholder for 2020	0	0		0	0	0	0	0	0	0	0	0	0	$0	$0	0%	0%	$0	$0	$0	$0
	WASTEWATER TREATMENT PLANT TOTAL				$5,350,000	$573,380	$907,480	$5,693,300	$354,340	$6,033,590	$0	$0	$0	$2,516,110	$12,878,500	$21,428,200			$11,541,000	$1,337,500	$18,821,737	$2,606,464
	WW TREATMENT PLANT GENERAL TOTAL =				4,012,500	573,380	907,480	5,693,300	354,340	6,033,590	0	0	0	1,247,147	11,541,000	18,821,737						
	WW TREATMENT PLANT SIF TOTAL =				1,337,500	0	0	0	0	0	0	0	0	1,268,964	1,337,500	2,606,464						
																		Total =	$22,810,860	$11,348,670	$48,911,893	$29,257,038
	WASTEWATER GENERAL PLANT																					
56	Security Upgrades at WWTP (cameras/recording device)	WW930	GP		0	104,250	0	0	0	0	0	0	0	0	$104,250	$104,250	100%	0%	$104,250	$0	$104,250	$0
57	Copier Replacement	WW930	GP		12,680	0	0	0	0	0	0	0	0	0	$12,680	$12,680	100%	0%	$12,680	$0	$12,680	$0
58	Miscellaneous Hardware Failures	WW930	GP		7,500	0	0	0	0	0	0	0	0	0	$7,500	$7,500	100%	0%	$7,500	$0	$7,500	$0
59	Unmanned Aircraft (Drone)	WW930	GP		20,000	0	0	0	0	0	0	0	0	0	$20,000	$20,000	100%	0%	$20,000	$0	$20,000	$0
60	New Vehicle 4WD & Utility Body, 3/4 Ton	WW930	GP		49,000	0	0	0	0	0	0	0	0	0	$49,000	$49,000	100%	0%	$49,000	$0	$49,000	$0
61	Sewer Easement Machine	WW930	GP		45,000	0	0	0	0	0	0	0	0	0	$45,000	$45,000	100%	0%	$45,000	$0	$45,000	$0
62	Replace Vehicle #5122 w/4WD Pick Up w/Utility	WW930	GP		99,000	0	0	0	0	0	0	0	0	0	$99,000	$99,000	100%	0%	$99,000	$0	$99,000	$0
63	New Vehicle for new employee	WW930	GP		77,000	0	0	0	0	0	0	0	0	0	$77,000	$77,000	100%	0%	$77,000	$0	$77,000	$0
	WASTEWATER GENERAL PLANT TOTAL				$310,180	$104,250	$0	$0	$0	$0	$0	$0	$0	$0	$414,430	$414,430			$414,430	$0	$414,430	$0
	WW General Capital				4,350,680	3,599,780	3,802,736	8,235,740	3,236,350	10,958,980	5,179,650	4,529,930	4,185,330	1,247,147	23,225,286	49,326,323						
	TOTAL WASTEWATER CIP				$5,813,180	$3,709,250	$4,868,890	$15,499,380	$4,683,260	$26,627,870	$5,320,860	$5,145,520	$4,289,960	$2,625,190	$34,573,960	$78,583,360			$23,225,290	$11,348,670	$49,326,323	$29,257,038
	WW SIF Capital				1,462,500	109,470	1,066,154	7,263,640	1,446,910	15,668,890	141,210	615,590	104,630	1,378,044	11,348,674	29,257,038						

Attachment C

Power 2019-2028 Ten Year Plan for City

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	**Project**	**Project #**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**5-Year Total (2019-2023)**	**10-Year Total (2019-2028)**	**General Unrestricted**	**SIF - Restricted**
2	**CAPITAL BLANKETS**															
3	Hydro Generation	PW900	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
4	Overhead Distribution Lines	PW901	25,000	25,880	26,780	27,720	28,690	29,690	30,730	31,810	32,920	34,070	134,070	293,290	100%	0%
5	Underground Distribution Lines	PW902	200,000	207,000	214,250	221,740	229,500	237,540	245,850	254,460	263,360	272,580	1,072,490	2,346,280	100%	0%
6	Meter purchases/installs/upgrades	PW903	250,000	258,750	267,810	277,180	286,880	296,920	307,310	318,070	329,200	340,720	1,340,620	2,932,840	100%	0%
7	Distribution transformers	PW904	150,000	155,250	160,680	166,310	172,130	178,150	184,390	190,840	197,520	204,440	804,370	1,759,710	100%	0%
8	Substation	PW905	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
9	Street lights & Yard lights	PW906	150,000	155,250	160,680	166,310	172,130	178,150	184,390	190,840	197,520	204,430	804,370	1,759,700	100%	0%
10	Overhead Service installations/upgrades	PW907	10,000	10,350	10,710	11,090	11,480	11,880	12,290	12,720	13,170	13,630	53,630	117,320	100%	0%
11	Underground Service installations/upgrades	PW908	250,000	258,750	267,810	277,180	286,880	296,920	307,310	318,070	329,200	340,720	1,340,620	2,932,840	100%	0%
12	Temporary Service installations	PW909	50,000	51,750	53,560	55,440	57,380	59,380	61,460	63,610	65,840	68,140	268,130	586,560	100%	0%
13	**CAPITAL BLANKETS TOTAL**		1,085,000	1,122,980	1,162,280	1,202,970	1,245,070	1,288,630	1,333,730	1,380,420	1,428,730	1,478,730	5,818,300	12,728,540		
14																
15	GENERAL (UNRESTRICTED) TOTAL =		1,085,000	1,122,980	1,162,280	1,202,970	1,245,070	1,288,630	1,333,730	1,380,420	1,428,730	1,478,730	5,818,300	12,728,540		
16	PIF (RESTRICTED) TOTAL =		0	0	0	0	0	0	0	0	0	0	0	0		
17			0	0	0	0	0	0	0	0	0	0	0	0		
18	**SPECIFIC PROJECTS**															
19	**HYDRO GENERATION**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
20	0	PW910	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
21	**SUBSTATION**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
22	Capital Maintenance	PW911	150,000	155,250	160,680	166,310	172,130	178,150	184,390	190,840	197,520	204,430	804,370	1,759,700	100%	0%
23	Security gates and fences at Substations	PW911	650,000	0	696,300	720,667	745,890	771,996	0	0	0	0	2,812,857	3,584,853	100%	0%
24	Relay Replacements at Substations - Airport	PW911	0	0	241,030	0	0	0	0	0	0	0	241,030	241,030	100%	0%
25	open	PW911	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
26	Substation Annunciators	PW911	150,000	0	160,680	0	0	0	0	0	0	0	310,680	310,680	100%	0%
27	Extend new feeders for PRPA community solar garden into system	PW911	250,000	0	0	0	0	0	0	0	0	0	250,000	250,000	100%	0%
28	Order and Install of Switchgear for H1 & H2	PW911	0	1,242,000	0	0	0	0	0	0	0	0	1,242,000	1,242,000	100%	0%
29	Begin retirement of west substation	PW911	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
30	Extention of underground transmission to serve new substation in SE corner of service territory	PW911	0	0	0	0	0	0	0	5,407,190	5,267,240	3,747,970	0	14,422,400	100%	0%
31	**CUSTOMER ATC**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
32	Transformers	PW904	350,000	362,250	374,930	388,050	401,630	415,690	430,240	445,300	460,880	477,010	1,876,860	4,105,980	100%	0%
33	Labor/Fleet & Other Materials	PW912	1,260,000	1,304,100	1,563,990	1,618,730	1,675,380	1,734,020	1,794,710	1,857,530	1,922,540	1,989,830	7,422,200	16,720,830	100%	0%
34	Flood Related Hwy 34 Road Rebuild (CDOT Reimbursable)	PW912	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
35	**SYSTEM IMPROVEMENTS**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
36	Underground blanket-development driven construction of lateral feeder extentions as required to meet new load requirements	PW913	150,000	155,250	160,680	166,310	172,130	178,150	184,390	190,840	197,520	204,430	804,370	1,759,700	100%	0%
37	Demand Response	PW913	150,000	155,250	160,680	166,310	172,130	178,150	184,390	190,840	197,520	204,430	804,370	1,759,700	100%	0%
38	Smaller Aging Infrastructure Replacement Projects - Unplanned	PW913	375,000	388,130	401,710	415,770	430,320	445,380	460,970	477,100	493,800	511,090	2,010,930	4,399,270	100%	0%
39	Distribution Automation	PW913	110,000	113,850	117,830	121,960	126,230	130,650	135,220	139,950	144,850	149,920	589,870	1,290,460	100%	0%
40	Planned Future Projects - General	PW913	0	0	0	1,829,380	1,721,280	1,793,410	2,827,290	4,007,680	3,555,380	3,679,820	3,550,660	19,414,240	100%	0%
41	Planned Future Projects - Worst Performing Feeders	PW913	0	0	0	0	0	0	2,458,511	2,544,559	2,633,618	2,725,795	0	10,362,482	100%	0%
42	Energy Diversification Projects	PW913	300,000	310,500	321,370	332,620	344,260	356,310	368,780	381,680	395,040	408,870	1,608,750	3,519,430	100%	0%
43	200 AMP Cable Replacement - Planned	PW913	300,000	310,500	321,370	332,620	344,260	356,310	368,780	381,680	395,040	408,870	1,608,750	3,519,430	100%	0%
44	1 - Install 600 amp tie from Cascade west along Hwy 34, turning south on Rossum to Saint Andrews	PW913	0	0	0	0	0	0	0	0	0	61,330	0	61,330	100%	0%
45	2 - Canyon Voltage Conversion from Idlewilde Park to Waltonia Rd	PW913	300,000	0	0	0	0	0	0	0	0	0	300,000	300,000	100%	0%
46	3 - Extend new feeders from Foothills Substation from W. 22nd & Rio Blanco to Rossum and Eisenhower	PW913	400,000	0	0	0	0	0	0	0	0	0	400,000	400,000	100%	0%
47	43 - Extend new feeders from Foothills Substation from W. 22nd & Cascade to Eisenhower	PW913	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
48	Metering Equipment	PW913	500,000	517,500	535,613	554,359	573,762	593,843	0	0	0	0	2,681,233	3,275,076	100%	0%
49	45 - Transfer West Substation Circuit 914 to Foothills Substation	PW913	500,000	0	0	0	0	0	0	0	0	0	500,000	500,000	100%	0%
50	0	PW913	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
51	**CONVERSION PROJECTS**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
52	4 - Overhead to underground conversion Wilson Ave & Carlisle to SW 10th & Tyler	PW914	0	0	696,300	0	0	0	0	0	0	0	696,300	696,300	100%	0%
53	5 - Overhead to underground circuit 214 - Eisenhower between Goram and Madison	PW914	0	0	10,710	565,450	0	0	0	0	0	0	576,160	576,160	100%	0%
54	6 - Overhead to underground conversion along 29th St from Madison to Hwy 287	PW914	0	0	803,420	0	0	0	0	0	0	0	803,420	803,420	100%	0%
55	8 - Overhead to underground conversion (circuits 222 & 221) from 11th along Madison to 1st	PW914	0	31,050	487,410	0	0	0	0	0	0	0	518,460	518,460	100%	0%
56	9 - Overhead to underground conversion (circuit 713) from 402 & Lincoln N to 1st St	PW914	0	0	0	0	45,900	962,030	0	0	0	0	45,900	1,007,930	100%	0%

Power 2019-2028 Ten Year Plan for City

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	**Project**	**Project #**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**5-Year Total (2019-2023)**	**10-Year Total (2019-2028)**	**General Unrestricted**	**SIF - Restricted**
57	10 - Overhead to underground conversion (circuit 411) along S. Taft from 20th St. SW to 23rd St. SW.	PW914	0	0	0	0	45,900	843,260	0	0	0	0	45,900	889,160	100%	0%
58	12 - Overhead to underground conversion (circuit 411) on railroad right of way from Taft to Grant	PW914	0	0	0	609,790	0	0	0	0	0	0	609,790	609,790	100%	0%
59	13 - Overhead to underground conversion along 14th St. SW between Roosevelt & S. Taft Ave.	PW914	0	0	21,420	643,060	0	0	0	0	0	0	664,480	664,480	100%	0%
60	14 - Overhead to underground conversion along 14th St. SE from St. Louis going .26 miles east	PW914	0	10,350	417,780	0	0	0	0	0	0	0	428,130	428,130	100%	0%
61	15 - Overhead to underground conversion along Madison between 16th & SW257 along ckt 231	PW914	0	0	0	55,440	1,090,150	0	0	0	0	0	1,145,590	1,145,590	100%	0%
62	16 - Overhead to underground conversion along Madison between 29th and vault 1023 - 200 amp	PW914	0	0	0	0	0	11,880	479,410	0	0	0	0	491,290	100%	0%
63	17 - Overhead to underground conversion - Foundry	PW914	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
64	18 - Overhead to underground conversion on 29th - Logan to Garfield	PW914	0	0	803,420	0	0	0	0	0	0	0	803,420	803,420	100%	0%
65	34 - Overhead to underground conversion on S. Roosevelt	PW914	0	0	0	0	0	1,425,220	0	0	0	0	0	1,425,220	100%	0%
66	40 - Overhead to underground conversion circuit 214 - Eisenhower between Madison and Boise - Downtown Backbone	PW914	0	0	0	510,010	0	0	0	0	0	0	510,010	510,010	100%	0%
67	36 - Overhead to underground conversion circuit 214 - RR between 3rd and 7th - Downtown Backbone	PW914	430,000	0	0	0	0	0	0	0	0	0	430,000	430,000	100%	0%
68	37 - Overhead to underground conversion circuit 214 - 7th between RR and Monroe - Downtown Backbone	PW914	0	646,880	0	0	0	0	0	0	0	0	646,880	646,880	100%	0%
69	38 - Overhead to underground conversion circuit 214 - Monroe between 7th and 11th - Downtown Backbone	PW914	0	0	460,630	0	0	0	0	0	0	0	460,630	460,630	100%	0%
70	41 - Overhead to underground conversion circuit 214 - Gorom between Eisenhower and 11th - Downtown Backbone	PW914	0	0	0	255,010	0	0	0	0	0	0	255,010	255,010	100%	0%
71	46 - HWY 287 - Phase I	PW914	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	100%	0%
72	47 - HWY 287 - Phase II	PW914	0	1,035,000	0	0	0	0	0	0	0	0	1,035,000	1,035,000	100%	0%
73	48 - HWY 287 - Phase III	PW914	0	0	1,071,230	0	0	0	0	0	0	0	1,071,230	1,071,230	100%	0%
74	0	PW914	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
75	**ROAD RELATED PROJECTS**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
76	Miscellaneous Small Projects	PW913	100,000	103,500	107,120	277,180	286,880	296,920	307,310	318,070	329,200	340,720	874,680	2,466,900	100%	0%
77	19 - Reconductor 921 on N Taft Ave from railroad right of way to Eisenhower	PW913	470,250	0	0	0	0	0	0	0	0	0	470,250	470,250	100%	0%
78	0	PW913	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
79	0	PW913	0	0	0	0	0	0	0	0	0	0	0	0	100%	0%
80	**STREET LIGHT PROJECTS**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
81	Arterials/Major Collectors	PW915	150,000	155,250	160,680	166,310	172,130	178,150	184,390	190,840	197,520	204,430	804,370	1,759,700	100%	0%
82	Customer requests/Miscellaneous projects	PW915	100,000	103,500	107,120	110,870	114,750	118,770	122,930	127,230	131,680	136,290	536,240	1,173,140	100%	0%
83	0		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
84	**TOTAL SPECIFIC PROJECTS**		8,145,250	7,100,110	10,364,103	10,006,206	8,635,111	10,968,289	10,491,711	16,851,329	16,519,348	15,455,235	44,250,780	114,536,691		
85																
86	HYDRO GENERATION (GENERAL) =		0	0	0	0	0	0	0	0	0	0	0	0		
87	SUBSTATION (GENERAL) =		1,200,000	1,397,250	1,258,690	886,977	918,020	950,146	184,390	5,598,030	5,464,760	3,952,400	5,660,937	21,810,663		
88	CUSTOMER ATC (GENERAL) =		1,610,000	1,666,350	1,938,920	2,006,780	2,077,010	2,149,710	2,224,950	2,302,830	2,383,420	2,466,840	9,299,060	20,826,810		
89	SYSTEM IMPROVEMENTS (GENERAL) =		3,085,000	1,950,980	2,019,253	3,919,329	3,884,372	4,032,203	6,988,331	8,314,329	8,012,768	8,354,555	14,858,933	50,561,118		
90	CONVERSIONS (GENERAL) =		1,430,000	1,723,280	4,772,320	2,638,760	1,181,950	3,242,390	479,410	0	0	0	11,746,310	15,468,110		
91	ROAD RELATED PROJECTS (GENERAL) =		570,250	103,500	107,120	277,180	286,880	296,920	307,310	318,070	329,200	340,720	1,344,930	2,937,150		
92	STREET LIGHT PROJECTS (GENERAL) =		250,000	258,750	267,800	277,180	286,880	296,920	307,320	318,070	329,200	340,720	1,340,610	2,932,840		
93			0	0	0	0	0	0	0	0	0	0	0	0		

Power 2019-2028 Ten Year Plan for City

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	**Project**	**Project #**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**5-Year Total (2019-2023)**	**10-Year Total (2019-2028)**	**General Unrestricted**	**SIF - Restricted**
94	**PLANT INVESTMENT FEE PROJECTS**															
95	**SUBSTATION PIF PROJECTS**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
96	Valley Substation - Order new transformer - V3	PW920	0	0	0	997,850	0	0	0	0	0	0	997,850	997,850	0%	100%
97	Valley Substation - Order new switchgear lineup for V3	PW920	0	0	0	831,540	0	0	0	0	0	0	831,540	831,540	0%	100%
98	Valley Substation - Install new switchgear lineup & transformer for V3	PW920	0	0	0	0	573,760	0	0	0	0	0	573,760	573,760	0%	100%
99	East Substation - Install new switchgear lineup for E3	PW920	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%
100	New Substation in SE corner of service territory	PW920	0	0	0	0	0	0	7,206,310	0	0	0	0	7,206,310	0%	100%
101	Replace Airport Substation Transformer	PW920	0	0	964,100	0	0	0	0	0	0	0	964,100	964,100	0%	100%
102	Foothills Substation - Order & Install F3 & F4 Transformers	PW920	0	0	0	0	0	0	0	0	3,292,020	0	0	3,292,020	0%	100%
103	Replace Horseshoe Substation Transformer H1	PW920	0	0	0	0	0	0	0	0	0	1,226,610	0	1,226,610	0%	100%
104	Land Purchase	PW920	800,000	0	0	0	0	0	0	0	0	0	800,000	800,000	0%	100%
105	Land Development	PW920	0	0	1,071,230	0	0	0	0	0	0	0	1,071,230	1,071,230	0%	100%
106	East Substation - Order and Install new Transformer - E1	PW920	0	1,035,000	0	0	0	0	0	0	0	0	1,035,000	1,035,000	0%	100%
107	0	PW920	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%
108	**FEEDER PIF PROJECTS**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
109	Blanket-development driven construction of miscellaneous primary feeder extentions as required to meet new load requirements	PW921	150,000	155,250	160,680	166,310	172,130	178,150	184,390	190,840	197,520	204,430	804,370	1,759,700	0%	100%
110	21 - Feeder from Foothills to Hunters Run	PW921	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%
111	22 - Install conduits from Byrd Dr to I25 Frontage Rd, connecting at Kendall Pkwy	PW921	0	931,500	0	0	0	0	0	0	0	0	931,500	931,500	0%	100%
112	44 - Install 750 AL from MCR to Kendall Pkwy & I25 - sub to sub tie between Crossroads and Airport	PW921	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%
113	23 - Sub to Sub Tie - Install new conduit bank and 750 AL from Garfield to CR 11	PW921	0	0	0	0	918,020	0	0	0	0	0	918,020	918,020	0%	100%
114	24 - Sub to Sub Tie - Install new conduit bank and 750 AL from 57th and Taft to vault V1780.	PW921	0	0	0	55,440	803,270	0	0	0	0	0	858,710	858,710	0%	100%
115	25 - Foothills Substation Conduit - Install new conduit along W. 22nd east from Rio Blanco to Van Buren	PW921	0	0	0	0	0	0	0	1,908,420	0	0	0	1,908,420	0%	100%
116	26 - Extend new feeders from Valley V3 into system	PW921	0	0	0	55,440	1,606,530	0	0	0	0	0	1,661,970	1,661,970	0%	100%
117	42 - Extend new feeders from East Sub to Boise and 402	PW921	0	517,500	0	0	0	0	0	0	0	0	517,500	517,500	0%	100%
118	27 - Extend new feeders from Boise and 402 to I25 towards future new substation	PW921	0	51,750	2,088,890	0	0	0	0	0	0	0	2,140,640	2,140,640	0%	100%
119	29 - Sub to Sub Tie - Install new duct bank and 750 AL on Madison E on 37th to CR11C, N to 57th St	PW921	0	0	0	0	0	0	61,460	954,210	0	0	0	1,015,670	0%	100%
120	30 - Sub to Sub Tie - Extend new feeders along CR 11 from 57th St. to CR 30	PW921	0	0	0	0	0	0	0	0	26,340	1,063,060	0	1,089,400	0%	100%
121	31 - Sub to Sub Tie - Extend new feeders along CR 11 from Boyd Lake Ave. to CR 30	PW921	0	0	0	0	0	0	0	0	0	2,044,350	0	2,044,350	0%	100%
122	35 - The Brands - Byrd Dr Fairgrounds along Crossroads	PW921	400,000	0	0	0	0	0	0	0	0	0	400,000	400,000	0%	100%
123	20 - Extension of 600 amp from 14th st sw to hwy 60 along hwy 287	PW921	1,100,000	0	0	0	0	0	0	0	0	0	1,100,000	1,100,000	0%	100%
124	49 - 37th St. 600amp Extension between Boyd Lake Ave and Rocky Mountain Blvd	PW921	1,200,000	0	0	0	0	0	0	0	0	0	1,200,000	1,200,000	0%	100%
125	50 - County Road 30 - Phase II - I25 Crossing	PW921	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000	1,000,000	0%	100%
126	0	PW921	0	0	0	0	0	0	0	0	0	0	0	0	0%	100%
127	**POWER GENERATION PIF**		0	0	0	0	0	0	0	0	0	0	0	0	0%	0%
128	0		0	0	0	0	0	0	0	0	0	0	0	0	0%	100%
129	**TOTAL PIF PROJECTS**		4,650,000	2,691,000	4,284,900	2,106,580	4,073,710	178,150	7,452,160	3,053,470	3,515,880	4,538,450	17,806,190	36,544,300		
130																
131	SUBSTATION PROJECTS (RESTRICTED) =		800,000	1,035,000	2,035,330	1,829,390	573,760	0	7,206,310	0	3,292,020	1,226,610	6,273,480	17,998,420		
132	FEEDER PROJECTS (RESTRICTED) =		3,850,000	1,656,000	2,249,570	277,190	3,499,950	178,150	245,850	3,053,470	223,860	3,311,840	11,532,710	18,545,880		
133	POWER GENERATION PROJECTS (RESTRICTED) =		0	0	0	0	0	0	0	0	0	0	0	0		
134			0	0	0	0	0	0	0	0	0	0	0	0		
135	**GENERAL PLANT**															
136	Replace #5206, 2002 Hyster Forklift	PW930	71,000	0	0	0	0	0	0	0	0	0	71,000	71,000	100%	0%
137	Replace #5807, 2009 S&R UnderDawg Puller	PW930	190,000	0	0	0	0	0	0	0	0	0	190,000	190,000	100%	0%
138	Replacement of Metering Software Server and Ancillary Equipment	PW930	10,000	0	0	0	0	0	0	0	0	0	10,000	10,000	100%	0%
139	Purchase of New Meter Testing Station	PW930	71,000	0	0	0	0	0	0	0	0	0	71,000	71,000	100%	0%
140	Purchase of New Pickup for Designer Team	PW930	40,000	0	0	0	0	0	0	0	0	0	40,000	40,000	100%	0%
141	Replacement of Electric SCADA Servers and SCADA Workstations	PW930	39,000	0	0	0	0	0	0	0	0	0	39,000	39,000	100%	0%
142	Service Center Renovations	PW930	0	98,330	101,770	105,330	109,010	112,830	116,780	120,870	125,100	129,480	414,440	1,019,500	100%	0%
143	Network Switches	PW930	73,180	0	0	0	0	0	0	0	0	0	73,180	73,180	100%	0%
144		PW930														
145	F450 Crew Cab, 4wd With Utility Body	PW930	70,400	0	0	0	0	0	0	0	0	0	70,400	70,400	100%	0%
146	**TOTAL GENERAL PLANT PROJECTS**		564,580	98,330	101,770	105,330	109,010	112,830	116,780	120,870	125,100	129,480	979,020	1,584,080		
147																

Power 2019-2028 Ten Year Plan for City

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Project	Project #	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-Year Total (2019-2023)	10-Year Total (2019-2028)	General Unrestricted	SIF - Restricted
149	POWER GENERAL TOTAL =		9,794,830	8,321,420	11,628,153	11,314,506	9,989,191	12,369,749	11,942,221	18,352,619	18,073,178	17,063,445	51,048,100	128,849,311		
150	POWER PIF TOTAL =		4,650,000	2,691,000	4,284,900	2,106,580	4,073,710	178,150	7,452,160	3,053,470	3,515,880	4,538,450	17,806,190	36,544,300		
151			0	0	0	0	0	0	0	0	0	0				
152																
153	TOTAL POWER CAPITAL EXPENDITURES =		14,444,830	11,012,420	15,913,053	13,421,086	14,062,901	12,547,899	19,394,381	21,406,089	21,589,058	21,601,895	68,854,290	165,393,611		

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 8
MEETING DATE: 4/18/2018
SUBMITTED BY: Michelle Erickson
STAFF TITLE: Technical Specialist

ITEM TITLE:

2017 Levels of Service Update for Water and Wastewater Utilities

DESCRIPTION:

This item provides a yearly update of our 2017 Levels of Service performance compared to prior years for the Water and Wastewater Utilities.

SUMMARY:

Our Levels of Service (LOS) targets are the minimum acceptable levels that water and wastewater should strive to maintain. When we initially worked on setting our LOS, we took into consideration LUC, internal staff, and customer expectations, regulatory requirements, actual performance, and the physical capabilities and limits of our current assets. Please see the attached presentation slides to view the results of our 2017 LOS compared to historical records back to 2009.

Water and Wastewater Utilities

As part of the Loveland Water and Power's Asset Management Program, we have developed Levels of Service for the Water and Wastewater Utilities. Asset management includes managing infrastructure capital assets to minimize the total cost of owning, operating, and maintaining assets at acceptable Levels of Service. Defining Levels of Service, tracking performance against these targets, and working to improve in areas in which we fall short are a key part of our asset management program. This is our fourth year in which staff has tracked Levels of Service performance criteria in both the Water and Wastewater Utilities in the following areas:

- Regulatory compliance
- Quantity of services provided
- Availability of services provided
- Reliability of services provided
- Responsiveness to outages or blockages
- Aesthetics (odor, taste, smell, etc.)

Improvements in LOS performance require additional resources. For instance, if we want to see fewer leaks, then we need to invest additional resources (time, money, equipment, manpower, etc.) to repair or replace failing water lines. It is important to balance the costs verses the benefits of improvements in LOS. For example, a target of zero water main breaks in any given year may sound desirable, but it is not likely that customers would be willing to pay substantially more for the associated costs required to provide and maintain that high of a water availability LOS. LOS improvements require additional operational costs, which in turn require additional funding through mechanisms such as debt financing or raising the rates charged to customers.

Measuring our progress and comparing it against our target LOS helps us to better focus on the areas that need improvement and helps us better communicate which areas need additional resources for progress

to be made. LOS requirements may need to be updated to adapt to changes such as population growth, increased regulatory requirements or technology improvements. Our hope is that over time, we will have the resources in place to meet all of our desired LOS performance measures, while still maintaining our assets in a cost-effective manner.

RECOMMENDATION:

Staff item only. No action required.

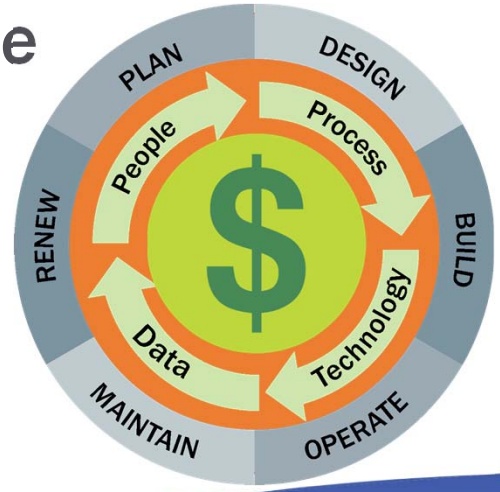
ATTACHMENTS:

- Attachment A: Presentation Slides

Attachment A

LOVELAND UTILITIES COMMISSION

2017 Water & Wastewater Levels of Service



Michelle Erickson
Technical Specialist
April 18, 2018

LEVELS OF SERVICE (LOS)

Levels of Service: Sets the minimum acceptable levels that the Water & Wastewater Utilities should strive to maintain for:

- Regulatory Compliance
- Quantity
- Availability & Capacity
- Reliability
- Responsiveness
- Aesthetics & Quality

LOVELAND UTILITIES COMMISSION

LOS • WATER REGULATORY COMPLIANCE

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Safe Potable Water: *Compliance with Drinking Water Standards and all requirements of the Safe Drinking Water Act*									
100% Compliant	✓	✓	✓	✗	✓	✓	✓	✗	✗
No Tier Notifications	✓	✓	✓	✓	✗	✓	✓	0	0
Fluoride: *Optimally fluoridate water*									
Number of months fluoride did not meet the optimally fluoridated requirements set by the state.	✓ 0	✗ 2	✗ 7	✗ 12	✗ 12	✗ 4	✓ 0	✓ 0	✓ 0

LOVELAND UTILITIES COMMISSION

LOS • WATER QUANTITY

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Pressure: *Minimum Pressure at Meter*									
All properties receive at least 40 PSI static pressure where not prevented due to high property elevations.	?	?	?	?	?	✗ 2	✗ 1	✗ 4	✗ 1
Flow: *Water system maintained to meet fire suppression flow requirements.*									
Maintain a Public Protection Classification of 2 in the Water Supply area of the survey conducted by the Insurance Services Office (ISO).	?	?	?	?	?	?	✓	✓	✓

LOVELAND UTILITIES COMMISSION

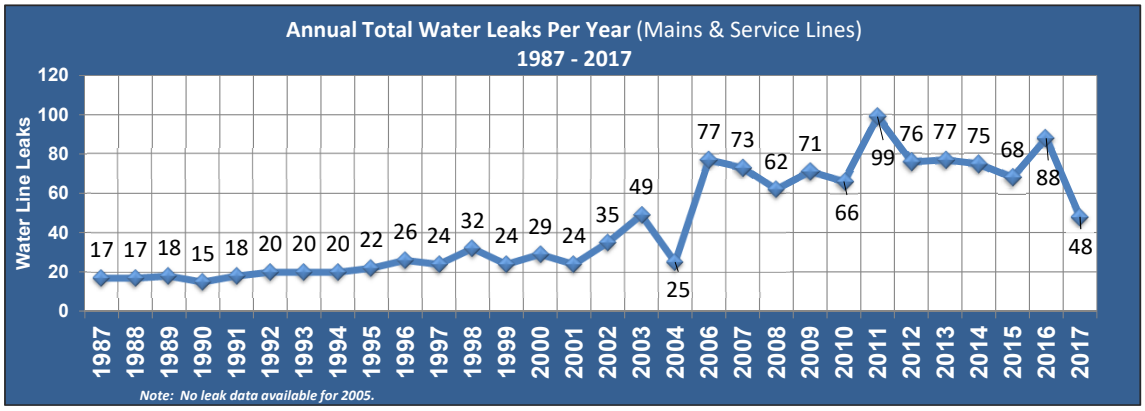
LOS • WATER AVAILABILITY

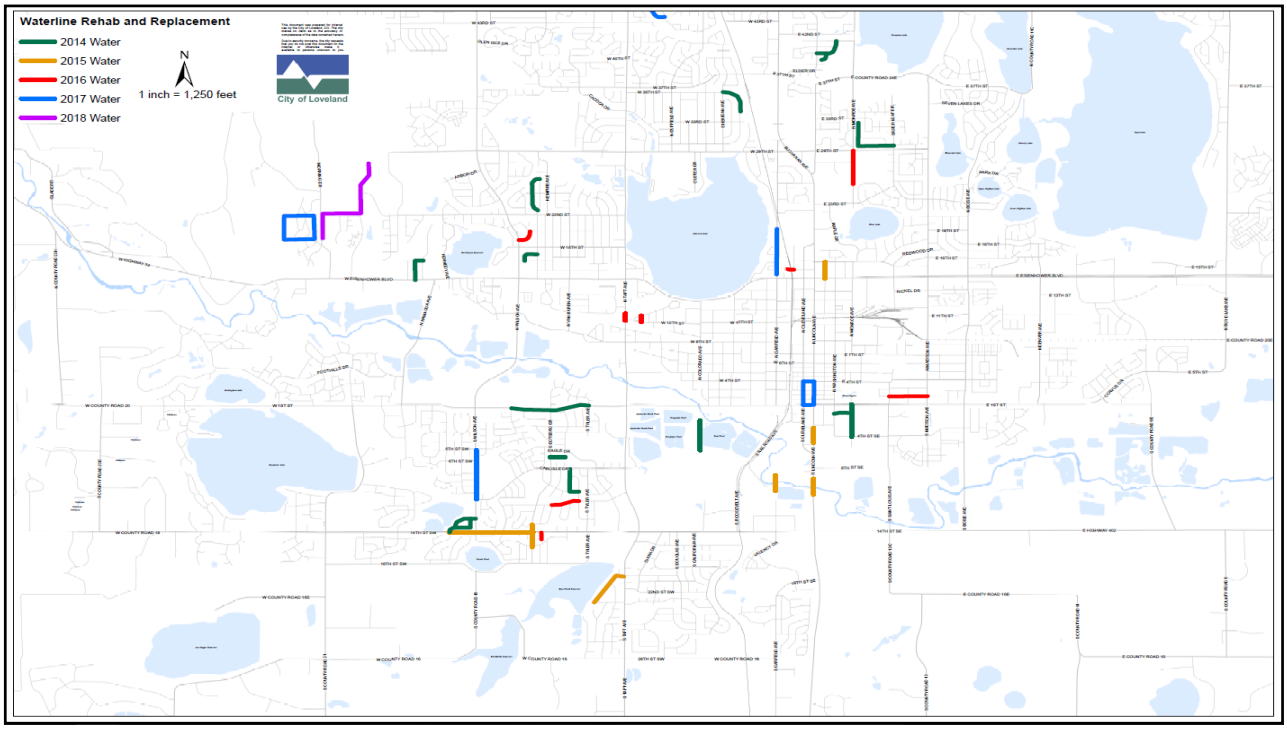
Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Drought Storage: *System to endure a 100-year drought event without mandatory watering restrictions*									
Did not implement mandatory watering restrictions.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Did not consider implementing mandatory watering restrictions.	✓	✓	✓	✗	✓	✓	✓	✓	✓
System Capacity: *Treatment capacity and system storage*									
Capacity to supply peak demand to all customers utilizing interconnects if necessary	✓	✓	✓	✓	✓	✓	✓	✓	✓

LOVELAND UTILITIES COMMISSION

LOS • WATER RELIABILITY

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Unplanned Interruptions: *Number of un-notified system interruptions*									
No more than 2 un-notified interruptions on any 1000' of waterlines	✗ 7	✗ 6	✗ 11	✗ 9	✗ 12	✗ 9	✗ 6	✗ 2	✗ 1





LOS • WATER RESPONSIVENESS

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Response to Unplanned Water Outages: *Time to respond to unplanned water outages*									
Respond on-site to all water outage complaints within 1 hour	?	?	?	?	?	✓	✓	✓	✓

LOS • WATER AESTHETICS

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Water Quality Complaints: *Number of water quality complaints*									
Water quality complaints do not exceed more than 1% of the number of active water meters.	✓	✓	✓	✓	✓	✓	✓	✗	✓

LOVELAND UTILITIES COMMISSION

LOS • WASTEWATER REGULATORY COMPLIANCE

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Compliance with Wastewater Permit Limits & Requirements: *Compliance with all regulatory and permit requirements*									
Zero exceedances and zero violations to all regulatory and permit requirements	✓	✓	✓	✗ 2	✓	✗ 1	✗ 3	✗ 3	✗ 2

LOS • WASTEWATER AVAILABILITY

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
System Capacity: *Collection, treatment, and lift station capacity and performance even during a 25-year rain storm event*									
0% exceedance of collection system and treatment plant capacity	✓	✓	✓	✓	✓	✓	✓	✓	✓
No sanitary sewer overflows	✗ 1	✓	✓	✓	✗ 2	✗ 4	✓	✓	✗ 1

LOS • WASTEWATER RELIABILITY

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Unplanned Interruptions: *Number of sewer main backups*									
No more than 2 sewer main backups.	✗ 13	✗ 2	✗ 7	✗ 8	✗ 4	✗ 14	✗ 4	✗ 5	✗ 7

LOS • Wastewater Responsiveness

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Response to Unplanned Blockages: *Time to respond to blockage complaints*									
Respond to all blockage complaints on-site within 1 hour.	?	?	?	?	?	✓	✓	✓	✓

LOS • Wastewater Aesthetics

Target Performance per Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Wastewater Odor Complaints: *Number of odor complaints related to the wastewater system*									
No more than 10 odor complaints	✓	✓	✓	✓	✓	✓	✓	✓	✓

LOVELAND UTILITIES COMMISSION

Benefits of Levels of Service

- **Narrow the Focus:** Helps narrow the focus to areas in which we are not meeting the minimum Levels of Service
- **Project Identification:** Helps identify areas where we may look at doing repair, replacement or risk mitigation projects
- **Communication Tool:** Ties results to funding and provides justification for decision-making and resource allocation
- **Trending:** Measures and documents actual performance against defined performance criteria which leads to greater understanding of trends and allows benchmarking against other utilities
- **Prioritization Tool:** Use as an additional tool to help prioritize capital improvement projects in conjunction with other tools such as:
  - Leak frequency and blockage maps
  - Budget projections
  - Project cost projections

LOVELAND UTILITIES COMMISSION

LOVELAND UTILITIES COMMISSION

QUESTIONS?

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 9
MEETING DATE: 4/18/2018
SUBMITTED BY: Michelle Erickson
STAFF TITLE: Technical Specialist

ITEM TITLE:

2017 Water Loss Audit Update

DESCRIPTION:

This item reviews the results of the Water Loss Audit of 2017, including ways to improve data validity of future audits, the progress made to improve the water tracking methods, and the actions taken or identified to better manage or reduce non-revenue water.

SUMMARY:

The Water and Power Department completed its third annual Water Loss Audit using AWWA's methodology presented in the *Water Audits and Loss Control Programs, Manual of Water Supply Practices M36* by gathering information from existing records, procedures, and databases to categorize where water entered and exited the LWP distribution system during the 2017 calendar year. A water loss audit tracks all sources and uses of water within a water system over a specified period and is summarized in a Water Balance Table (see Attachment A). The Water Balance Table is based on the theory that all water placed into a distribution system would equal all the water taken out of a distribution system. The sum of each column of components in the Water Balance Table are equal and therefore "balance".

The water audit can help reveal and clarify inefficiencies in water delivery and revenue generation and answer questions such as: How much water entered the water system? For what purposes was the water used? What types of water loss occurred? How much water was lost? What was the financial cost of water loss? What was the volume and the financial cost of non-revenue water? Our goals in performing these water audits are to identify areas in which we can reduce water losses, improve data validity and decrease non-revenue water where practical and feasible.

Water Supplied: In 2017, the Water Division supplied 4,457 million gallons (MG) of water to the distribution system. Because the large diameter source water meter has not been tested or calibrated we verified the amount metered going into the distribution system against what entered the water treatment plant less the water removed during the treatment process. There was a 4.4% difference between the metered water entering the water treatment plant less the process water, verses the water metered as exiting the plant and entering the distribution system.

Staff discovered while exercising a valve and performing a pipe inspection of the 54" diameter line from the Big Thompson River to the Water Treatment Plant that there was a steady flow of water coming in at the head of the plant, but after the raw water source meter. After some investigation, staff determined that this water was decant water off the ponds up the hill. The valve is now closed to cut off this flow. The double counting of this water, would account for at least a portion of the 4.4% discrepancy between the water measured as entering and exiting the plant.

AWWA recommends that source water meters be tested annually. Small errors on the source meters can result in large swings in other areas of the water audit. The configuration of our Water Treatment Plant does not allow the treated water source meter to be removed for testing; however, we have noted that the electronic components of the treated water and raw water source meters should be calibrated on a regular

bases as well as performing some type of flow test such as a drawdown test of the adjacent Chasteen's Tank to improve the data validity of what is measured going into the distribution system. Staff is scheduled to meet in late April to discuss plans for a drawdown test of the Chasteen's tank to verify the accuracy of the water measured as entering the distribution system. Our Tech Services group is working on getting contracts in place to calibrate the electronics on the distribution system source meter as well.

Billed Metered Consumption: Billed metered consumption for 2017 was 3,671 MG. This makes up 83% of the 4,410 MG water supplied into the distribution system. For the 2017 audit, we drilled down to more detail than prior years and corrected for misalignment between the meter readings, billing cycles and the audit period. We obtained the individual meter reads for all water meter readings done during the audit period and for the month before and after the audit year. For the meter readings that included water consumption for the year prior or after the audit period, we divided the usage by the number of days since the meter was last read and multiplied by the number of days that were in the audit period. This method assumes that approximately the same amount of water is used per day by our customers.

By looking at the individual meter reading data, we corrected some additional errors that were inadvertently included in prior audits.

- Interconnects: Water exported to neighboring water districts was subtracted out. This water consumption is accounted for in the Water Imported and Water Exported area of the water audit.
- Water Provided by Others: There is some customer overlap with Little Thompson Water District and with Fort Collins-Loveland Water District in which one utility provides the water to a customer, but for which the customer is billed for water, sewer or both from another water provider. We subtracted out any consumption of water that was provided by neighboring water districts, but which LWP billed and added in water that LWP provided that was billed out by other water providers.

During 2017 and 2018, we have made progress in getting more locations that were previously not billed to be billed. We have noted in the billed unmetered, unbilled metered and unbilled unmetered sections below these additional locations.

Billed Unmetered Consumption: In 2017, we had 24,021 gallons of billed unmetered usage. The only usage that falls in this category are four vehicles in the Public Works Department with unmetered water tanks. The water usage is estimated based on the volume of tank capacity per vehicle and load counts. LWP then bills Public Works based on the estimated water usage.

Unbilled Metered Consumption: In 2017, we had 1.1 MG of unbilled metered usage, which decreased considerably by 10.8 MG gallons from 2016. Below is a summary of what is included in this figure as well as the progress made to get this consumption billed or tracked more accurately.

- ***Wastewater Utility:*** The Wastewater Treatment Plant had three meters that were not set to bill. We began billing the wastewater utility for this water usage starting September 30, 2016 for all three of these meters. (13.9 MG of metered billed usage in 2017)
- ***Storm Water Utility:*** In 2018, we began billing the Stormwater utility for the irrigation water provided to two detention ponds located off 1st Street and for the landscaping around the Louden Siphon. (995,151 gallons of unbilled metered usage in 2017)
- ***HOA:*** In 2017, we began billing the HOA for the irrigation of the landscaping around the Lakes Place Lift Station, which was an oversight from when the landscaping and meter were first installed. (180,000 gallons of metered billed usage in 2017)
- ***Events of Authorized Unbilled Water Usage:*** Any event in which water is not billed, requires the prior approval of the Director of Water and Power. We track the usage for these instances through hydrant

meters. For 2017, this included water for the Corn Roast Festival, Loveland Loves BBQ event and the Steam Fest of Northern Colorado Sponsored by The Boys and Girls Club. (15,596 gallons of unbilled metered usage in 2017)

- ***Billing Adjustments:*** Includes consumption adjustments for water that actually arrived at the customer, but was credited back to the customer for various reasons usually due to a nearby leak or construction activity that impacted the water service to the customer. (117,000 gallons of unbilled metered usage in 2017)

Unbilled Unmetered Consumption: In 2017, we estimated we had 67.4 MG of authorized unbilled unmetered water usage. The costs for some of these uses of water are shared by all water customers, such as the water used to maintain the distribution system and water used in fire training and firefighting. When economically feasible, we are working to get this water usage metered and billed. When that is not economically feasible, we are working to ensure the water is not used wastefully, and we are working to improve the methods used to estimate and track the water usage. Below outlines what falls into this category and the progress made in tracking this usage.

- ***Head of the Wastewater Treatment Plant (WWTP):*** During the WWTP expansion project, we found that there was water being used at the odor control facility that came off the service line before the water meter. In 2018, the meter was moved to a new location to account for this water. Based on the year-to-date 2018 consumption, we estimate that this water use in 2017 accounts for approximately 41% of all unbilled unmetered consumption. (Estimated 27.7 MG in 2017)
- ***Sanitary Sewer Jetting:*** In 2017, 9.0% of the unbilled unmetered consumption was used for sanitary sewer jetting. Because this maintenance task is used to maintain the wastewater collection system and not for the water distribution system, this water usage should be charged to the wastewater utility. This is included in our 2019 budget. In 2019, we will begin doing quarterly fund transfers from the wastewater utility to the water utility to account for this water usage. (Estimated 6.0 MG in 2017)
- ***Maintenance of Water Distribution System:*** Water is necessary for on-going maintenance of our water distribution system. As part of the audit, we reviewed the calculations used to estimate the water usage and are working with staff to maintain detailed and accurate logs of this water usage. For 2017, we estimated this water usage as follows:

Gallons Used	Water Distribution System Maintenance Activity
15,414,460	Fire hydrant flushing
3,250	Scheduled main shutdown Non-Emergency De-Watering (Usually for construction projects)
6,534,558	Transmission Line Flushing
6,327,031	Water Storage Tank Cleaning & Draining

- ***Disinfection & Construction Projects:*** We use water to disinfect water pipes and for non-emergency de-watering of lines. Both of these primarily occur during construction projects and for new developments. Project Managers maintain a log of each of these instances in a spreadsheet that auto-calculates the water used based on various input values. These logs are submitted annually as part of the audit. (Estimated 4.6 MG in 2017)
- ***Fire Training Grounds:*** There are nine unmetered fire hydrants used for fire training purposes at the Loveland Fire Training Grounds. We previously investigated installing a water meter and pit at both ends of the Fire Training Grounds, but found the project to be cost prohibitive. The Fire Authority maintains a log of water usage when they or other parties hook up to the on-site hydrants for fire training exercises and submits this log annually as part of the audit. (Estimated 686 thousand gallons in 2017)
- ***Off-Site Fire Training:*** The Fire Authority performs off-site fire training in which they hook up to fire hydrants throughout the City. The Fire Authority maintains a log of which water district's fire hydrants they hook up to and estimates the water used during these off-site training exercises and submits this log annually as part of the audit. (Estimated 122 thousand gallons in 2017)

- ***Fire Fighting:*** The Fire Authority tracks and logs the water used for each fire incident and submits this log annually as part of the audit. (Estimated 40 thousand gallons in 2017)
- ***Wastewater Treatment Plant:*** There were two swamp coolers on the roof of the Blower Building and an eyewash station and hose hookup in the UV Building at the Wastewater Treatment Plant that had unmetered water usage. We installed meters at both locations and began billing the wastewater utility for this water usage starting February 16, 2017. (241,000 gallons of metered billed usage in 2017)
- ***Parks:*** North Lake Park had unmetered water usage for the train depot concession stand sink. We installed a meter and began billing Parks for this usage starting August 31, 2017. (Estimated 5,000 gallons in 2017)
- ***Fire Hydrant Flow Tests:*** Fire hydrant flow tests are conducted to determine water availability in planning for firefighting activities, fire sprinkler systems or domestic water demand. Near the tail end of 2017, we created a new form used when performing fire hydrant flow tests which also includes enough information to calculate the estimated water use during such tests. This water usage will be included in future water audits.
- ***Fire Sprinkler Systems:*** We have not previously tracked or estimated the water used for fire sprinkler systems. We have met with the Fire Authority and with multiple fire sprinkler system design and installation companies to discuss ways to estimate this usage. Because the majority of the water used for fire sprinkler systems is during the initial installation with very minimal amounts required during annual inspections, we will be focusing our efforts on estimating the water used during the initial installation of new structures with fire sprinklers. The Fire Authority is working on compiling data for projects that were permitted during 2017. Depending on the timing of when we receive the reports from the Fire Authority, we may modify the 2017 audit with this information or wait until the next audit period to include this information. Going forward, the Fire Authority will provide us annually a report with details on newly permitted structures requiring fire sprinkler systems to help with the estimation of water use.
- ***Fire Pumps:*** We have not previously tracked or estimated the water used for fire pumps. Fire pumps are needed when the water system cannot provide sufficient pressure to meet the hydraulic design requirements of the fire sprinkler system such as for tall buildings, systems with relatively high terminal pressure at the fire sprinklers in order to provide a large volume of water, such as in storage warehouses or when the water supply is provided from a ground level water storage tank. Fire pumps are certified annually and each test generally uses several thousand gallons of water. We met with the Fire Authority in March 2018, and the Fire Authority is in the process of compiling a list of sites with fire pumps located within our service territory. Depending on the timing of when we receive this list, we may modify the 2017 audit with this information or wait until the next audit period to include this information. Going forward, the Fire Authority will provide us annually a report with details on newly installed fire pumps to help with the estimation of water use.

Apparent Losses: These losses are the nonphysical losses that occur when water is successfully delivered to the customer but is not measured or recorded accurately. These losses include unauthorized consumption, metering inaccuracies and systematic data handling errors. These losses are valued at the full rate the utility would have received had they been billed. Because apparent losses are valued at the customer retail cost, controlling apparent losses can offer substantial revenue recovery opportunities for utilities.

- Unauthorized Consumption: Consumption not explicitly or implicitly authorized by the utility, commonly known as water theft. These include water from illegal connections, open bypasses, buried or otherwise obscured meters, misuse of fire hydrants and fire-fighting systems, vandalized or bypassed consumption meters, tampering with meter reading equipment, etc. For the water audit, we used the AWWA default estimate of 0.25% of water supplied. This percentage has been found to be representative of this component of loss in water audits compiled worldwide. (Estimated 11.0 MG in 2017)

- **Customer Meter Inaccuracies:** Water meters act as the cash registers for water utilities and it is important that they accurately record water usage, particularly for customers with high water use, so that the utility is adequately compensated for the water that customers use and so that each customer pays their fair share of the cost of the utility. Below outlines our testing procedures:
  - **Account Anomalies:** In 2017, we began testing a portion of our 5/8" and 3/4" meters in the field that were not flagged for problems. Previously, we only tested 5/8", ¾" and 1" meters when there some type of anomaly recorded such as a large change in consumption or a problem with the actual meter (high bill, meter stuck, non-consumption read, meter malfunction, etc.), which lowered the average test results.
  - **1" Meters:** Because many of the 1" meters had not been tested in several years, the Water Metering group decided to test about 10 percent of the 1" meters in 2016.
  - **Large Meters:** 1-1/2" and greater sized meters are tested every 5 years.

  LWP's Water Metering group tested 931 water meters in 2017 and replaced between 440 to 450 of the meters tested. Water meters are replaced rather than rebuilt when it is more cost effective (particularly for smaller meters), parts to rebuild the meter have been discontinued, meters with lead components removed for testing may not be reinstalled at a different location, which often results in replacing the meter, and often when meters tested are not Advanced Meter Infrastructure (AMI) compatible.

  If available, the 5-year average of the meter test results was applied to 1" to 6" size meters for each make and model. For the ¾" and 5/8" meters, the average meter test results of the meters tested that were not flagged due to problems was applied. When no meters were tested within the past 5-years of the specific make and model, then the weighted average of all meters of that size was applied. Based on these meter test results and the 2017 water consumption records, it is estimated that the water meters collectively under-registered actual consumption by about 81 MG in 2017. (Estimated under registration 81 MG for 2017)

- **Systematic Data Handling Errors:** These refer to errors in the processes that transmit, archive, and report customer consumption totals from the time when a meter is read to the time when that consumption is billed. For the water audit, we used the AWWA default estimate of 0.25% billed metered authorized consumption. (Estimated 9.2 MG in 2017)

  The City has contracted with Water Company of America to review unbilled or misbilled Water, Wastewater, Power, Stormwater and Solid Waste Utilities. The consultant is currently working to comb through data and perform field work to find areas in which we can recapture revenue such as when a City rate structure was misapplied, finding billing system inaccuracies, detecting unknown connections, finding account coding errors, flagging chronic meter reading errors, etc. Some of this work may lead to corrections in the actual number of the gallons of water consumed to help us more accurately reflect our true water consumption.

  Sewer - *Service not billing or billing incorrect number of units*
  - 10 accounts for a total of $125.58/month

  Water – *Incorrect rate*
  - 3 accounts for a total of $19.13/month

Real Losses: Physical water losses of treated, energized water from the water distribution system from breaks, leaks and overflows. In this audit, real losses are calculated as what remains after authorized consumption, and apparent loss volumes are deducted from the water supplied volume. For 2017, real losses were calculated to be 570 MG.

The table below is the estimated gallons lost due to reported water leaks. We estimated the gallons lost based on various system attributes and the amount of time it takes to repair each leak.

Gallons Lost	Water Distribution System Maintenance Activity
92,008	Replace service
155,621	Repair service
114,165	Repair/replace valve
18,104,153	Repair main

Reported leakages are easy to see, and they account for about 3% of the total estimated leakage from our system in 2017. The rest of the leakage is either hidden (i.e. leaking into a river, ditch, ground water, etc.) or goes unreported. The volume of real water loss is dependent on the number of leaks, the size of the leaks, the operating pressures of the system and the total time the leaks are permitted to run. Improvements in each of these areas can help reduce real losses. Keeping up with deteriorating waterlines requires time and money to address problems that we are aware of as well proactive measures to find and fix the hidden or unreported leaks.

- **Number of Leaks:** The following are two approaches to determine the approximate amount of reinvestment needed to keep up with Loveland's aging and deteriorating waterline infrastructure.
  - In 2017, we had 1 leak for every 51,370 feet of pipe (48 leaks total on 2,465,736 feet of pipe). To decrease the number of leaks that occur in a year, we would need to replace on average about 51,370 feet of pipe for each leak we want to prevent from occurring.
  - Assuming a system design life of 100-years, 1% or 24,657 feet of waterlines should be replaced or rehabilitated per year. With a weighted average cost of $320 per foot (includes material costs + 15% for engineering and construction), we would need about $7.9 Million budgeted per year for waterline replacements.
- **Operating Pressures:** As a system's pressures increases, the amount of water that escapes from each leak increases as well. Lowering the operating pressures of a system will decrease the leakage from a system. Loveland's average operating pressure is at 65 psi, which falls within AWWA's recommended range of 60 psi to 80 psi for normal working pressures in water distribution systems.
- **Size of Leaks/Run Times:** The faster a utility is aware of a leak, the faster a utility can respond to fix the leak and thus reduce the run-time of the leaks and the amount of water lost per leak. In the past, LWP has employed some acoustic leak detection technologies; however, these efforts have not been consistent due to time and budgetary constraints. Our Water Operations crews have been occupied fixing reported leaks and maintaining the water distribution and wastewater collection systems. In 2018, LWP hired an additional Water Operations crew member, and LWP purchased new leak detection equipment. The leak detection equipment is deployed in several water valves within an area and helps to identify the approximate location of leaks while monitoring the acoustics on the water lines during low usage times at night.

Performance Indicators & Focus Areas: The AWWA water audit software provides performance indicators, an overall audit validity score and focus areas to improve the validity of future audits, which are summarized in the following table:

Financial Impact of Losses	Annual Cost
Apparent losses	$684,330
Real losses	$602,734

Financial Performance Indicator	Percent

Non-revenue water as percent by volume of water supplied	16.7%
Non-revenue water as percent by cost of operating system	10.9%

Note: Apparent losses valued at the retail unit cost, which is the lost volumetric water and wastewater revenue. Real losses and unbilled authorized consumption are valued at the variable production costs, which are the costs to supply the next unit of water to the system.

Operational Efficiency Performance Indicators	Number	Units
Apparent losses per service connection per day	10.36	Gallons
Real losses per service connection per day	58.20	Gallons
Real losses per service connection per day per psi pressure	0.90	Gallons
Current annual real losses (CARL)	568.84	MG
Unavoidable annual real losses (UARL) *Based on key system characteristics of lengths of mains, number of service connections, and average system operating pressure*	155.24	MG
Infrastructure Leakage Index (CARL/UARL) *The ILI is useful in benchmarking operational performance with other utilities. In 2017, Loveland's real losses were 3.66 times the technical minimum.*	3.66	ratio

Loveland's 2017 water audit received a validity score of 65 out of 100 based on the data inputs and accuracy gradings for each input value. See below for the top three areas needing the most attention to improve the validity score of future audits:

Priority Areas and Ways to Improve Validity Score
1. Volume from own sources
Ideally, treated water source meters should be flow tested and calibrated on a regular basis. Because Loveland's treated water source meter is configured in a way that does not allow us to remove it from operation to be tested, we have been verifying the metered flows against the raw water source meters' flow from the river and the reservoir less the water removed during the treatment process. However, none of these source meters have been tested or calibrated in several years. At a minimum, we should at least calibrate the electronic components of these meters and perform drawdown flow tests to help verify the accuracy of the measured flows of the treated water source meter on a regular basis. LWP is in the process of getting contracts in place to calibrate the electronic components of these meters. Staff is scheduled to meet near the end of April to discuss and plan how to execute a drawdown test.
2. Unbilled metered
In 2016, 10.7 MG of the 11.9 MG of unbilled metered usage was for the process water used at the Wastewater Treatment Plant. We began billing the wastewater utility for this water starting 4th Quarter of 2016. In 2018, we began billing Storm Water for the irrigation of 2 detention ponds and around the Louden Siphon. For the 2018 audit, we anticipate unbilled metered usage to be just a few thousand gallons for events or instances approved by the Director in which LWP does not charge for water. In addition to reductions in the actual quantity of unbilled metered consumption, AWWA also recommends that utilities have a clearly written policy that identify the types of

accounts given a billing exemption, with emphasis on keeping such accounts to a minimum. Customer meter management and meter reading for these accounts is given proper priority and is reliably conducted with regular auditing. Total water consumption for these accounts is taken from reliable readings from accurate meters.

3. Billed Metered

Part of the reason billed metered usage received a low score was due to the large amounts of authorized water uses that were not billed. We anticipate this to be much improved in the future with the following improvements:

- The estimated 27.7 MG per year of unmetered water usage discovered at the Wastewater Treatment Plant is now metered and billed.
- In 2018, we began billing the Storm Sewer Utility for the irrigation of two detention ponds and around the Louden Siphon.
- Beginning in 2019, the Wastewater Utility will be reimbursing the Water Utility for sanitary sewer jetting.

AWWA recommends that utilities test a statistically significant sample of customer meters on a continuous basis and set goals to replace meters based upon the accuracy of the meter test results. LWP could improve by testing a statistically significant sample each year of the smaller meters (5/8", ¾" and 1") of all makes and models that are employed in the field. This would require additional staffing resources dedicated to this type of work.

RECOMMENDATION:

Staff item only. No action required.

ATTACHMENTS:

- Attachment A: 2017 Loveland Water & Power Water Balance Table
- Attachment B: Presentation slides

Attachment A

Water Balance Table

Loveland Water & Power • 2017 Calendar Year

Volume in Million Gallons • Dollar Value

Volume from Own Sources 4,407.922	System Input Volume 4,434.088	Water Exported 24.015	Billed Water Exported 24.015			Revenue Water 24.015
		Water Supplied 4,410.073	Authorized Consumption 3,739.991	Billed Authorized Consumption 3,671.430	Billed Metered Consumption 3,671.406	Revenue Water 3,671.430
					Billed Unmetered Consumption 0.024	
				Unbilled Authorized Consumption 68.561 $72,646	Unbilled Metered Consumption 1.128 $1,195	Non-Revenue Water (NRW) 738.643 $1,359,711
					Unbilled Unmetered Consumption 67.433 $71,451	
			Water Losses 678.083	Apparent Losses 101.244 $684,330	Unauthorized Consumption 11.025 $74,522	
					Customer Metering Inaccuracies 81.040 $547,769	
					Systematic Data Handling Errors 9.179 $62,040	
				Real Losses *Includes Leakage/Overflows on:* • *Transmission & Distribution Mains* • *Water Storage Tanks* • *Service Connections up to the point of Customer Metering* 568.839 $602,734		
Water Imported 26.166						

Apparent losses valued at the retail unit cost (the lost volumetric water and wastewater revenue). Real losses and unbilled authorized consumption are valued at the variable production costs (the costs to supply the next unit of water to the system).

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2017 Water Loss Audit

Michelle Erickson, Technical Specialist

April 17, 2018

Agenda

1. Water Balance Table Overview
2. Audit Results by Category
3. Overall Audit Quality & Key Focus Areas
4. Performance Indicators

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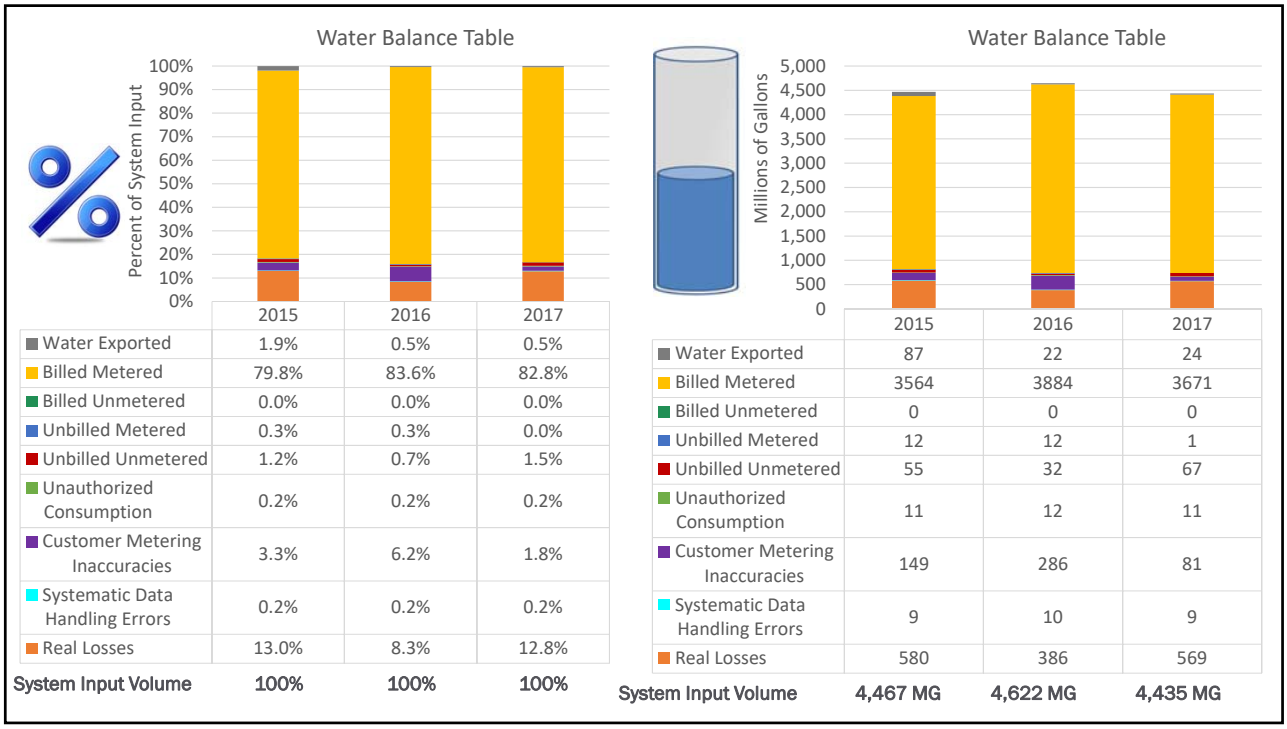
Water Balance Table • Loveland Water & Power • 2017 Calendar Year • Volume in Million Gallons • Dollar Value NRW

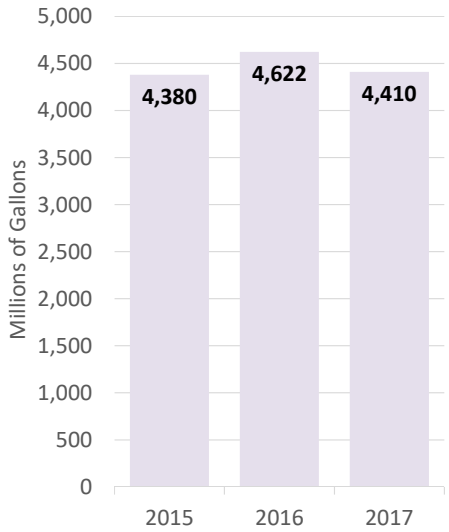
Volume from Own Sources	System Input Volume	Water Exported	Billed Water Exported			Revenue Water
		24.015	24.015			24.015
4,407.922	4,434.088	Water Supplied 4,410.073	Authorized Consumption 3,739.991	Billed Authorized Consumption 3,671.430	Billed Metered Consumption 3,671.406	Revenue Water 3,671.430
					Billed Unmetered Consumption 0.024	
				Unbilled Authorized Consumption 68.561 $72,646	Unbilled Metered Consumption 1.128 • $1,195	Non-Revenue Water (NRW) 738.643 $1,359,711
					Unbilled Unmetered Consumption 67.433 • $71,451	
			Water Losses 670.083	Apparent Losses 101.244 $684,330	Unauthorized Consumption 11.025 • $74,522	
					Customer Metering Inaccuracies 81.040 • $547,769	
Water Imported 26.166					Systematic Data Handling Errors 9.179 • $62,040	
				Real Losses 568.839 • $602,734		



	2015	2016	2017
Water Exported	1.9%	0.5%	0.5%
Billed Metered	79.8%	83.6%	82.8%
Billed Unmetered	0.0%	0.0%	0.0%
Unbilled Metered	0.3%	0.3%	0.0%
Unbilled Unmetered	1.2%	0.7%	1.5%
Unauthorized Consumption	0.2%	0.2%	0.2%
Customer Metering Inaccuracies	3.3%	6.2%	1.8%
Systematic Data Handling Errors	0.2%	0.2%	0.2%
Real Losses	13.0%	8.3%	12.8%
System Input Volume	100%	100%	100%

	2015	2016	2017
Water Exported	87	22	24
Billed Metered	3564	3884	3671
Billed Unmetered	0	0	0
Unbilled Metered	12	12	1
Unbilled Unmetered	55	32	67
Unauthorized Consumption	11	12	11
Customer Metering Inaccuracies	149	286	81
Systematic Data Handling Errors	9	10	9
Real Losses	580	386	569
System Input Volume	4,467 MG	4,622 MG	4,435 MG

Water Supplied



- Improvements:
  - Working on contracts to calibrate source meter electronics.
  - Scheduled to meet in April 2018 to plan a draw down flow test of the Chasteen's Tank
  - March 2018, discovered decant water piped to head of plant

4,408 MG Volume from Own Sources (Produced at WTP)
+ 26 MG Water Imported (Bought from Other Water Districts)
- 24 MG Water Exported (Sold to Other Water Districts)
4,410 MG Water Supplied

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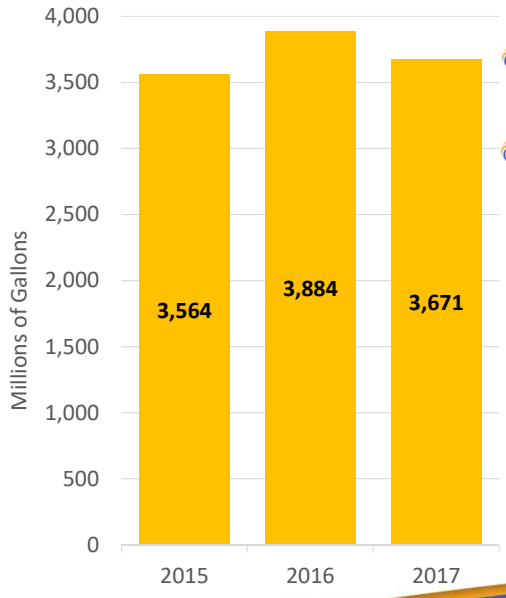
Billed Metered Consumption



- **Includes:** Metered and billed water usage of sites and vehicles (83% of water supplied)
- Improvements:
  - During the WWTP Expansion project, we discovered unmetered water used at the head of the plant. As of 2018, this water is now metered and billed.
  - Began billing Storm Water in 2018 for irrigation water at 2 detention ponds & ditch syphon
  - Began billing HOA for irrigation around a lift station

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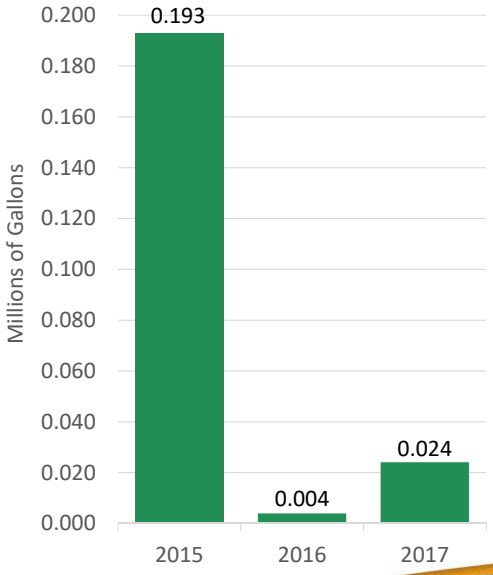
Billed Unmetered Consumption



- **Includes:** Water usage that is estimated and billed based on load counts.
- Only 4 Public Works vehicles remaining with unmetered water tanks.

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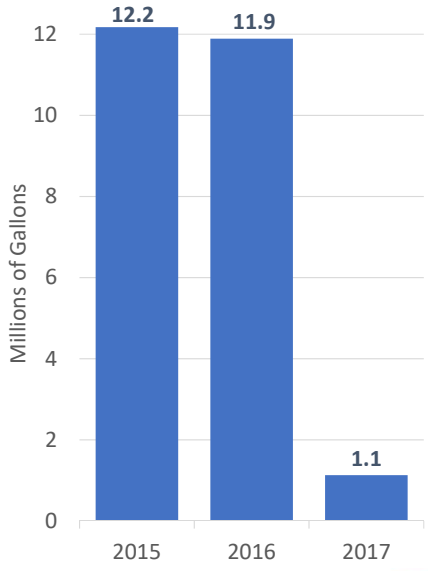
Unbilled Metered Consumption



- **Includes:** 2 detention ponds, & 1 ditch siphon, & director approved events/incidents, consumption adjustments in which water arrived at the customer, but was not billed due to various reasons.

Reductions:

- 4th quarter 2016, began billing Wastewater Utility for 3 previously unbilled meters at plant. (13.9 MG in 2017)
- In 2017, began billed HOA for irrigation of landscaping around a lift station (180,000 gallons in 2017)
- In 2018, the irrigation of 2 detention ponds and around the Louden Ditch Syphon is billed to the Storm Sewer Utility (995,151 gallons in 2017)

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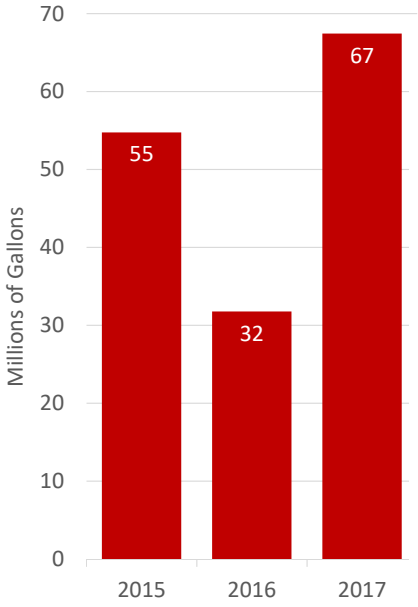
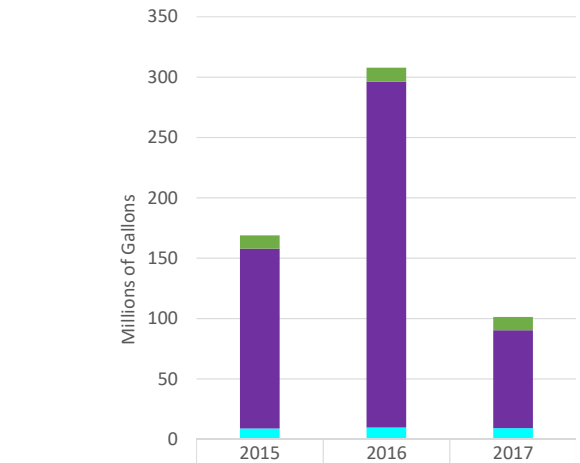
Unbilled Unmetered Consumption



- **Includes:** Estimated water use for fire training & fighting, water distribution system maintenance, water pipe disinfection, sanitary sewer jetting & plant usage,
- **Improvements:**
  - In 2018, moved a meter to new location to capture previously unmetered water usage at WWTP (Estimated 27.7 MG in 2017)
  - Starting Feb. 2017, metered and billed for WWTP Swamp Coolers and UV Building (0.241 MG in 2017)
  - Starting Sept. 2017 - North Lake Park Train Depot billed
  - Bill Wastewater Utility for sanitary sewer jetting beginning in 2019 (Estimated 6 MG in 2017)
  - Estimate water usage for fire sprinklers and fire pumps

Apparent Losses



	2015	2016	2017
Unauthorized Consumption	11	12	11
Customer Metering Inaccuracies	149	286	81
Systematic Data Handling Errors	9	10	9
Apparent Losses	**169 MG**	**308 MG**	**101 MG**

- **Includes:** Nonphysical losses when water is successfully delivered to a customer, but not measured or recorded accurately.
- **Apparent Loss Categories:**
  - Unauthorized consumption
  - Customer metering inaccuracies
  - Systematic data handling errors
- **Valued** at retail unit cost

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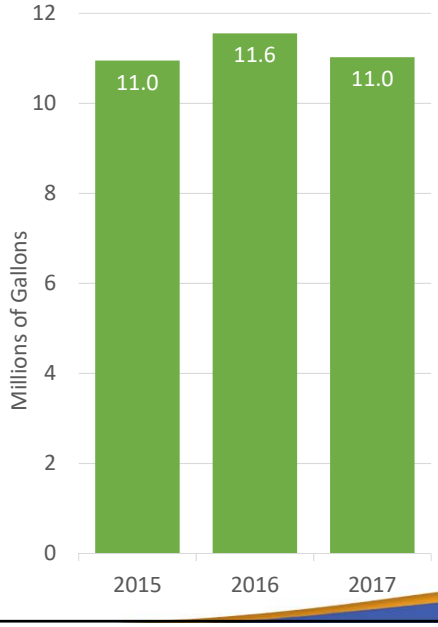
Unauthorized Consumption



- **Includes:** Consumption not explicitly or implicitly authorized by the utility, commonly known as water theft
- **Examples:**
  - Illegal connections
  - Open bypasses
  - Buried or otherwise obscured meters
  - Misuse of fire hydrants or fire-fighting systems
  - Vandalized or bypassed consumption meters
  - Tampered with meter reading equipment
- **Estimate:** Based on AWWA default setting of 0.25% Water Supplied

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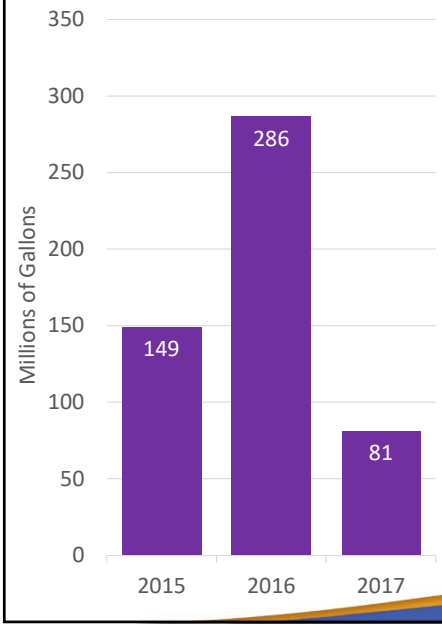
Customer Metering Inaccuracies



- **Includes:** Inaccuracies in registering water consumption by customer meters
  - *Usually meters under-register water due to wear-and-tear or inappropriate meter sizing*
- **Improvements:**
  - Used average meter test results applied to consumption for each size of meter according to make and model. Used weighted average of meter tests when specific test results not available.
  - Tested a sample of small meters in the field that were not flagged due to problems

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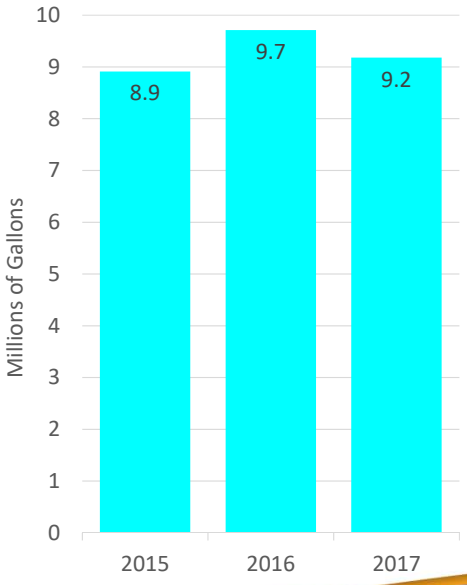
Systematic Data Handling Errors



- **Includes:** Errors in the process to transmit, archive and report customer consumption
  - Includes errors from the point the meter is read to when the customer is billed
- **Estimate:** Based on AWWA default setting of 0.25% billed metered consumption
- **Audit:** Water Company of America is in the process of performing a thorough review of unbilled or misbilled utilities.

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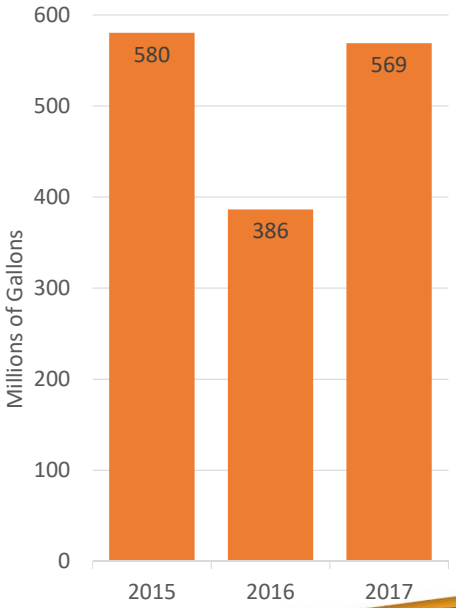
Real Losses



- **Includes:** Physical losses of treated, energized water from the distribution system, commonly known as water leaks and overflows
- **Estimate:** Based on what remains after authorized consumption and apparent losses are deducted from Water Supplied volume
- **Volume of Loss Affected By:**
  - Number of leaks
  - Magnitude of leaks
  - Operating pressures
  - Total time leaks are permitted to run

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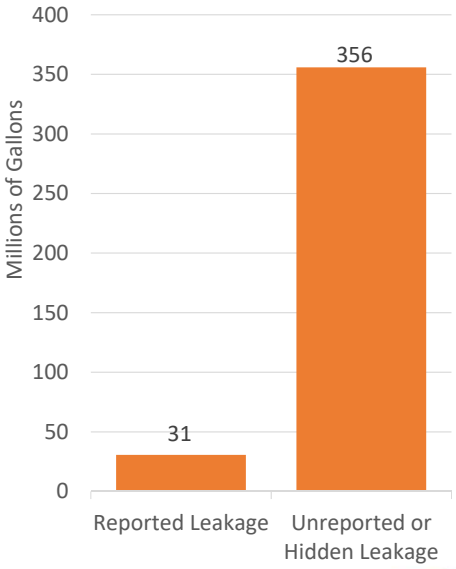
Breakout of Real Losses



- 48 reported leaks in 2017 (1 leak for every 51,370 feet of pipe)
- 65 psi average operating pressure
- Reported leakage account for 3% of the total estimated leakage in 2017
- Employed new leak detection technology in 2018

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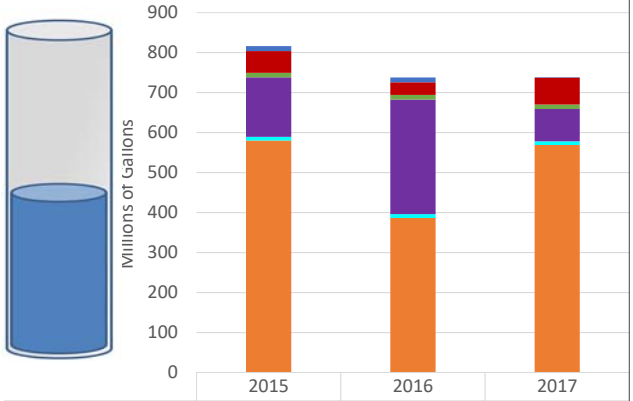
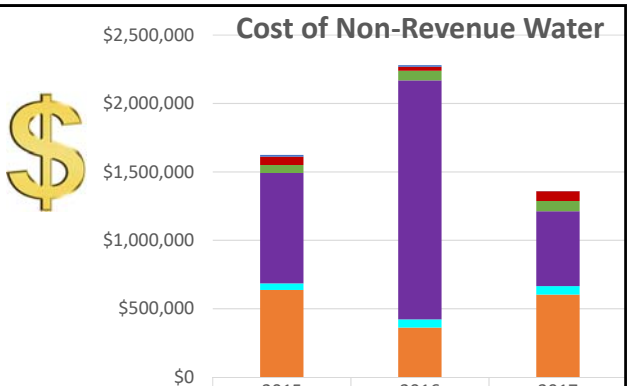
Volume of Non-Revenue Water



	2015	2016	2017
Unbilled Metered	12	12	1
Unbilled Unmetered	55	32	67
Unauthorized Consumption	11	12	11
Customer Metering Inaccuracies	149	286	81
Systematic Data Handling Errors	9	10	9
Real Losses	580	386	569
Totals	**816 MG**	**738 MG**	**738 MG**

Cost of Non-Revenue Water



	2015	2016	2017
Unbilled Metered *	$13,356	$11,132	$1,195
Unbilled Unmetered *	$60,075	$29,740	$71,451
Unauthorized Consumption **	$59,245	$70,488	$74,522
Customer Metering Inaccuracies **	$806,128	$1,747,322	$547,769
Systematic Data Handling Errors **	$48,203	$59,238	$62,040
Real Losses *	$636,695	$361,759	$602,734
Totals	**$1.6 M**	**$2.3 M**	**$1.4 M**

* Valued at variable production cost ** Valued at retail unit cost

Operational Efficiency

Performance Indicator	Score
Apparent Losses per Service Connection per Day	10.36 gallons/connection/day
Real Losses per Service Connection per Day	58.20 gallons/connection/day
Real Losses per Service Connection per Day per PSI	0.90 gallons/connection/day/psi
Current Annual Real Losses (CARL)	568.84 million gallons/year
Infrastructure Leakage Index (Current Annual Real Losses/Unavoidable Annual Real Losses)	3.66 times the technical minimum system loss

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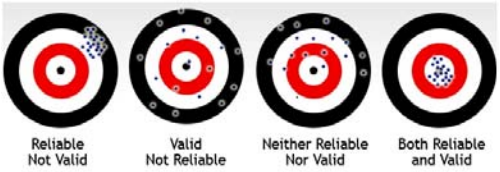
Quality of the Audit



Data Validity Score

- 2015 - 64 out of 100
- 2016 - 65 out of 100
- 2017 - 65 out of 100
- A lower score reflects less confidence in the accuracy of data.

Top Priorities for Improvement

- Volume from own sources
- Unbilled metered
- Billed metered

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QUESTIONS?

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 10
MEETING DATE: 4/18/2018
SUBMITTED BY: Jim Lees
STAFF TITLE: Utility Accounting Manager

ITEM TITLE:

Quarterly Financial Report Update

DESCRIPTION:

This item summarizes the monthly and year-to date Preliminary financials for March 2018.

SUMMARY:

The March 2018 financial reports are submitted for Commission review. The following table summarizes the sales and expense results for the month of March, and the March Year-To-Date results in comparison to the same periods from 2017. The summarized and detailed monthly financial statements that compare March Year-To-Date actuals to the 2018 budgeted figures are attached.

	March				March Year-To-Date			
	2018	2017	$ Ovr/(Und) vs. 2017	% Ovr/(Und) vs. 2017	2018	2017	$ Ovr/(Und) vs. 2017	% Ovr/(Und) vs. 2017
WATER								
Sales	$879,035	$768,793	$110,242	14.3%	$2,626,857	$2,353,629	$273,228	11.6%
Operating Expenses	$1,408,515	$1,135,803	$272,712	24.0%	$3,940,559	$2,807,535	$1,133,024	40.4%
Capital (Unrestricted)	$166,058	$20,314	$145,744	717.4%	$209,228	$48,574	$160,655	330.7%
WASTEWATER								
Sales	$970,459	$845,032	$125,427	14.8%	$3,018,359	$2,683,768	$334,591	12.5%
Operating Expenses	$652,007	$556,216	$95,791	17.2%	$1,897,803	$1,632,261	$265,542	16.3%
Capital (Unrestricted)	$67,436	$189,075	($121,639)	-64.3%	$702,724	$252,256	$450,468	178.6%
POWER								
Sales	$4,025,689	$4,438,715	($413,026)	-9.3%	$15,720,648	$14,352,036	$1,368,613	9.5%
Operating Expenses	$4,262,015	$7,332,660	($3,070,645)	-41.9%	$13,329,228	$12,665,334	$663,893	5.2%
Capital (Unrestricted)	$725,170	$1,109,607	($384,437)	-34.6%	$2,137,551	$2,162,656	($25,105)	-1.2%

RECOMMENDATION:

Staff item only. No action required.

ATTACHMENTS:

- Attachment A: City of Loveland Financial Statement-Raw Water
- Attachment B: City of Loveland Financial Statement-Water
- Attachment C: City of Loveland Financial Statement-Wastewater
- Attachment D: City of Loveland Financial Statement-Power
- Attachment E: PowerPoint Slides

Attachment A

City of Loveland
Financial Statement-Raw Water
For Period Ending 03/31/2018 Preliminary

		TOTAL BUDGET FYE 12/31/2018	YTD ACTUAL	YTD BUDGET	OVER <UNDER>	VARIANCE
1	**REVENUES & SOURCES**					
2	High Use Surcharge	74,667	(5,290)	18,666	(23,956)	-128.3%
3	Raw Water Development Fees/Cap Rec Surcharge	514,952	87,809	128,739	(40,930)	-31.8%
4	Cash-In-Lieu of Water Rights	527,084	111,520	131,772	(20,252)	-15.4%
5	Native Raw Water Storage Fees	31,598	63,379	7,899	55,480	702.4%
6	Loan Payback from Water	32,500	0	8,125	(8,125)	-100.0%
7	Raw Water 1% Transfer In	491,220	78,806	78,771	35	0.0%
8	Interest on Investments	351,950	60,378	87,987	(27,609)	-31.4%
9	**TOTAL REVENUES & SOURCES**	**2,023,971**	**396,602**	**461,959**	**(65,357)**	**-14.1%**
10	**OPERATING EXPENSES**					
11	Loan to Water	0	0	0	0	0.0%
12	Windy Gap Payments	7,100	7,044	7,100	(56)	-0.8%
13	**TOTAL OPERATING EXPENSES**	**7,100**	**7,044**	**7,100**	**(56)**	**-0.8%**
14	NET OPERATING REVENUE/(LOSS) (excl depr)	2,016,871	389,558	454,859	(65,301)	-14.4%
15	RAW WATER CAPITAL EXPENDITURES	5,564,900	1,028,484	1,509,500	(481,016)	-31.9%
16	**ENDING CASH BALANCES**					
17	Total Available Funds		16,846,203			
18	Reserve - Windy Gap Cash		0			
19	Reserve - 1% Transfer From Rates		6,132,675			
20	Reserve - Native Raw Water Storage Interest		1,625,961			
21	**TOTAL RAW WATER CASH**		**24,604,839**			

NOTE: YTD ACTUAL DOES NOT INCLUDE ENCUMBRANCES TOTALING: 0

Attachment B

City of Loveland
Financial Statement-Water
For Period Ending 03/31/2018

		TOTAL BUDGET FYE 12/31/2018	YTD ACTUAL	YTD BUDGET	OVER <UNDER>	VARIANCE
1	****UNRESTRICTED FUNDS****					
2	**REVENUES & SOURCES**					
3	Water Sales	16,373,998	2,626,857	2,625,715	1,142	0.0%
4	Raw Water Transfer Out	(491,220)	(78,806)	(78,771)	(35)	0.0%
5	Wholesale Sales	161,307	18,655	40,326	(21,671)	-53.7%
6	Meter Sales	94,722	22,049	23,682	(1,634)	-6.9%
7	Interest on Investments	89,770	7,404	22,443	(15,039)	-67.0%
8	Other Revenue	1,408,745	72,250	210,168	(137,918)	-65.6%
9	Federal and State Grants	0	75,804	0	75,804	0.0%
10	Internal Loan Monies Received	750,000	750,000	750,000	0	0.0%
11	External Loan Monies Received	0	0	0	0	0.0%
12	**TOTAL REVENUES & SOURCES**	**18,387,322**	**3,494,212**	**3,593,563**	**(99,351)**	**-2.8%**
13	**OPERATING EXPENSES**					
14	Source of Supply	2,810,906	797,370	786,969	10,401	1.3%
15	Treatment	3,833,608	652,520	1,024,999	(372,479)	-36.3%
16	Distribution Operation & Maintenance	4,231,148	748,562	1,187,057	(438,495)	-36.9%
17	Administration	2,517,512	116,196	652,353	(536,157)	-82.2%
18	Customer Relations	421,932	65,151	131,402	(66,251)	-50.4%
19	PILT	1,111,790	178,364	166,770	11,594	7.0%
20	1% for Arts Transfer	73,314	1,103	68,289	(67,186)	-98.4%
21	Services Rendered-Other Departments	1,480,676	371,437	371,437	0	0.0%
22	Internal Loan Debt Expense	827,500	795,300	795,300	0	0.0%
23	External Loan Debt Expense	1,015,150	214,556	253,788	(39,232)	-15.5%
24	**TOTAL OPERATING EXPENSES**	**18,323,536**	**3,940,559**	**5,438,364**	**(1,497,805)**	**-27.5%**
25	NET OPERATING REVENUE/(LOSS)(excl depr)	63,786	(446,347)	(1,844,801)	1,398,454	-75.8%
26	CAPITAL EXPENDITURES	3,174,083	209,228	2,062,363	(1,853,135)	-89.9%
27	ENDING CASH BALANCE (26% OF OPER EXP)		**4,849,667**			100
28	WATER DEBT FUNDS ENDING CASH BALANCE		**327,369**			100
29	MINIMUM BALANCE (15% OF OPER EXP)		2,748,530			
30	**OVER/(UNDER) MINIMUM BALANCE**		**2,101,137**			
31	****RESTRICTED FUNDS****					
32	**REVENUES & SOURCES**					
33	SIF Collections	6,168,963	358,678	511,780	(153,102)	-29.9%
34	SIF Interest Income	51,660	9,053	12,915	(3,862)	-29.9%
35	SIF Federal and State Grants	0	75,804	0	75,804	0.0%
36	Internal Loan Monies Received	0	0	0	0	0.0%
37	**TOTAL SIF REVENUES & SOURCES**	**6,220,623**	**443,535**	**524,695**	**(81,160)**	**-15.5%**
38	SIF Capital Expenditures	7,527,489	114,894	2,204,212	(2,089,318)	-94.8%
39	1% for Arts Transfer	38,462	0	10,112	(10,112)	-100.0%
40	Legal Agreements & Shared Costs	276,440	17,885	95,971	(78,086)	-81.4%
	TOTAL OPERATING EXPENSES	**7,842,391**	**132,778**	**2,310,295**	**(2,177,517)**	**100**
41	NET OPERATING REVENUE/(LOSS)(excl depr)	(1,621,768)	310,756	(1,785,600)	2,177,517	-117.4%
41	**SIF ENDING CASH BALANCE**		**3,522,727**			**100**
42	**TOTAL ENDING CASH BALANCE**		**8,372,394**			
42	NOTE: YTD ACTUAL DOES NOT INCLUDE ENCUMBRANCES TOTALING:		3,498,686			
43	Water Treated at WTP (in million gallons)		602			
44	Water Sold To Customers (in million gallons,	3,745	455	460	(5)	-1.0%

Attachment C

City of Loveland-LIVE
Financial Statement-Wastewater
For Period Ending 03/31/2018 Preliminary

		TOTAL BUDGET FYE 12/31/2018	YTD ACTUAL	YTD BUDGET	OVER <UNDER>	VARIANCE
1	****UNRESTRICTED FUNDS****					
2	**REVENUES & SOURCES**					
3	Sanitary Sewer Charges	12,620,160	3,018,359	3,042,549	(24,190)	-0.8%
4	High Strength Surcharge	393,240	101,977	78,480	23,497	29.9%
5	Interest on Investments	88,800	28,460	22,200	6,260	28.2%
6	Other Revenue	763,090	18,769	187,097	(168,328)	-90.0%
7	Bond Proceeds	15,659,620	3,759,760	3,759,760	(0)	0.0%
8	Federal Grants	0	0	0	0	0.0%
9	State Grants	0	0	0	0	0.0%
10	**TOTAL REVENUES & SOURCES**	**29,524,910**	**6,927,325**	**7,090,086**	**(162,761)**	**-2.3%**
11	**OPERATING EXPENSES**				0	0.0%
12	Treatment	4,310,725	876,297	1,109,564	(233,267)	-21.0%
13	Collection System Maintenance	3,389,734	500,252	920,042	(419,790)	-45.6%
14	Administration	1,734,963	79,177	509,674	(430,497)	-84.5%
15	Customer Relations	50,855	10,265	14,040	(3,775)	-26.9%
16	PILT	910,940	218,424	209,516	8,908	4.3%
17	1% for Arts Transfer	255,989	8,473	210,698	(202,225)	-96.0%
18	Services Rendered-Other Departments	758,706	190,632	190,632	0	0.0%
19	Debt Service	88,819	14,283	22,206	(7,923)	-35.7%
20	**TOTAL OPERATING EXPENSES**	**11,500,731**	**1,897,803**	**3,186,372**	**(1,288,569)**	**-40.4%**
21	NET OPERATING REVENUE/(LOSS)(excl depr)	18,024,179	5,029,522	3,903,714	1,125,808	28.8%
22	CAPITAL EXPENDITURES	24,916,928	702,724	20,010,896	(19,308,172)	-96.5%
23	ENDING CASH BALANCE (114% OF OPER EXP)		**13,059,322**			100
24	WASTEWATER DEBT FUNDS ENDING CASH BALANCE		458,480			100
25	MINIMUM BALANCE (15% OF OPER EXP)		1,725,110			
26	OVER/(UNDER) MINIMUM BALANCE		**11,334,212**			
27	****RESTRICTED FUNDS****					
28	**REVENUES & SOURCES**					
29	SIF Collections	2,386,151	223,124	361,116	(137,992)	-38.2%
30	SIF Interest Income	89,010	24,322	22,254	2,068	9.3%
31	SIF Bond Proceeds	8,691,380	2,304,369	2,304,369	0	0.0%
32	**TOTAL SIF REVENUES & SOURCES**	**11,166,541**	**2,551,815**	**2,687,739**	**(135,924)**	**-5.1%**
33	SIF Capital Expenditures	17,573,793	450,416	12,303,323	(11,852,907)	-96.3%
34	1% for Arts Transfer	177,664	3,154	129,171	(126,017)	-97.6%
35	Debt Service	49,406	8,754	12,351	(3,597)	-29.1%
	TOTAL OPERATING EXPENSES	**17,800,863**	**462,325**	**12,444,845**	**(11,982,520)**	**100**
	NET OPERATING REVENUE	4,393,803	**13,521,647**	5,670,050	1,061,821	100
	SIF ENDING CASH BALANCE		**8,926,258**			100
	TOTAL ENDING CASH BALANCE		**21,985,579**			
	NOTE: YTD ACTUAL DOES NOT INCLUDE ENCUMBRANCES TOTALING		29,181,695			
36	Wastewater Treated at WWTP (in million gallons)	N/A	510	N/A		
37	Wastewater Billed To Customers (in million gallons)	1,768	413	420	(6)	-1.5%

Attachment D

City of Loveland
Financial Statement-Power
For Period Ending 3/31/2018 - Preliminary

		TOTAL BUDGET		YTD ACTUAL	YTD BUDGET	OVER <UNDER>	VARIANCE
	****UNRESTRICTED FUNDS****						
1	REVENUES & SOURCES:						
2	Electric revenues	$65,421,010		$15,720,648	$15,801,570	($80,922)	-0.5%
3	Wheeling charges	$260,000		$56,378	$65,000	($8,622)	-13.3%
4	Interest on investments	$258,420		$35,947	$64,605	($28,658)	-44.4%
5	Aid-to-construction deposits	$1,530,000		$329,286	$382,500	($53,214)	-13.9%
6	Customer deposit-services	$310,000		$40,765	$77,500	($36,735)	-47.4%
7	Late Payment Penalty Fees	$450,000		$117,285	$112,500	$4,785	4.3%
8	Connect Fees	$170,000		$34,918	$42,500	($7,582)	-17.8%
9	Services rendered to other depts.	$0		$0	$0	$0	0.0%
10	Other revenues	$306,230		$108,036	$76,558	$31,479	41.1%
11	Federal Grants	$365,000		$0	$91,250	($91,250)	-100.0%
12	State Grants	$61,000		$0	$15,250	($15,250)	-100.0%
13	Year-end cash adjustments	$0		$0	$0	$0	0.0%
14	**TOTAL REVENUES & SOURCES**	**$69,131,660**		**$16,443,264**	**$16,729,233**	**($285,969)**	**-1.7%**
15	OPERATING EXPENSES:						
16	Hydro oper. & maint.	$1,309,821		($31,704)	$352,644	($384,348)	-109.0%
17	Solar oper.& maint.	$90,000		$850	$24,231	($23,381)	-96.5%
18	Purchased power	$44,079,146		$10,067,811	$10,051,589	$16,222	0.2%
19	Distribution oper. & maint.	$5,617,230		$1,172,340	$1,512,331	($339,992)	-22.5%
21	Customer Relations	$1,528,241		$122,841	$411,450	($288,609)	-70.1%
22	Administration	$3,732,454		$201,200	$1,004,891	($803,692)	-80.0%
23	Payment in-lieu-of taxes	$4,579,440		$1,088,595	$1,121,963	($33,368)	-3.0%
24	1% for Arts Transfer	$83,488		$12,487	$20,455	($7,967)	-39.0%
25	Services rendered-other depts.	$2,767,799		$694,808	$691,950	$2,858	0.4%
26	**TOTAL OPERATING EXPENSES (excl depn)**	**$63,787,619**		**$13,329,228**	**$15,191,503**	**($1,862,276)**	**-12.3%**
27	NET OPERATING REVENUE/(LOSS) (excl depn)	$5,344,041		$3,114,036	$1,537,729	$1,576,307	$0
28	CAPITAL EXPENDITURES:						
29	General Plant/Other Generation & Distribution	$10,213,838		$1,430,020	$2,695,036	($1,265,016)	-46.9%
30	Aid-to-construction	$1,110,000		$642,115	$298,846	$343,269	114.9%
31	Service installations	$310,000		$65,416	$83,462	($18,046)	-21.6%
32	**TOTAL CAPITAL EXPENDITURES**	**$11,633,838**		**$2,137,551**	**$3,077,344**	**($939,793)**	**-30.5%**
33	**ENDING CASH BALANCE (23% of Oper Exp)**			**$14,829,469**			
34	MINIMUM BAL. (23% of OPER EXP)			$14,671,152			
35	OVER/(UNDER) MINIMUM BALANCE			$158,316			
36	****RESTRICTED FUNDS****						
37	PIF Collections	$3,115,400		$655,639	$778,850	($123,211)	-15.8%
38	PIF Interest Income	$12,350		$13,454	$3,088	$10,367	335.8%
39	Water Loan Payback	$795,000		$795,300	$795,000	$300	0.0%
40	Federal Grants	$0		$0	$0	$0	0.0%
41	State Grants	$0		$0	$0	$0	0.0%
42	**TOTAL REVENUES**	**$3,922,750**		**$1,464,394**	**$1,576,938**	**($112,544)**	**-7.1%**
43	PIF Feeders	$3,700,000		$71,297	$996,154	($924,857)	-92.8%
44	PIF Substations & Solar	$1,850,000		$0	$462,500	($462,500)	-100.0%
45	**TOTAL EXPENDITURES**	**$5,550,000**		**$71,297**	**$1,458,654**	**($1,387,357)**	**-95.1%**
46	**ENDING PIF CASH BALANCE**			**$4,947,768**			
47	**TOTAL ENDING CASH BALANCE**			**$19,777,237**			

NOTE: YTD ACTUAL does NOT include encumbrances totalling $5,451,371

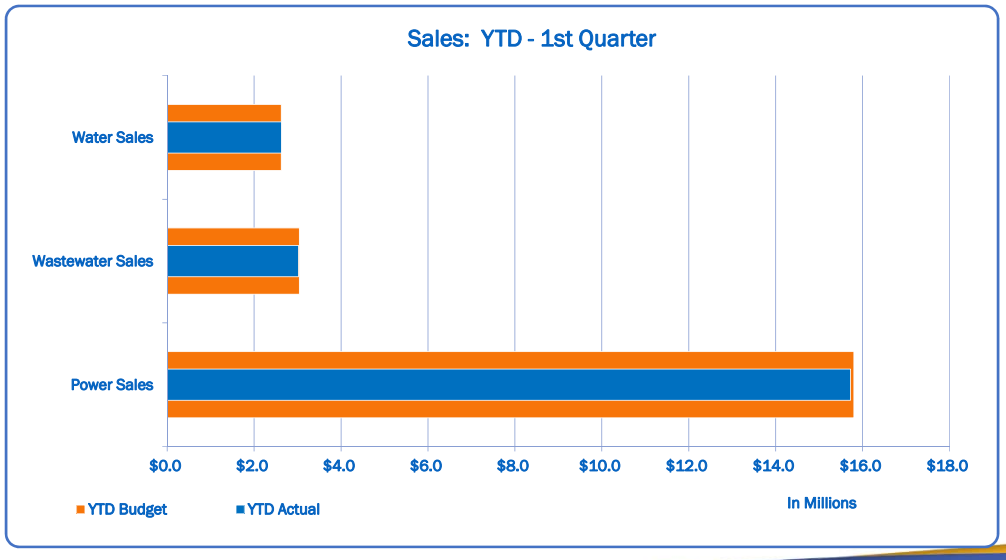
48	Energy Purchased (in million kWh) from PRPA	744	180	180	0	-0.7%
49	Energy Sold to Customers (in million kWh)	715	182	181	0	0.1%

Attachment E

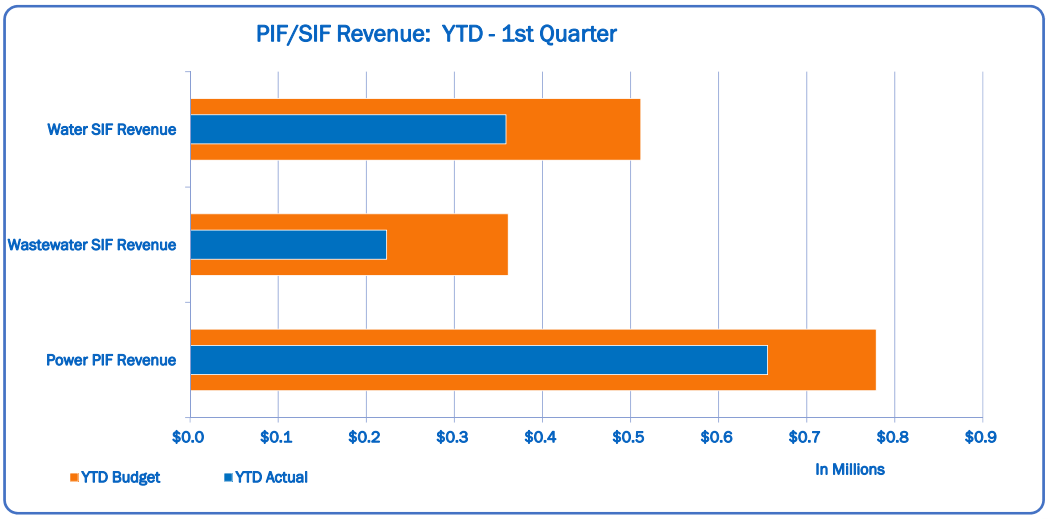
LOVELAND UTILITIES COMMISSION

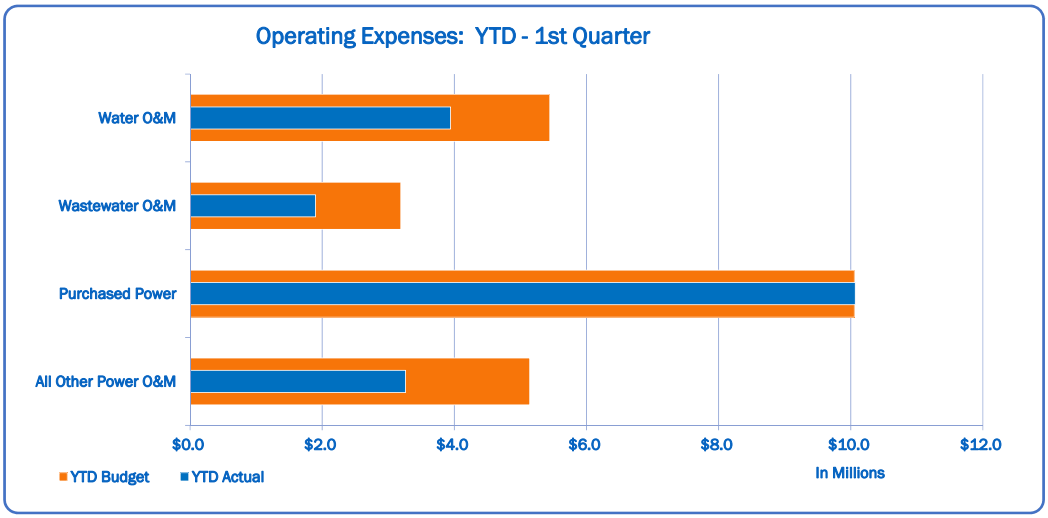
Quarterly Financial Report

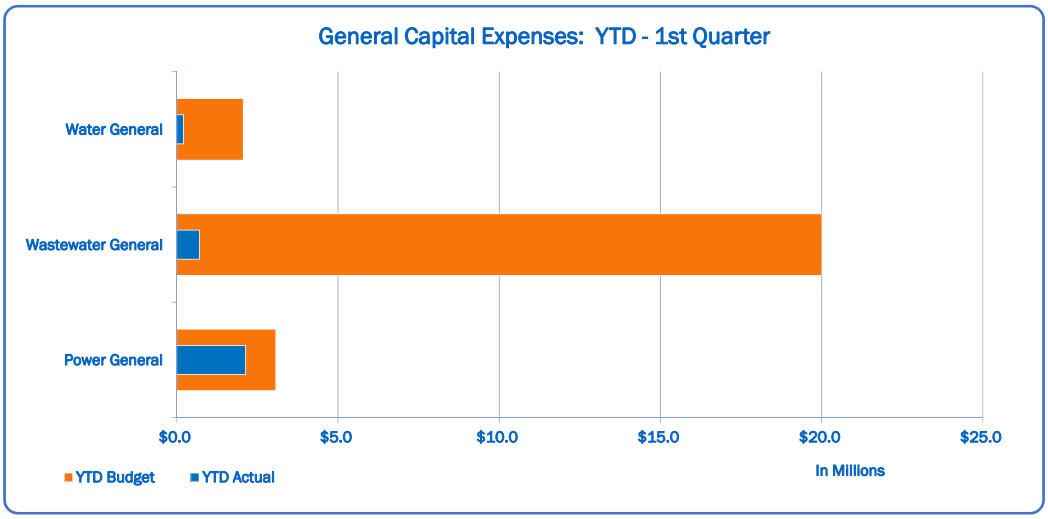
Jim Lees,
Utility Accounting Manager
April 18, 2018

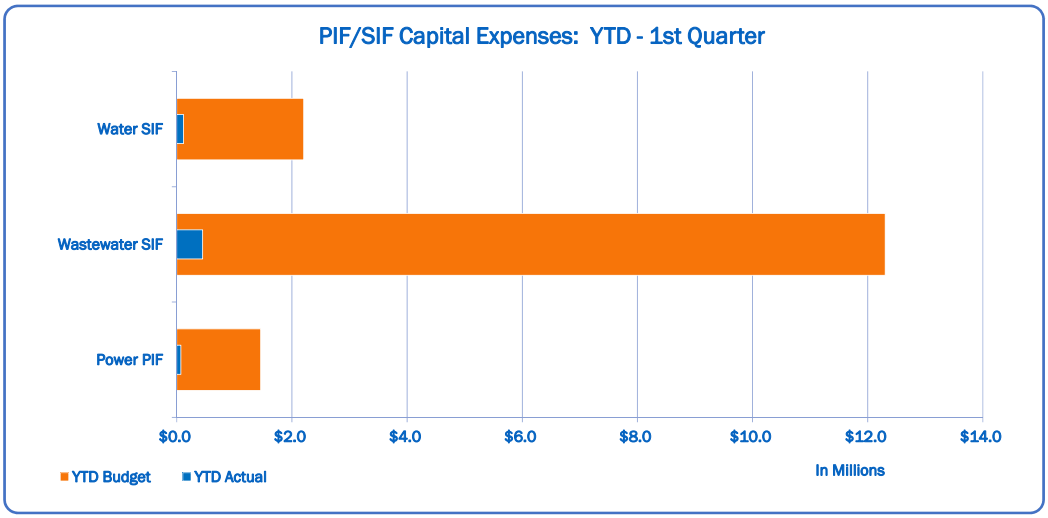


LOVELAND UTILITIES COMMISSION


PIF/SIF Revenue: YTD - 1st Quarter
Water SIF Revenue
Wastewater SIF Revenue
Power PIF Revenue
$0.0
$0.1
$0.2
$0.3
$0.4
$0.5
$0.6
$0.7
$0.8
$0.9
YTD Budget
YTD Actual
In Millions


Operating Expenses: YTD - 1st Quarter
Water O&M
Wastewater O&M
Purchased Power
All Other Power O&M
$0.0
$2.0
$4.0
$6.0
$8.0
$10.0
$12.0
YTD Budget
YTD Actual
In Millions


General Capital Expenses: YTD - 1st Quarter
Water General
Wastewater General
Power General
$0.0
$5.0
$10.0
$15.0
$20.0
$25.0
YTD Budget
YTD Actual
In Millions


PIF/SIF Capital Expenses: YTD - 1st Quarter
Water SIF
Wastewater SIF
Power PIF
$0.0
$2.0
$4.0
$6.0
$8.0
$10.0
$12.0
$14.0
YTD Budget
YTD Actual
In Millions


LOVELAND
UTILITIES COMMISSION
QUESTIONS?

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 11
MEETING DATE: 4/18/2018
SUBMITTED BY: Joe Bernosky
STAFF TITLE: Director

ITEM TITLE:

Commission & Council Report

SUMMARY:

Discuss events that the Loveland Utility Commission Board members attended, special topics and any City Council items related to the Water and Power Department from the past month.

- City Council Report

RECOMMENDATION:

Commission/Council report only.

LOVELAND UTILITIES COMMISSION

AGENDA ITEM: 12
MEETING DATE: 4/18/2018
SUBMITTED BY: Joe Bernosky
STAFF TITLE: Director

ITEM TITLE:

Director's Report

EVENTS:

Please note the following events that LUC members may wish to attend:

Tri-City Meeting: This year's Tri-City Meeting will be held on Thursday May 31st from 6:00 p.m. – 9:00 p.m. at the Hilton Double Tree, 9191 7th St. in Greely, CO 80634. Please RSVP to Allison Bohling if you plan on attending.

Tour of Foundry Project: The Foundry, which represents the largest single downtown redevelopment project in the City's history, is well under way. If you are interested in peeking behind the fence, Economic Development is offering guided tours of the construction site on the following dates (subject to weather and other construction contingencies):

Friday, April 27, 2018

Friday, May 25, 2018

All tours start at 9 am at the back door of 320 N. Cleveland Ave. Keith Meyer, the City's onsite construction manager, will check you in, and provide you with the appropriate safety gear. He will also lead the tour. Space is limited to no more than 10 people per tour. If interested, please contact Mike Scholl at (970) 962-2607 or mike.scholl@cityofloveland.org with which tour date you are interested in attending.

WATER UTILITY DIVISION:

WTP, Tech Services, Water Operations and LFRA Staff

Cooperation Between Groups Results in Success: On March 7, City of Loveland Water Treatment Plant (WTP) staff were accompanied by the Tech Services team and the Loveland Fire Rescue Authority (LFRA) to perform a confined space entry and valve inspection. WTP staff operated and exercised a 54" valve that had not been utilized in many years. To achieve this, the staff had to plan extensively with Tech Services, Water Operations, and the LFRA. The plant was shut down, large river and reservoir supply lines were drained, proper lock out/tag out on all equipment was utilized, and the entry was performed. The procedure was successful in meeting its objective and the valve was proven to be in working condition. This is great news for the WTP and the City of Loveland. If a taste and odor causing algal outbreak occurs in the Green Ridge Glade Reservoir, we will now be able to utilize the Big Thompson River for flows up to 38 million gallons a day. Assuming the Big Thompson River water is of acceptable quality, the potential now exists to "work around" a reservoir algal event even during the summer's highest water demand. Thanks to everyone's collaborative effort, this event was both successful and safely performed.

20" Boyd Lake Ave. Directional Drill Waterline: The City of Loveland has contracted with Connell Resources to install the 20" Water Main Extension Project on Boyd Lake Avenue at a lowest bid cost of $387,182. This project consists of a variety of water main work on Boyd Lake Avenue near the intersection of Eisenhower Boulevard and Boyd Lake Avenue. The majority of the work will be the installation of a 20" water main extension installed beneath Eisenhower Boulevard via a directional drill. This new 20" water main will bring a parallel feed from the Mountain View Pump Station under Eisenhower Boulevard and will allow for more flexibility and the ability to meet future water demands. The project is being done in conjunction with the Public Works road improvements on Boyd Lake Avenue and roundabout installation at Mountain Lion Drive.

Source Water Sampling for Optimal Treatment of Drinking Water: The City of Loveland utilizes water from both the Big Thompson watershed and the Colorado River watershed via the Colorado-Big Thompson Project (C-BT). C-BT water is diverted from the West Slope of the Rockies to the east via the Alva B. Adams Tunnel and through a system of canals and reservoirs, including the Green Ridge Glade Reservoir, where it is taken in by the Loveland water treatment plant. Depending on the season and circumstance, the water treatment plant can pull water directly from the Big Thompson River, Green Ridge Glade Reservoir or blend them together.

LWP Staff Collecting Water Samples

The City's Water Quality Lab regularly samples and tests the Big Thompson watershed and locations along the C-BT system for several general and complex water quality indicators that affect water treatment efficiency. As spring runoff and hot summer months approach, the lab is getting ready to increase monitoring frequency specifically to focus on algal population. The lab monitors individual species and conditions that may lead to an algal bloom. Algae growth is heavily influenced by the presence or absence of nutrients such as nitrogen and phosphorous. Large blooms can cause problems for the water treatment plant by not only clogging filters, but also by releasing taste and odor compounds, albeit harmless, that can result in an earthy, musty taste in the finished drinking water.

Source water quality can change predictably with seasonal variations or unexpectedly as a result of sudden events (i.e. flooding) and human interference (i.e. construction), requiring constant adjustment of the water treatment process. By consistently measuring these parameters, the water quality lab is able to monitor the general health of the water taken in by the plant and inform plant personnel of potential treatment challenges headed their way.

24" Boyd Sanitary Sewer: The 24-inch parallel Boyd Sanitary Sewer Project has been broken out into two phases to accommodate site conditions and expedite construction. Connell Resources out of Fort Collins, Colorado, was selected to complete this project. Construction on phase one of the project started in early February with the installation of sanitary sewer, electrical duct bank, and a new storm sewer. Phase one construction is currently approximately 20% complete. This work began from northeast of the intersection of Cheyenne Avenue and Highway 34 and currently extends north just past Cheyenne Avenue. Both the sewer and electrical duct bank were installed under the Greeley Loveland Irrigation Canal. Phase two of this project, which includes extending the sewer line from the end of phase one work at 17th Street and Boise Avenue to approximately 650 feet north of Silver Leaf Drive and Madison Avenue, is still in the design process.

POWER UTILITY:

Electric Metering: Throughout February and March, the Electric Metering group reviewed and approved electric metering applications for 28 new commercial building permits. As of March 1, the new revised *City of Loveland Requirements for Electric Service Standards* (RFES) were released and implemented to all new and upgraded electric service installations. This group has been heavily involved with the review and revision of the RFES, which is used by all electrical contractors as well as customers who are changing or applying for new electric services. Standardization is very important in the electric metering industry and the City's Power Division, especially when it comes to new building permits.

The Electric Meter group has been involved weekly in the downtown Foundry project, verifying on-site that all metering gear and equipment being installed matches what was approved during the review process. This is important to assure that any gear or equipment issues are caught sooner rather than later and changes can be addressed if needed.

Staff recently built and developed a hands-on training device that was used during the annual Rocky Mountain Electric Metering School at CSU earlier this month. The device was built to represent an overhead primary metering installation and allows students to practice and learn the wiring associated with real life installation. Our Electric Metering staff volunteer as instructors and serve on the school's planning committee. Please see photos below.

Electric Line Crews: The Line Crew have been involved in a variety of work. These projects ranged from street light repairs, to switching loads off several substation feeders/transformers, to the everyday work of construction of the underground distribution systems.

A Line Crew was involved on a not so everyday project earlier this month as the crew worked with PVREA to change out a joint-use pole at the northwest corner of Eisenhower Boulevard and Van Buren Avenue. The pole at this corner had been tested as having a rotten butt (the part of the pole buried in the ground). Both PVREA and The City of Loveland had main line feeders on this pole, which were energized during the operations. The picture below shows that both overhead lines needed to be spread and held in place while a new pole was set in-between these lines.

Coordinating with PVREA to change out a joint-use pole

Our contractor, Power Contracting, has been moving at a safe yet aggressive pace on the rebuild of the 911 BT Canyon Circuit. This month we had two scheduled outages for work on and around the overhead power lines for all customers west of Waterdale Drive. During these outages crews set new poles, spread the existing 22kv line for a safe working space as work continues and putting W-3 transformer on line at Sylvan Dale. This worked required a coordinated effort with our Customer Relations team, the Service Operation Center, Power Contracting and our Line Crews. Work completed at this time was the full build-out of the new 12.7kv line between the water treatment plant and the step up transformer (W-3) at Sylvan Dale Ranch.

Power Contracting
Ellis Ranch Ridge

W-3 Step=Up Transformer
On line at Sylvan Dale

LINE CREWS AT WORK

City of Loveland Crew
Spreading 22kv Line

City of Loveland Crews
Prepping OH Lines for W-3

UTILITY ACCOUNTING DIVISION:

Update on External Wastewater Loan: Through the end of March, $6.6 million of the total $24.9 million loan amount has been drawn to help finance the Wastewater Treatment Expansion and Rehabilitation Project. Closing on the loan took place in February of 2017. The loan is being paid back partly out of wastewater unrestricted funds and part from wastewater SIF funds. Instead of the entire $24.9 million being drawn at the beginning of the loan, there are four draws done: the first was completed with the closing of the loan, and the remaining three draws scheduled for August of 2017 and February and August of 2018. Being able to delay the drawing of funds will save approximately $1.8 million in interest charges in comparison to if the loan proceeds had been received in full on the front end of the loan.

Year-End Process Completed…Next, The Auditors: The year-end closing process is now finished for Water, Wastewater and Power. The next step will be the review by our external auditors, which will begin the week of March 26.

Regional Rate Comparison – We have known for many years that our electric rates are among the lowest in the state. Now, according to a new survey from Nebraska Municipal Power Pool (NMPP), we have discovered that our rates are very competitive even for the areas surrounding Colorado. This survey includes 139 utilities in 7 states (Colorado, Nebraska, Kansas, Wyoming, North Dakota, South Dakota and Iowa), and compared monthly electric utility bills for Residential, Commercial and Large General customer classes. The survey covered several scenarios, but, to cite a few examples, in looking at summer bills for scenarios closest to our average customers, Loveland ranked #25 (25th lowest out of 139 utilities) for Residential, #26 for Small Commercial and #29 for Large Commercial. In addition, NMPP also surveyed water and wastewater utilities, and Loveland wound up in the highest third for water and slightly higher than the middle for wastewater. For Residential rate customers, Loveland was ranked 88th lowest out of 136 water utilities and ranked 69th lowest out of 133 wastewater utilities.

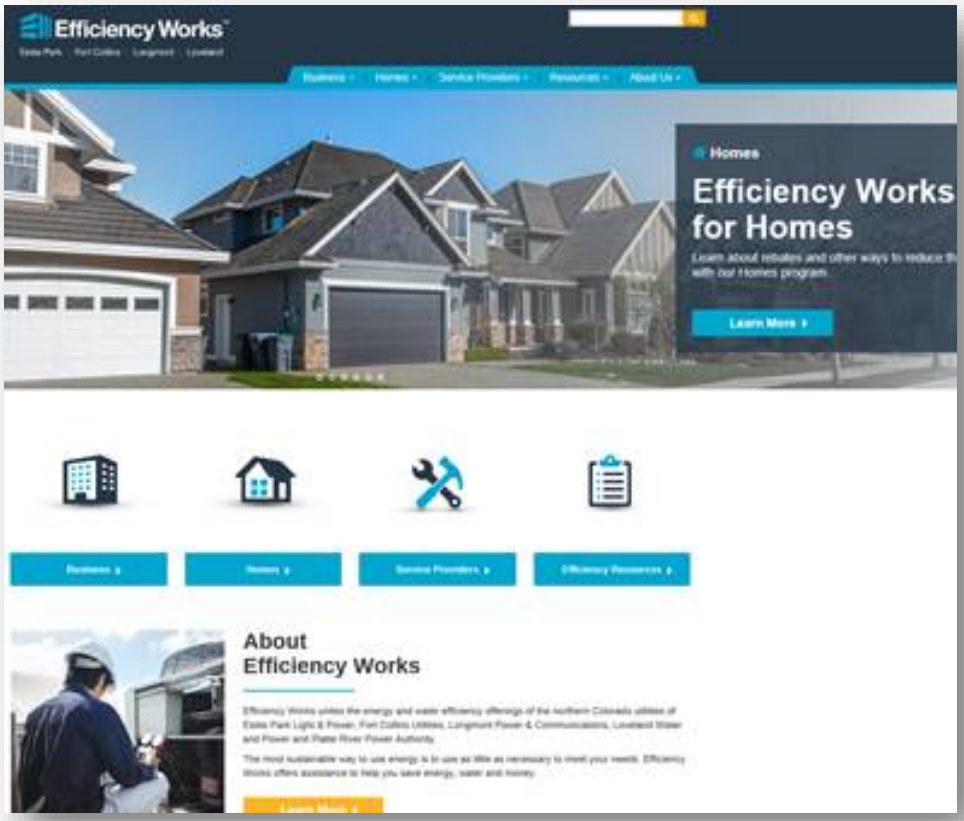
CUSTOMER RELATIONS DIVISION:

Garden In A Box: Garden In A Box is now on sale. Loveland water customers are eligible for an additional discount of $25 on the already below retail priced gardens. Garden In A Box offers a simple approach to water-wise gardening by providing professionally designed gardens containing perennial, Xeric (low-water) plants. Sales and additional information available at www.resourcecentral.org/gardens

Larimer County Conservation Corps (LCCC): The LCCC Water and Energy Assessment Program is approaching the halfway point in the season. Staff is working on promotion and outreach for the program. The LCCC group offers free home energy assessments and direct install of water and energy products for Loveland customers. Enrollment and additional information can be found at www.larimerworkforce.org/energy

Efficiency Works Website: A new Efficiency Works website has been developed and will replace the previous. Once testing has been complete the website will be released and available at www.efficiencyworks.org.

Efficiency Works Store: Starting in late 2017, Efficiency Works hired Simple Energy, which provides a digital customer engagement platform that can support utilities' EE program implementation. Simple Energy will be providing Platte River and the municipalities with two online services: an Efficiency Works online store and Rebates-as a- Service (RaaS). The Efficiency Works online store will allow customers to purchase selected energy efficient products. The RaaS platform will support our ability to provide targeted, instant, in-store rebates for selected energy-efficient products in participating retailers. The program launched its first RaaS rebate for smart thermostats in late 2017 in Lowes Home Improvement stores, Lowes.com, and Nest.com platforms. Our website has gone live and we are in the soft launch phase where we are doing employee testing. You can access the site here: www.efficiencyworksstore.com.



McKee Medical Center / Boyd Lake Sewer: Customer Relations is working with McKee to provide proactive outreach to customers and ambulance services. Staff met with management at McKee Medical Center and LWP project managers to develop a traffic plan for the section of road that will be disturbed in front of the hospital by the sewer project.

Big Thompson Canyon Outreach: Staff continues to manage communication and problem resolution with canyon customers. We produced press releases, email alerts, social media posts and website alerts for the two planned outages in March. We met personally with some customers that had additional needs.

Customer Experience Team: Staff continues to work with a team to improve the customer experience at the Development Center. We presented the latest iteration of the Customer Experience Plan and survey results at the last gathering.

Electric Vehicle Study: Staff is collaborating with Platte River and Fort Collins Utilities to study customer behavior around charging vehicles.

Energy Star Homes: Staff is coordinating with Platte River to determine next steps of the ESH program. It is housed at PRPA but might be moved into the Efficiency Works suite of offerings. More to come on that in future reports.

Community Outreach: Loveland Water and Power will be attending the following upcoming events:

- Manufacturing Trade Show – April 12, 2018
- Safety Motorcade – April 12, 2018

Facebook Insights (March 2018):

- Reach (unique users) – 5,871 people
- Engagement (unique users) – 597 people
- Impressions (total count) – 17,980 people

Media:

- Reporter Herald – April 9, 2018: Loveland city vehicle motorcade to raise awareness for work zone safety
- Estes Park Trail Gazette – April 9, 2018: News and Notes for the week ending in April 6 2018 – Efficiency Works Store
- Longmont Observer – April 8, 2018: Efficiency Works opens online store Longmont residents can shop to save money and energy with instant rebates
- Reporter Herald – April 7, 2018: City of Loveland seeks applicants for new communications advisory board
- Colorado Independent – April 5, 2018: Morning round-up of stories from the front pages of newspapers across Colorado – PRPA's latest solar power project
- Times Call - April 5, 2018: Longmont power provider Platte River Power Authority advised to go fully renewable by 2030
- The Coloradoan - April 5, 2018: Fort Collins electricity provider gets avalanche of bids on solar project
- North Forty News – April 4, 2018: Fort Collins Utilities and Efficiency Works Launch Online Marketplace
- BizWest – April 4, 2018: NoCo clean-energy group criticizes PRPA net-zero study
- Longmont Observer – April 4, 2018: Press Release: Northern Colorado Partners for Clean Energy Releases Second Review of Platte River Power Authority's "Zero Net Carbon" Analysis

UTILITY APPLICATION SERVICES DIVISION:

CIS Replacement: Statement of Work (SOW) negotiations are now complete and contract negotiations will be wrapped up shortly.

Utility Business Analyst: Sterling Overturf has joined the UAS team and brings a wealth of applications and GIS knowledge to Water and Power.

Project & Request Tracking: One of the Technology Roadmap recommendations was to establish a tracking system for our team's work. Since the beginning of 2017 we have configured Cityworks for this purpose. The big projects, tracked as work orders, are reported to,be approved and prioritized by our LWP Technology Steering Committee. There are currently 21 approved projects in our queue. The smaller, maintenance-type jobs are tracked as service requests. So far this year we have completed 47 requests within an average of 6.78 days. These are the numbers broken down by type:

Application Requests – 2.73 days
Application Support – 13.24 days
Data Requests – 6.09 days
Hardware Support – 11.22 days
Map Requests – 6.12 days
Report Requests - 1.33 days

GENERATION, TRANSMISSION & NORTHERN COLORADO UTILITY REPORTS:

Northern Water Conservancy District: Meeting materials from the March 8, 2018 board meeting are available online. The minutes have not been posted yet. The next board meeting will be held on Thursday, April 12, 2018 at 9 am at Northern Water headquarters located at 220 Water Ave, Berthoud, CO 80513.

Platte River Power Authority (PRPA): Meeting materials from the March 29, 2018 board meeting are available online. The minutes have not been posted yet. The next board meeting will be held on April 26, 2018 at 9 am at PRPA headquarters located at 2000 E. Horsetooth Rd, Fort Collins, CO 80525.

Fort Collins Energy Board: The next board meeting will be held on Wednesday, April 19 at 5:30 pm at the Colorado River Community Room, 222 LaPorte Avenue, Fort Collins, CO. Meeting materials are available online. The April 12, 2018 meeting was rescheduled to a joint meeting with the Water Board on April 19, 2018 at 5:30 p.m. at 222 Laporte Avenue, Colorado Room.