CITY OF BURLINGTON
KIT CARSON COUNTY
CITY COUNCIL
WORK SESSION
AGENDA
21-2016
COMMUNITY BUILDING ROOM A
340 S 14TH STREET
November 14, 2016
6:30 PM

1 **Call to Order**

2 **Pledge of Allegiance**

3 **Consent Agenda Items**
Any consent agenda item may be removed from the Consent Agenda and placed under Business if discussion is desired. Otherwise, one motion will pass all items.

Approval of bills.

4 **Public Comment**

5 **Reports from City Departments**
Clerk- Shelly Clark
Treasurer- Veronica Boyles
IT-Suzy Velasco

6 **Work Session**
Unfinished Business

New Business
A. Approval of Water Efficiency Plan.

7 **Council Comments**
- A. Mayor Dale Franklin
- B. Rod Murray
- C. Mike Halde
- D. Mark Burghart
- E. Kamron Weisshaar
- F. Beth Crites
- G. Harold McNerney

8 **Adjournment**

Emergency matters that may come before Council may be discussed with decisions to be ratified at a subsequent Council meeting.

PO	Vendor		Amt.	Depart	Description
49886	Accutest	$	176.50	Water	Wastewater Sample Testing
50973	Accutest	$	38.00	Water	E-Coli Testing
50856	Accutest	$	186.50	Water	Confirmation on Nitrates for October
50892	Accutest	$	36.50	Water	Nitrate Sampling
51022	Accutest	$	(110.00)	Water	Credit on Overpayment from Invoice # DX68256-IN on 11/05/15
51023	Accutest	$	(10.00)	Water	Credit on Overpayment from Invoice # DA66345-CM on 09/08/15
50942	Accutest	$	176.50	Water	Wastewater Sample Testing
51047	Accutest	$	38.00	Water	E-Coli Testing
51011	Advanced Auto Parts	$	11.90	Streets	Oil & Air Filter
51012	Advanced Auto Parts	$	13.67	Streets	2 Oil Filters & 1 Air Filter
50974	Alsco	$	17.00	Comm Center	Dust Mops, Mop Handles
51009	Alsco	$	17.00	Comm Center	Dust Mops, Mop Handles
51053	Alsco	$	17.00	Comm Center	Dust Mops, Mop Handles
50976	Camp Cook Concessions	$	126.50	Activities	Link Union Concert-11 Meals 10/26/16
51059	Camp Cook Concessions	$	195.00	Old Town	30 Catered Meals on 10/29/16
50999	Caselle	$	1,480.00	Admin	Contract Fee for November
51002	Casi Asphalt & Concrete	$	1,976.40	Streets	14.64 Tons EZ Street Cold Patch Asphalt
51050	Cavalier	$	46.34	Old Town	Old Town 800 #
50687	ChemaTox Laboratory	$	290.00	PD	Lab Fees-Sent for Restitution-Ruben Trevino
49902	City of Burlington	$	27,325.18	Various	October City Utility Usage
51036	Cole, Ray	$	112.00	Old Town	Consignor
51001	Co. Dept of Labor & Employment	$	70.00	Airport	2016 Yearly Registration for Fuel Storage Tanks
51057	Co. Dept of Public Health	$	100.00	Water	October 2016 Environmental
51020	Colo Dept of Revenue	$	108.00	Airport	October Aviation Fuel Sales Tax
50988	Colo Dept of Revenue	$	6,581.00	Electric	October Utility Sales Tax
51024	Colorado Municipal League	$	2,995.00	Admin	2017 Membership Dues
50984	Dale's Service & Supply	$	63.79	Admin	Wax Ring & Labor-Ladies Room at City Hall
50985	Dale's Service & Supply	$	95.00	Welcome Cent	Open Urinal Drains at Welcome Center
51045	Department of Energy	$	11,316.77	Electric	October Electrical Energy Used
51015	Durham Ag Tech	$	11.01	Streets	Street Sweeper Hose Fittings
50995	E-470 Public Highway Authority	$	42.60	PD	License Plate Toll Fees-6545LAQ Dodge Charger
50688	Elan Credit Card	$	147.83	PD	K-9 Expenses
51016	Elan Credit Card	$	7,035.80	Various	October Credit Card Bill
50998	F8 Advertising	$	375.00	Old Town	I-70 Boards Advertising
51037	Fetty, Jim	$	73.50	Old Town	Consignor
51026	Great America Financial Services	$	85.68	Admin	Mailing Meter Rental
49899	Herman Lumber	$	86.95	Water	Faucet, Supply Hoses, Basket Strainer, Plumbers Putty-For New Water Shop
50685	Herman Lumber	$	4.99	PD	Extension Cord
48461	Herman Lumber	$	45.97	Water	Paint for New Shop, 1/4" Ball Valve for Repair/Plunger
50875	Herman Lumber	$	44.99	Old Town	Filter for AC Units at Old Town
48465	Herman Lumber	$	0.86	IT	Anchors for Suzy's Desk
49901	Herman Lumber	$	4.79	Water	Drain Extension Tube for Water Shop
48466	Herman Lumber	$	4.29	Water	Coupler for Water Shop
48464	Herman Lumber	$	60.76	Water	Plumbing Equipment & Outlets for New Water Shop
49903	Herman Lumber	$	68.46	Admin	Door Locks & Weather Strips for Airport House
49883	Herman Lumber	$	15.86	Old Town	Lightbulbs
49885	Herman Lumber	$	9.99	Electric	Screws for Electric Dept
50940	Herman Lumber	$	32.00	Electric	Screws/Washers
49896	Herman Lumber	$	38.49	Old Town	Ballast
49898	Herman Lumber	$	151.33	Old Town	Fluorescent Lightbulbs & Spraypaint
51007	Herman Lumber	$	14.37	Old Town	14.6" Black Stand & 2 Cycle Oil
51008	Herman Lumber	$	200.85	Activities	Haunted House-Poly Film, Tape, Utility Knifes, Staples, Lampholder, Clamplamp & Spraypaint
51006	Herman Lumber	$	30.00	Electric	Screws
48469	Herman Lumber	$	2.97	Water	3 Outlets for Water Shop
48468	Herman Lumber	$	12.98	Water	Nails & P-Trap for Water Shop
49907	Herman Lumber	$	33.22	Water	Glue, Caulking, Wire Doorbell, Biscuit Joiner
51049	Herman Lumber	$	19.99	Water	Hinges
48470	Herman Lumber	$	68.94	Parks	Cleaning Supplies
51038	Hett, Lyndon	$	74.00	Old Town	Consignor
50996	Hitchcock	$	500.00	Old Town	Crane Labor
51044	Holland & Hart	$	2,686.00	Admin	October Attorney Fees
51060	Impact Photographics	$	160.75	Old Town	Gift Shop Merchandise
51039	KCC Carousel	$	70.30	Old Town	Consignor
51014	KC Electric	$	1,376.97	Airport/Water	Electric Used in October
50975	Kit Carson County Landfill	$	20.23	Streets	Dumping Fees
51000	Kit Carson County Landfill	$	135.88	Streets	Dumping Fees
50997	KNAB	$	840.00	Old Town	October Old Town Advertising
51040	Kreative Stitches	$	26.00	Old Town	Consignor
50989	Leaf	$	136.22	PD	PD Copy System Lease
50693	Maxx Wrench	$	299.99	PD	Vehicle Repair-Replaced Front Lower Right Motor Mount
51021	Meliaire Aviation	$	393.57	Airport	10 % Fuel & Rental

51019	Mid-American Research Chemical	$	455.73	Velcome Cente	12-1 Gallon Scrub Up
51041	Muirhead, Sara	$	100.00	Old Town	Consignor
50690	Neve's Uniforms & Equipment	$	651.41	PD	Uniforms for Tory Treat
51042	North 40 Alpacas	$	441.00	Old Town	Consignor
51013	Office Works	$	3.46	Library	October Copy Count
50032	Office Works	$	0.90	Library	September Copy Count
50686	Parke Health Center	$	80.00	PD	Lab Fees-Sent for Restitution
51004	Permits & Papers	$	40.00	PD	Non DOT Random Collection
50691	Petty Cash-PD	$	133.33	PD	Supplies-Yearbook Ads, Parade Candy, Postage
51005	Plain's Heating & Air Conditioning	$	142.00	Admin	Heat Ignitor Repair & Labor at Storage Building
51058	Prairie Mountain Publishing	$	2,191.83	Various	October-Monthly Newspaper Ads
51034	Quality Inn	$	267.00	Activities	Outback Arts Council-Rooms for Reckless Abandon
51018	Quill	$	35.99	Library	Green Glass Desk Lamp
51017	Quill	$	23.18	Library/Admin	Advil for city Hall & ID Labels for Library
51055	Quill	$	61.99	Judicial	File Folder Divider with Pockets
51056	Quill	$	15.98	Activities	Manila File Folders
50987	Rabe, Steven	$	1,225.00	Admin	October Admin Support
50987	Rabe, Steven	$	900.00	Admin	October Administration Support
50978	Safeway	$	19.98	Activities	Youth Council-Haunted House- Grab Bag Skittles
51003	Safeway	$	8.88	Admin	Bottled Water for City Council Meeting
51051	Safeway	$	36.84	Admin	Breakfast with Santa Staff Meeting-Veggie Tray, Fruit Tray, Watermelon Bowl
51025	Scheopner's Water Conditioning	$	7.50	Misc.	Water Cooler at VA Clinic
50981	SE & EC Recycling	$	2,242.47	Admin	4th Quarter Fees for Recycling
51052	Stanion Wholesale Electric	$	279.00	Electric	1000-E-J Brooks 622 Green Meter Seal
50684	Stratton CO-OP	$	19.00	PD	Tire Repair
50689	TransUnion Risk & Alternative Data Sol.	$	50.00	PD	Oct/Nov Data Assesment Report Fees
49905	Utility Deposit Refund	$	57.07	Electric	Utility Deposit Refund-Dorothy Little
50983	Utility Notification Center of Co.	$	41.47	Water	RTL Transmissions
51027	Utility Service Co., Inc.	$	2,750.00	Water	Washout/Condition Assessment/Disinfection-Performed on the 500,000 Gallon Water Tower
50986	Verizon	$	1,423.29	Various	October Cell Phone Bill
51048	Wex Bank/Sinclair	$	2,678.95	Various	October Fuel Purchased
50994	Wagner	$	142.99	Streets	Service Filters for CAT & Backhoe
50992	Wagner	$	(9.18)	Streets	Credit/Return on Service Filters for CAT & Backhoe
50990	Wagner	$	20.67	Streets	Service Filters for CAT & Backhoe
51043	Wall, Nikki	$	277.25	Old Town	Consignor
51010	Waxie Sanitary Supply	$	1,467.58	Welcome Cent	Cleaning Supplies for Welcome Center
50991	Wrico Environmental	$	547.95	Water	Drinking Water Consultation
		$	**87,764.44**		

MERRICK® & COMPANY

2480 W. 26th Avenue, Unit B225
Denver, Colorado 80211
Tel: +1 303-964-3333
Fax: +1 303-964-3355

www.merrick.com

November 10, 2016

Shelly Clark
City of Burlington
415 15th Street
Burlington, Colorado 80807

Re: Water Efficiency Plan

Dear Shelly,

Submitted herewith is a draft of the Water Efficiency Plan. We are still making progress on some of the final tables to be included in this Plan. However, it is essential that we include feedback from the City and City Council to ensure that the Water Efficiency Plan fits the City's long-term water planning. If you would please distribute this draft to the Council members and City administrators for their review.

Once you have had a chance to review, please share the City's comments, revisions, or additional inputs to the Plan. Thank you for your assistance in providing the City's opinions on this Plan.

Respectfully Submitted,
Merrick & Company

Allyson Junker

Enclosures: Draft Water Efficiency Plan

DRAFT

WATER EFFICIENCY PLAN

CITY OF BURLINGTON, COLORADO

Prepared by:

MERRICK & COMPANY
McLaughlin Water Engineers
A Division of Merrick & Company

2480 26th AVENUE, B225
DENVER, COLORADO 80211

November 2016

TABLE OF CONTENTS

LETTER OF TRANSMITTAL

BACKGROUND 1

PURPOSE 2

APPROACH 2

1.1 OVERVIEW OF EXISTING WATER SUPPLY SYSTEM 3

1.3 SUPPLY-SIDE LIMITATIONS AND FUTURE NEEDS 3

Future Challenges 3

Water Availability 4

Drinking Water Quality 5

Water Savings v. Water Revenue 5

2.1 DEMOGRAPHICS AND KEY CHARACTERISTICS 7

2.2 HISTORICAL WATER DEMANDS 7

2.3 DEMAND MANAGEMENT ACTIVITIES AND IMPACTS 10

2.4 DEMAND FORECASTS 10

3.1 WATER EFFICIENCY AND WATER SUPPLY PLANNING 14

3.2 WATER EFFICIENCY GOALS 15

4.1 Identification and Screening Process 16

4.1.1 Foundational Activities 16

4.1.2 Targeted Technical Assistance and Incentives 20

4.1.3 Ordinances and Regulations 20

4.1.4 Education Activities 21

4.2 evaluation of ACTIVITIES 22

4.3 SELECTED ACTIVITIES 23

5.1 IMPLEMENTATION PLAN 27

5.2 MONITORING PLAN 27

6.1 ADOPTION OF NEW POLICY 29

6.2 Public review process 29

6.3 local ADOPTION and state approval processes 29

6.4 periodic review and update 29

List of Tables

Table I-A – Individual Well Appropriated and Actual Production Capacities 4
Table I-B – Contaminants Detected Above National Secondary Drinking Water Regulations 5
Table II-A – Current Water Efficiency Activities & Measures 11
Table II-B Projected Demand Rates 12
Table IV-A – Review of State Required Wate Efficiency Activities for Consideration 17
Table IV-B – Quantitative Analysis of Proposed Water Efficiency Activities 22
Table IV-C – Qualitative Analysis of Proposed Water Conservation Activities 23
Table IV-D – Selected Water Efficiency Activities and Estimated Water Savings 24
Table V-A – Selected Water Efficiency Implementation Plan 26

List of Figures

Figure II-A: Annual Water Production, 1987-2013 8
Figure II-B: Monthly Pumping and Billing Totals, 2011-2012 9
Figure II-C: Unmodified Projected Water Demand 13
Figure III-A: Modified Projected Demand with Water Efficiency Implementation 14

List of Drawings

Appendix A: Martin and Wood Memo re Halde Well Change of Use

INTRODUCTION

BACKGROUND

The City of Burlington is located in Kit Carson County on the Eastern Plains of the State of Colorado. The City is situated 12.5 miles from the Colorado-Kansas state line, at the junction of U.S. Highway 385 (US 385) and Interstate 70 (I-70). Gently sloping grasslands and crop fields dominate the area surrounding the City of Burlington, which has no natural boundaries.

The Burlington water system has historically used the Ogallala aquifer as its water source. The aquifer is deep and generally furnishes good quality water. Historically, he distribution system has been supplied by 10 individual wells with no central collection or injection point; each well discharged to the nearest point of distribution piping. Wells have been added gradually, with each well being essentially independent.

In 2013, the City purchased two additional wells – the Halde Wells. This acquisition was justified by the need for additional water (declining production of existing wells) and because these wells tested having low nitrate concentrations. The City retained Martin & Wood, Consulting Water Engineers to change the permitted use from agriculture to municipal.

The City is in the process of designing and constructing a Central Blending Plant to counter the high nitrate concentrations in some of the individual wells by blending water from low-mitrate wells.

Since water resources are limited to the local wells, it is in the City's best interest to reduce per capita water demands. Water conservation is essential to provide low-nitrate drinking water within the City's water right, hopefully deferring and decreasing the need for further well acquisition and infrastructure expansion.

PURPOSE

The City is under Enforcement Order of the Colorado Department of Public Health and Environment to provide investigate the causes of elevated nitrate levels, to implement a water treatment system compliant with the State's Drinking Water Standards, and to prepare a State-approved Water Efficiency Plan by December 2017. These requirements were the impetus for developing this plan.

The purposes of this Water Efficiency Plan are to:

- Reduce and/or defer future acquisition of wells to maintain water supply;
- Reduce and/or defer capital costs for further water and wastewater infrastructure;
- Improve water supply reliability and potential to meet future projected water demands; and
- Meet the requirements of the State's Enforcement Order.

APPROACH

This Water Efficiency Plan follows the organizational template provided in the Colorado Water Conservation Board's Guidance Document and worksheets (available at: http://cwcb.state.co.us/technical-resources/water-conservation-plan-development-guide/Pages/main.aspx). First, the Plan presents an overview of the City's existing drinking water system, the historical water demand, and the projected future demand with and without water efficiency efforts. The Plan explains the process that the City used to determine which Water Efficiency measures and programs to include, the implementation schedule, the method the City will us to monitor activities, and the procedure to review, approve, and adopt this Plan.

This initial plan should be updated within seven years, as required by the State. It is anticipated that the City's Water Efficiency Program will be an evolutionary process, based on the monitoring information and public feedback collected and incorporated into future updates.

SECTION 1.0 – EXISTING SYSTEM

1.1 OVERVIEW OF EXISTING WATER SUPPLY SYSTEM

The City of Burlington currently relies on 10 active wells pumping from the Ogallala Aquifer directly into the distribution system as its drinking water source. An eleventh well, Well 3, is no longer active due to continued elevated nitrate concentrations. The City has active water right permits for all of these wells. The City has also acquired two wells (the Halde North and Halde South) to the West of Burlington, in 2013, which have undergone Change-of-Use Procedures from agricultural to municipal use and will be incorporated into the City's supply as part of the 2017 Water Quality Improvements project.

A telemetry (SCADA) system monitors the water level in the City's elevated storage tank and can control most of the well pumps, based on tank water level. Disinfection occurs at each well individually, where chlorine gas is injected at the bottom of the well. Besides chlorination, no additional treatment is provided to the well water. All wells are housed in updated, above-grade pump stations. The wells are regularly maintained to keep them in proper working condition. As a result, the wells, pumps, telemetry, and chlorination systems presently have no known mechanical issues.

The Central Blending Plant will blend water from six wells before injecting to the distribution system. The Plant will also provide a secondary chlorination point, additional storage, and a central control system that communications with all wells and the elevated tank. High service pumps at the Plant will pump directly into the distribution system. Wells will still turn on based on the elevation at the storage tank, with logic to ensure low and high nitrate water is blended to meet State standards and allocated water rights are balanced.

The City of Burlington's water system contains one operational elevated steel tank, which has a 500,000 gallon capacity, which is in good operating condition. The tank water level governs the system hydraulic gradient. Assuming about 200,000 gallons should be reserved for fire protection flows, the design tank water level is approximately 4,260 feet. Recent development on the west side has an elevation of approximately 4,190 feet, resulting in a static pressure of about 70 feet or 30 psi.

Drawing 1: Map of service area & supply wells.

1.3 SUPPLY-SIDE LIMITATIONS AND FUTURE NEEDS

Future Challenges

There are several long-term uncertainties which could affect Burlington long-range water system planning, including:

- Water Availability;
- Drinking water quality; and
- Balancing water efficiency activities with Water Utility revenue.

Water Availability

Table I-A summarizes the annual water rights, permitted pumping rate, and actual pumping rate used for each well. Although the wells have rights for pumping rates as shown, actual pumping rates are limited by aquifer capacity, pump and well characteristics. The current water supply is projected to satisfy the City's water demands through 2045. However, changes in the aquifer, including depth and rising nitrate levels, may impact the availability of high quality water sources. The City's current Water Quality Improvments project, currently in construction, addresses these concerns by upgrading existing well houses bringing the water supply to a Central Facility for blending. In the future, if the City elects to add treatment for nitrate removal at the Central Facility, more water from high nitrate-level wells could be incorporated into the total water supply.

Table I-A – Individual Well Appropriated and Actual Production Capacities

Well No.	Permit No.	Date Issued	Annual Right (acre-ft/year)	Annual Right (gpm)	Maximum Rate (gpm)	Actual Pump Rate (gpm)	Actual Pump Rate (MGD)
1	14724FP	7/19/1991	400	248.45	400	130	0.19
2	16442FP	7/19/1991	400	248.45	500	290	0.42
3	7787-FP	4/14/1981	320	198.76	400	0	0.00
4	R-10598-FP	9/6/2002	320	198.76	400	100	0.14
5	R-10599-FP	10/6/1980	480	298.14	600	180	0.26
6	5960-FP	12/14/1981	200	124.22	1000	250	0.36
7	10796FP	7/19/1991	400	248.45	535	200	0.29
8	13035FP	7/27/1988	400	248.45	470	220	0.32
9	R-10597-FP	8/14/1980	320	198.76	400	130	0.19
10	2657-FP	11/21/1980	50	31.06	400	300	0.43
11	R-20458-FP	1/27/1998	204.8	127.20	1200	600	0.86
S. Halde	5838-FP	2015	227	140.99	805	400	0.58
N. Halde	5838-FP-R	2015	189	117.39	727	400	0.58
TOTAL			3910.8	2429.07	7837	3200	4.61

Drinking Water Quality

Drinking Water Quality Nitrate levels are based upon water quality data collected by the City of Burlington from January 2009 to June 2015. The nitrate concentrations are compiled by well. Nitrate concentrations vary by site as well as temporally.

Other water quality issues in the City of Burlington's water may influence future treatment requirements. A 2014 study conducted by Onsite Water Management and Superior H_2O detected iron, manganese, hardness, and turbidity levels above the EPA's National Secondary Drinking Water Regulations MCLs, in Well 6 and Well 8 (no longer in use). **Table I-B** provides a summary of their findings. Although MCLs are not currently enforceable, the City should consider these contaminants in the long-term planning of the drinking water system

Water quality analysis testing from 2009-2012 has detected other regulated contaminants in Burlington's drinking water wells, including Atrazine, Barium, Chromium, Heptachlor, Selenium, and Picloram. These results were all well below their respective MCLs.

Table I-B – Contaminants Detected Above National Secondary Drinking Water Regulations

Contaminant	Results	Units	Secondary Standard
Iron	1.57 – 5.14	mg/L	0.3
Manganese	0.035 – 0.346	mg/L	0.05
Hardness	186 – 207	mg/L	100
Turbidity	12.0 – 35.0	NTU	1.0

Water Savings v. Water Revenue

While water savings has the advantage of prolonging the need to modify public water supply and facilities, water sales are also an important source of revenue to the City of Burlington. Aggressive near-term water demand reductions could negatively impact the City and Water Utility by diminishing water revenue too quickly and rendering the Utility fiscally unstable. The City needs to maintain sufficient revenue from through the Water Utility to cover daily operating and maintenance costs, to repay bond dept and loans, and to fund any future capital improvement projects. Through this Water Efficiency Plan, the City will identify activities that promote water savings while keeping its revenue stable.

Insert Drawing 1

SECTION 2.0 – WATER DEMANDS

2.1 DEMOGRAPHICS AND KEY CHARACTERISTICS

The drinking water system serves the City's 4,254 residents, according to the 2010 Census. The Census included inmates at the Kit Carson Correctional Facility, which has a maximum capacity of 1,448 inmates, as residents. In 2016, the Correctional Facility was closed.

There are also 233 commercial connections. The largest users are the schools, the hospital, and the prison. The City's billing system has the ability to track users by customer type (i.e. residential or commercial) and report largest users on a monthly or annually basis.

The City also provides water to the City Parks and the Prairies Pines Golf Course. These irrigated use customers are not currently metered.

2.2 HISTORICAL WATER DEMANDS

The City's drinking water system serves 1,330 residential connections and 233 commercial connections. Based on the data compiled in EBH & Associates 2014 Preliminary Engineering Report[1], **Figure II-A** shows the annual water production in millions of gallons between 1987 and 2013. Variations in historic water use are attributed to changes in precipitation and population. Fluctuations in precipitation affect the irrigation demand, while population growth corresponds with increased water usage.

The average annual water production over the past 25 years was 354 million gallons per year (MGY). However, the average annual production has decreased in more recent years. In the past 10 years, water production averaged 348 MGY and only 307 MGY in the past 5 years.

[1] Preliminary Engineering Report on Halde Wells Infrastructure & Blending Improvements, EBH & Associates, July 2014.

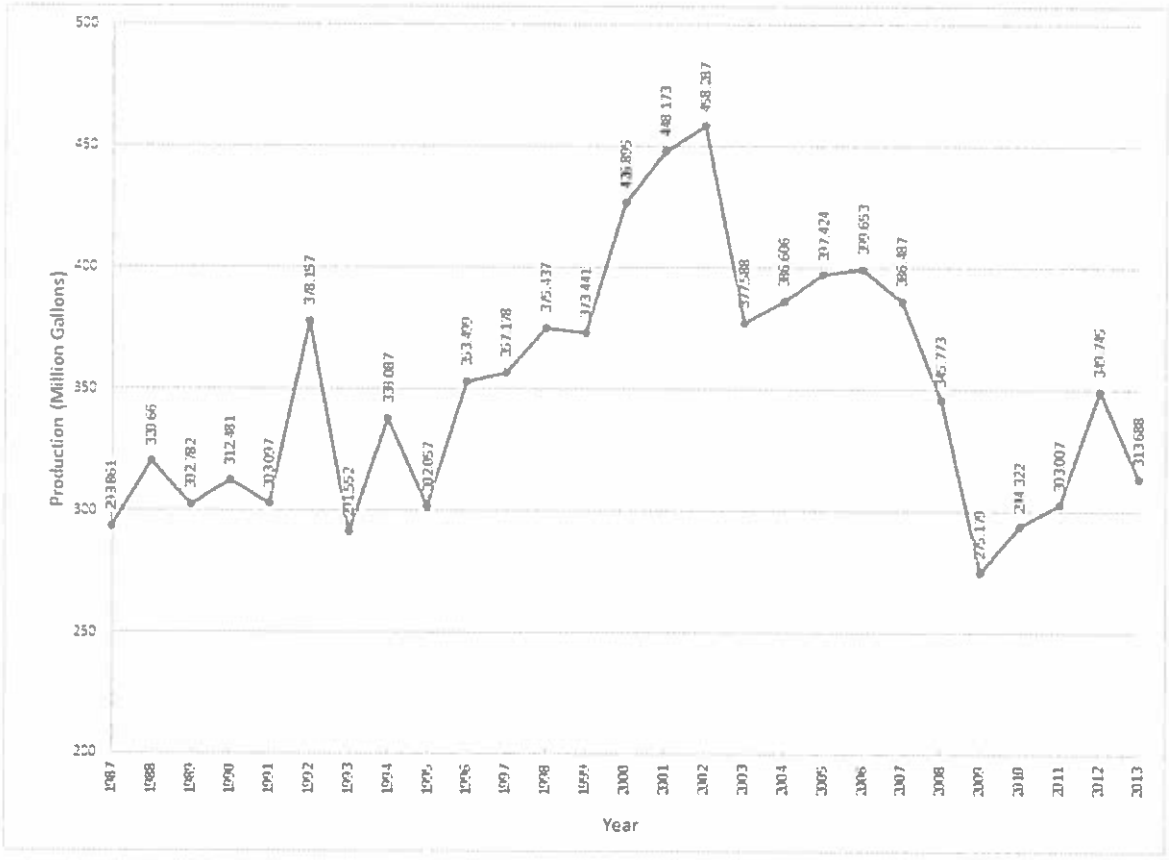

Figure II-A: Annual Water Production, 1987-2013

Water usage has also varied seasonally, with peak water usage June through August and minimal usage from November through March. The monthly pumping and billing curves for 2011 and 2012 (**Figure II-B**) clearly shows the difference in water usage between the winter and summer months. This variation affects how much water the City needs to pump from the various wells to meet demand. In the summer months it must most of the wells to meet demand, so turning off all high nitrate level wells permanently is not a feasible solution without developing a new water source.

Note that Figure II-B demonstrates that the Burlington system has a low percentage of loss (i.e. pumping and billing quantities similar).

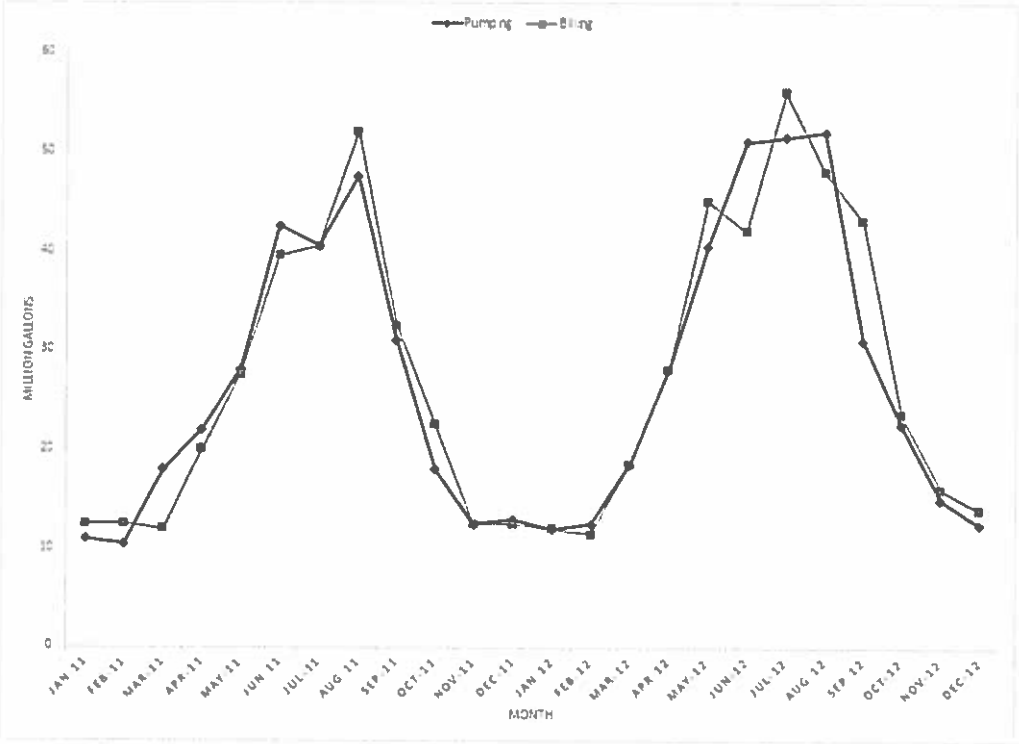

Figure II-B: Monthly Pumping and Billing Totals in 2011-2012[2]

2.3 DEMAND MANAGEMENT ACTIVITIES AND IMPACTS

The City has several ordinances and foundational activities in place already to address the efficient use of the municipal water supply. In 2005, the City inacted Ordinance 829, which revised tap fees and water rate schedule, prohibited the waste of water, and upheld the prohibition of independent water-supplies within the City limits. Ordinance 874 in 2011 modified outdoor water use restrictions during high demand months; these restrictions have been in place for decades. The City also increased water rates from 2013-2015 in anticipation for current improvements to the water supply.

The City meters water use and collects meter readings on a monthly basis, in accordance with their billing schedule. A summary of these measures and their estimated water savings is presented in **Table II-A**.

The existing ordinances have encouraged a moderate level of water efficiency since their enactment. However, the City has trouble enforcing the outdoor use restrictions during high demand months and has suggested additional administrative/staff efforts in enforcement would improve public adhersion to the restrictions.

The City has had limited success raising revenue for the Water Utility through the existing water rates and tap fees for needed capital improvements projects. The City is considering modifications to the existing rates and tap fees to pay back bonds and to fund future capital improvement needs.

2.4 DEMAND FORECASTS

Demand projections have been based on the assumption that the population grows by 10% in the next 40 years. This growth estimate is conservative and is based on the EBH & Associates Reports[1,2], which predicted the City's base population to increase by 292 people between 2015 and 2045. The projections also consider additional demand from the Kit Carson Correctional Facility by assuming that the prison would be at full capacity. Although the Correctional Facility is currently closed, there is reason to believe it will be reopened, in which case the City will need to have sufficient water supply available to furnish the Correctional Facility.

The baseline annual production rate was derived from the average annual production in the past 5 years. To serve the prison at full capacity (approximate 1,000 inmates) would require an additional 48 MGY. The estimated demand under dry weather conditions used the annual water production rate from 2002 (458 MG per year) as a baseline, since this was the driest year in the data set; the additional demands of population growth and a full prison were also applied to this dry year baseline. The projected demand rates under these various scenarios is summarized in **Table II-B**.

[2] Engineering Report – Public Water System and Water Rate Study, EBH & Associates, December, 2001

Insert table II-A

Table II-B: Projected Demand Rates

Scenario	Annual Production (MGY)	Avg Day (MGD)	Avg Day (gpm)	Max Day (MGD)	Max Day (gpm)	Peak Hour (gpm)	Fire Flow (gpm for 3 hours)
Baseline	307	0.84	584.5	2.36	1636	2338	3500
With Prison Full	355	0.97	675.8	2.72	1892	2703	3500
With Prison Full & 10% growth	386	1.06	734.2	2.96	2056	2937	3500
Dry Year with Prison Full & 10% growth	550	1.51	1046.4	3.01	2093	2937	3500

In previous reports by EBH & Associates, the actual maximum day was found to be approximately 2.5 times the average daily demand. In Table II-B, the maximum day is calculated by applying a factor of 2.8 to the average daily demand, which provides an additional safety factor. For the dry year scenario, the maximum day is only 2.0 times the average daily demand since high irrigation use days are not as atypical to other days as they would be in a wetter year.

The peak hour is approximated to be 4 times the average daily demand on an average year. Fire flow is based on the ISO community rating, which identifies at least five buildings in the City of Burlington that fall in the 3,000 to 3,500 gpm range, which should be sustained for 3 hours. Typical residential construction would require 1,500 gpm sustained for 2 hours. In the worst case scenario, with dry weather conditions and the prison at full capacity, the projected maximum day demand rate would be 3.01 MGD, assuming 10% population growth. The past peak day demand has been approximately 2.8 MGD.

Unmodified, projected water demands are based on the population growth projections presented in the EBH Report. In the forecast, it is assumed the prison is full. **Figure II-C** presents the projected water demands if the City does not implement any water efficiency activities.

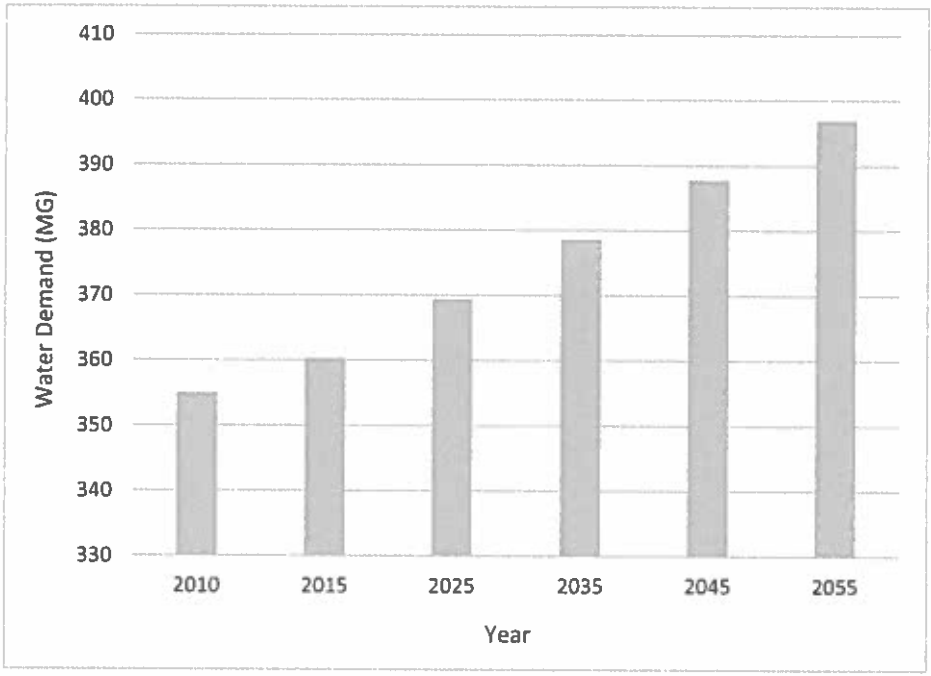

Figure II-C: Unmodified Projected Water Demand

Although the water demand projections are developed out to 2055, the planning horizon for this plan is limited to 10 years. Since the City intends on evaluating and reviewing this plan every 7 years, the planning horizon should provide sufficient data on water savings and other impacts of this Plan. The 10-year planning horizon also gives the City flexibility, as it collects more data, to reassess the forecasted challenges to the system and determine which water efficiency activities actually provide the highest cost-benefit to the Drinking Water System.

3.1 WATER EFFICIENCY AND WATER SUPPLY PLANNING

Figure III-A presents modified, forecasted water demands which assumes that all of the measures and programs presented in this Plan are fully implemented by 2025. After the planning period, it is assumed that the City's future efforts in Water Efficiency will perpetuate water savings by an additional 5% each decade.

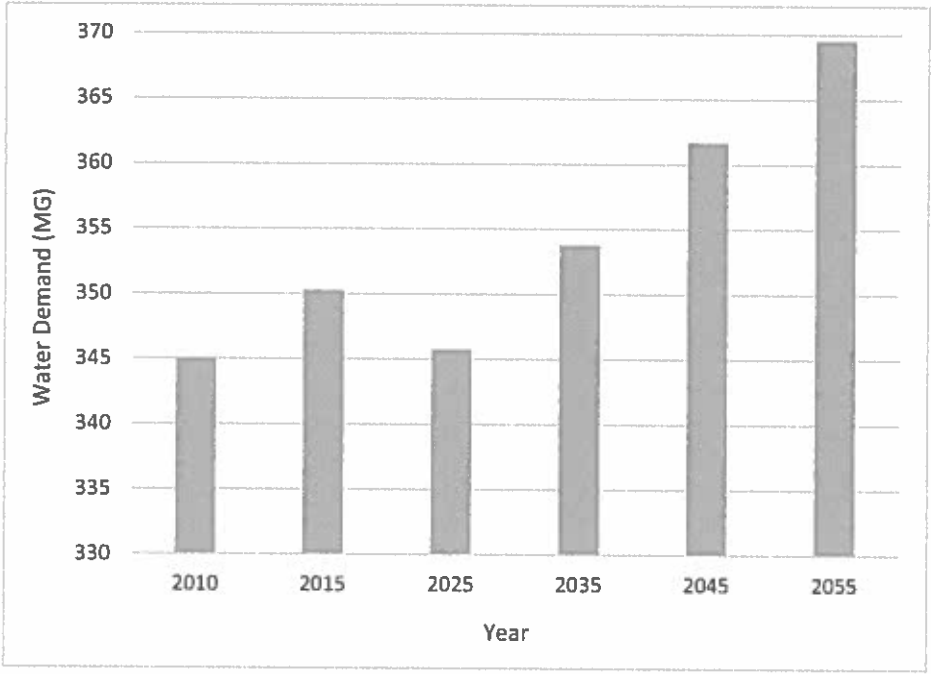

Figure III-A: Modified Projected Demand with Water Efficiency Implementation

The current Water Quality Improvements project and this Water Efficiency Plan will set the City up with a reliable source of water for the next few decades. The use of existing water rights will provide the sufficient water supply beyond 2055. The City will be able to recooperate the costs of this current capital improvements project, while eliminating the need for additional source water acquisition during this period. The acquistion of new supply wells is estimated to cost several million dollars.

The City needs to balance the pumping of low and high-nitrate raw water to provide quality, blended drinking water. The blending program is limited by the availability of low-nitrate water: if water demand increases significantly, the City has plenty of allocated water rights, but not enough low-nitrate water to successfully blend with high-nitrate water. Efficient water use will postpone the need for additional treatment to remove nitrates from blended water. Upgrading the Plant to incorporate treatment for nitrate removal would cost the City at least $ 3 million.

3.2 WATER EFFICIENCY GOALS

The City of Burlington will benefit from a Water Efficiency Program that preserves existing water supplies and prolongs the need to develop new water sources. Reduced water consumption will prolong the usefulness of existing water and sanitation facilities, which reduces long-term costs associated with the operations, maintenance, and capital improvements to the City's Water and Sewer Utilities.

The City's goals for its Water Efiiciency Program are:

- Develop a Water Efficiency Program that achieves water savings targets, but fits the City's financial and administrative constraints.
- Adopt water efficiency activities and policies that are acceptable to the community.
- Identify largest water users and reduce water usage by 10%.
- Reduce peak day use by lowering summer water consumption by 10%.
- Identify and repair water losses within the existing water supply and distribution systems.
- Promote awareness of water conservation within the community.
- Establish a monitoring and evaluation system that compiles water usage data in order to measure success of water conservation initiatives and identify areas that still need improvement for subsequent revisions of the Water Efficiency Plan.

The City will measure the successes of the goals by monitoring billing data to determine actual water demands, evaluating the Water Utility budget, estimating water savings, and collecting feedback from Water Utility customers.

SECTION 4.0 – ACTIVITIES SELECTION

4.1 IDENTIFICATION AND SCREENING PROCESS

The selection process began with screening the Water Efficiency activities required by the State under CRS 30-67-126(4)(a) and listed in the Colorado Water Conservation Board's guidance document worksheets. These activities fall into four broad categories: Foundational Acitivies, Targeted Technical Assistance Incentives, Ordinances and Regulations, and Education Acitivities. Each measure or program was screened to determine which activities are applicable to the City of Burlington using the following screening criteria:

- Projected water demand savings
- Ability to implement
- Community compatability
- City Council and staff acceptance

Table IV-A summarizes the findings from the initial screening of the State required measures and programs.

These water efficiency measures and programs were further reviewed to determine specific water saving activities appropriate for the City and recommend an implementation schedule. These activities were presented to the City Council and Staff for further evaluation and selection. Further description of the existing and proposed water efiiciency activities follows below, by category.

4.1.1 Foundational Activities

Metering

The City currently collects water meter readings on a monthly basis. The water meters are owned and maintained by the City. The City will continue to read meters monthly. The City will consider installing meters at locations it does not currently meter, including City parks and some municipal buildings.

- No additional cost is expected in maintaining this practice.

Automated Meter Readers

The City has a few automated water meter readers in operation. The City has had a positive experience operating AMRs and will evaluate replacing obsolete meters with automatic meter reading

- The estimated cost per automated meter reader installation is $500 with goal to install an average of 5 per year.

Table IV-A

Review of the State Required Water Efficiency Activities for Consideration

Activity	Targeted Costumer Category	Applicability to City of Burlington	Recommended for Further Evaluation
Foundational Activities			
Water-use metering and data collection, including monitoring and verification	Water Distribution System Management, Customer Billing	The City currently meters water use of customers. The City will consider improved data collection to monitor and verify water savings resulting from this Water Conservation Plan. The city will also evaluate replacing obsolete meters with automated meter readers.	Yes.
Water rate schedules and tap fees oriented towards water use efficiency in a fiscally responsible manner	Customer Billing and Water Utility Financing	The City has tapping fees and rate schedule based on customer type and evaluate EQRs. The City has recently raised its Water Utility Rates, but will consider reviewing the rates to keep up with increasing operations costs and to price appropriately in case of future water restrictions.	Yes
System water loss management and control programs, including distirbution system leak detection and repair	Water Distribution System Management	The City has expressed interest in a System Water Loss Management Program, including leak detection and repair. The Water Utility already has replaced several hundred feet of aging water lines, but does not have a specific program at this time.	Yes
Targeted Technical Assistance Incentives			
Installation of water efficient fixtures and appliances such as toilets, urinals, showerheads, faucet aerators, washing machines, dishwashers, and swamp coolers	Indoor water use, primarily residential customers	The City could expand its Water Quality ordinances to regulate new construction indoor plumbing fixtures, however the State is currently moving forward with this effort. The City could better use its resources to provide customer education and water use audits related to water-use efficiency.	No.
Low water use landscapes, efficient irrigation, drought resistant vegetation, and removal of phreatophytes	Outdoor water use	The City plans to supply the golf course with non-potable raw water as part of the Water Quality Improvements porject (in construction). The City will consider efforts to promote Xeriscape and native plant materials through its educational programs and materials.	Yes.
Water-efficient industrial and commercial water-using processes	Commercial and Industrial Customers	The main commercial customers are the private prison, restaurants, and hotels. With the closing of the private prison, commercial water demand has decreased significantly. At this time, new commerical or industrial equipment is not a cost-effective and will further reduce commerical water-use revenue for the City.	No.
Incentives to implement water efficient practices, including rebates to customers to encourage water conservation installations	Indoor and Outdoor Water Use	The cost and administrative effort associated with these measures compared with estimated water savings make this option unfavorable to the City. The City can achieve more long-term water savings through improved data collection, water loss management, and customer education.	No.
Ordinances and Regulations			
General water use, landscape design/installation, and indoor and commerical rules and regulations	Customer Water Use Efficiency	The City already has general water use regulations, including Water Waste Prohibition and Watering Restrictions Ordinances.	No
Education Activities			
Dissemination of information regarding water use efficiency, including customer education, water use audits, water-saving workshops/demonstrations, and citizen advisory boards	Customer and elected official education	Educational activities provide long-term water-use changes with minimal implementation costs and effort. This efforts will also build public approval and community acceptance of the Water Efficiency Program proposed in this plan.	Yes.

Demand Data Collection and Billing

Customers are billed on a monthly based on the meter readings collected by Water Utility personnel. The City will improve data collection and analysis available from its existing billing system, including tracking largest water users and reporting monthly and annual water demand based on customer type. Improvements will include tracking by customer type and largest water users.

- No additional cost is expected with this practice.

Water Efficiency Oriented Rates and Tap Fees

The City has a water efficiency rate schedule in place; base rates were recently increased from $20 in 2013 to $30 in June 2015. The City sells water at $30 per month for the first 5,000 gallons and $1.50 for each additional 1,000 gallons.

The tap fees that the City developed are based on equivalent residential (EQR) units. The current tap fees (Ordinance Number 829 §1 (part), 2005 and Ord. No. 854 §1, 3-9-09) are $1,750 per EQR for commercial application and $1,350 per EQR for residential application. The EQR schedule is provided in Appendix A.

However, the City's Water Utility rates are still comparatively low. The City will re-evaluate the existing rate schedule and tap fees and determine the Utility's financial ability to provide adequate funding for daily operations and maintenance, planned capital improvements projects, and anticipated costs associated with new regulations and commodity cost increases. The results of this evaluation may result in revised water rate schedules and tap fees.

- The estimated budgeted amount for re-evaluation of the City's Water Utility rates and fees is $10,000.

System Water Loss Management and Control

The available billing and well pumping data follow each other closely and indicate that the City has only minor system water loss issues. As the system continues to age, however, there is an increasing likelihood of pipe leaks and failure. The City will continue to monitor billing and water production information to assess water loss in the in Water system. The City will initiate a system-wide audit following the American Waterworks Association (AWWA) M-36 methodology to identify existing water loss sources.

- The estimated cost for a system wide audit is $50,000.

The City will prepare for the future water loss control by creating a Leak Detection and Repair Program within the Water Utility. This Program will establish procedures for identifying, monitoring, and repairing leaks in the distribution system.

- The estimated budgeted amount is $75,000 per year.

Level 3 Management of Remaining Customer Demands

The City will consider implementation of a rebate program for customers that install xeriscapes and/or residential irrigation system soil moisture controllers.

- The estimated cost for the rebate program for 50 residents at $150 per installation is $7,500.

4.1.2 Targeted Technical Assistance and Incentives

Level 1 Utility/Municipal Facility Water Efficiency

As part of the 2017 Water Quality Improvements project, the City is upgrading the pumps and plumbing at existing well houses. These upgrades will reduce energy costs associated with pinching down the currently oversized well pumps and address any existing leaks in the well house plumbing, which will decrease operational costs of its water supply. The new pumps and flow meters will communicate with the central control system and provide accurate, up-to-date information on pumping and water supply production.

- No additional cost is expected in maintaining this practice.

The City will contol its outdoor water use, specifically the irrigation of City parks and properties, by installing irrigation system controllers that monitor precipitation and ground moisture. The irrigation control system will turn sprinklers off during a rainfall event and when ground moisture levels are high. The upgrade will reduce municipal water demands for irrigation, which mainly occur during summer months.

- The estimated budgeted amount is $15,000 for the audit.

4.1.3 Ordinances and Regulations

Existing Ordinances and Regulations

The City has ordinances prohibiting the waste of water, which gives the City power to turn off water where such waste occurs (Ord. No. 829 § 1(part), 2005).

The City protects access to the groundwater supply by prohibiting independent water supplies within the City limits (Ord. No. 829 § 1(part), 2005).

The City regulates outdoor water use during high demand months. These restrictions specify time of day and day of week that costumers may use water for outdoor purposes, such watering lawns and gardens or washing cars. From June 1 to August 31, customers may only use water for outdoor purposes during the restricted period, between 9:00 pm to 9:00 am the following day. Large irrigators may only water during the restricted period. All other customers may water during the restricted period on even dates for even-numbered addresses and odd dates for odd-numbered addresses (Ord. No. 874, §1, 2, 7-11-2011).

Since the Water Utility has had trouble enforcing the outdoor use regulations in the past, the City will consider bolstering enforcement of these restrictions. The Water Utility will dedicate additional staff hours to observing outdoor use during the summer months and ticketing offenders of the existing restrictions.

In general, the waste of water and independent-supply prohibitions are followed. The City has some trouble enforcing the outdoor water use restrictions during high demand months. The City will consider ways to improve the public's adhersion to these restrictions, including mailing reminders with the spring water bills and hiring additional staff part-time to facilitate with enforcement.

- No additional cost is expected in maintaining these regulations.
- The water restriction enforcement program will cost an estimated $5,000 annual cost for additional administrative services.

4.1.4 Education Activities

Customer Education

The City will publish and maintainaintain an informational water efficiency webpage on the its website. The page will include information about the City's water-saving landscape design, details on the voluntary customer audit program, and tips for more efficient indoor and outdoor water-use. This page will also allow citizens to comment about the City's Water Efficiency Program and share their personal efforts and experience in adopting water-saving activities. This source of feedback will be helpful in gauging public acceptance and interest in various water saving activities for subsequent reviews of this Plan.The City will also include water efficiency information as a monthly bill stuffer with the Water Utility bill. The monthly inserts will explain water conservation techniques for customers and advertise the City's water efficiency measures and programs. Prior to the high demand period (i.e. April billing cycle), the bill stuffer will remind customers of the City's existing outdoor water-use restrictions). The monthly inserts will improve community awareness of water conservation and the City's Water Efficiency initiatives. The bill stuffer will also direct customers to the Water Efficiency webpage for additional information.

- Estimated budgeted amount to provide public education through its webpage and utility bill stuffers is $1,500.

The City will work with local schools to disseminate water conservation information to students. The City will provide handouts illustrating water conservation tips.

- Estimated cost of conservation education is $500 annual.

The City will facilitate the creation of a Citizens Advisory Board will provide a forum for disucss of water (efficiency) issues affecting the community. The City will advertise meetings of the Board in bill inserts and on its Water Efficiency webpage. Feedback and conversations generated from this Board will provide information on public perceptions and acceptance of this Water Efficiency Plan and ideas for revising the plan in subsequent reviews.

- The estimated additional administrative cost is $1,000 for program support.

4.2 EVALUATION OF ACTIVITIES

The project team evaluated and scored the 14 identified activities based on quantitative and qualitative analysis of each item. Quantitative criteria included:

- Cost of implementation
- Potential peak day and annual water savings
- Reduced Water Utility costs associated with demand reductions

Qualitative criteria included:

- Public acceptance
- Ease of implementation
- Engineer's recommendation
- City's preference

The quantative analysis is essentially a cost-benefit analysis of the identified water efficiency activities. The appreciable benefits of the Water Efficiency Plan are long-term, namely prolonging or obscuring the need to develop additional water sources or to expand existing water facilities; short-term benefits are limited to reduced operational costs. Therefore, the quantative analysis was conducted over a 20 year time period; the results of this analysis are provided in **Table IV-B**.

The qualitative analysis provided addition information on the anticipated uptake and success of each activity. It also fostered discussion about potential implementation challenges, which were helpful in developing the Implementation Plan (Section 5). **Table IV-C** summarizes the results of the qualitative analysis.

Table IV-B

Quantitative Analysis of Proposed Water Efficiency Activities

Item	Activity Description	Est. initial total cost ($)	Est. 10-year total cost ($)	Project-annual water savings (gal.)	Projected 10-year total water savings (gal.)	Cost per 1,000 gallons saved ($)	Projected 10-year total operating cost savings ($)	Projected 10-year total water capital cost savings ($)	Total 10-year Cost Savings	Beneifit/Cost Ratio
1	Continue meter reading and maintenance (as necessary)	$ -	$ -		NC					NA
2	Replace disfunctional meters with automated meter readers	$ 2,500.00	$ 25,000.00	1,200,000	12,000,000	$ 2.08	$ 960.00	$ 12,000.00	$ 12,960.00	5.18
3	Improve Water Utility data collection and analysis	$ -	$ -	NC	NC					NA
4	Re-evaluate existing Water Utility rate schedule and tap fees	$ 10,000.00	$ 10,000.00	12,000,000	120,000,000	$ 0.08	$ 9,600.00	$ 120,000.00	$ 129,600.00	12.96
5	Initiate system wide water audit	$ 50,000.00		NC	NC					NA
6	Establish a Leak Detection and Repair Program	$ 75,000.00	$ 750,000.00	9,000,000	90,000,000	$ 8.33	$ 7,200.00	$ 90,000.00	$ 97,200.00	1.30
7	Upgrade existing well house pumps and plumbing	$ -	$ -		NC				$ -	NA
8	City Parks Irrigation System controller - rain off program	$ 15,000.00	$ 15,000.00	1,200,000	12,000,000	$ 1.25	$ 960.00	$ 12,000.00	$ 12,960.00	0.86
9	Water Restrictions Enforcement	$ 5,000.00	$ 50,000.00	3,600,000	36,000,000	$ 1.39	$ 2,880.00	$ 36,000.00	$ 38,880.00	7.78
10	Maintain an informational water efficiency page on the City's website.	$ 500.00	$ 1,175.00	2,250,000	22,500,000	$ 0.05	$ 1,800.00	$ 22,500.00	$ 24,300.00	48.60
11	Include water efficiency information as a bill stuffer	$ 100.00	$ 1,000.00	2,250,000	22,500,000	$ 0.04	$ 1,800.00	$ 22,500.00	$ 24,300.00	243.00
12	Conservation Education through schools	$ 500.00	$ 5,000.00	1,500,000	12,000,000	$ 0.42	$ 960.00	$ 12,000.00	$ 12,960.00	25.92
13	Create a Citizens Advisory Board to incorporate public feedback	$ 1,000.00	$ 5,000.00	NC	NC					NA

Table IV-C							
Qualitative Analysis of Proposed Water Conservation Activities							
	Activity No. and Description	**Public Acceptance**	**Ease of Implementation**	**Min. Additional Admin. Effort**	**Engineer's recommendation**	**City's Preference**	**Total Score**
1	Continue meter reading and maintenance (as necessary)	5	5	5	5		20
2	Replace obsolete meters with automated meter readers	5	4	4	5		18
3	Improve Water Utility data collection and analysis	5	5	4	5		19
4	Re-evaluate existing Water Utility rate schedule and tap fees	1	4	4	5		14
5	Initiate system wide water audit	4	2	3	3		12
6	Establish a Leak Detection and Repair Program	3	3	2	2		10
7	Upgrade existing well house pumps and plumbing	5	5	5	5		20
8	City Parks Irrigation System controller - rain off program	4	4	3	4		15
9	Water Restrictions Enforcement	2	3	3	4		12
10	Maintain an informational water efficiency page on the City's website.	5	5	4	5		19
11	Include water efficiency information as a bill stuffer	4	5	3	5		17
12	Conservation Education through schools	5	3	5	4		17
13	Create a Citizens Advisory Board to incorporate public feedback	3	4	4	4		15

4.3 SELECTED ACTIVITIES

The programs and measure selected for implementation had high benefit to cost ratio and/or scored highly on the qualitative analysis. The following activities were selected:

- Continue meter reading and maintenance (as necessary)
- Meter replacement program with automated meter readers
- Improve Water Utility data collection and analysis
- Re-evaluate existing Water Utility rate schedule and tap fees
- Upgrade existing well house pumps and plumbing
- City Parks irrigation system controller – rain off program
- Maintain an informational water efficiency page on the City's website
- Include water efficiency information as a bill stuffer
- Conservation education through local schools
- Create a Citizens Advisory Board to incorporate public feedback

In addition to the measures already in place, implementation of these water efficiency activities and measures will result in significant water savings. The estimate water savings achieved through implementation of this plan are presented in **Table IV-D**.The total water savings were used to develop the modified demands presented in Figure III-A in Section 3.1 of this plan.

Table IV-D
Selected Water Efficiency Activities & Estimated Water Savings

Activity	Implementation Period: Historical Activities	Historical Total Water Savings (MG)	Implementation Period: New Acitivities	Projected Water Savings for Planning Period (MG)
Foundational Activities				
Continued Metering	2005			
Meter Replacement Program			Immediate	12,000,000
Improve Water Utility data collection and analysis			Immediate	
Re-evaluate existing Water Utility rate schedule and tap fees			Immediate	120,000,000
Upgrade existing well house pumps and plumbing			2017	
Targeted Technical Assistance Incentives				
City Parks Irrigation System controller - rain off program			2018	12,000,000
Ordinances and Regulations				
Adjust Existing Water Rates			Immediate	
Adjust Existing Tap Fees			Immediate	
Waste of water prohibition	2005			
Independent water supply prohibition	2005			
Outdoor use of water restrictions	2011			
Water Restrictions Enforcement			Immediate	36,000,000
Education Activities				
Maintain an informational water efficiency page on the City's website.			Immediate	22,500,000
Include water efficiency information as a bill stuffer			Immediate	22,500,000
Conservation Education through schools			Immediate	12,000,000
Create a Citizens Advisory Board to incorporate public feedback			2020	

SECTION 5.0 – IMPLEMENTATION & MONITORING

5.1 IMPLEMENTATION PLAN

The selected water efficiency activities are listed in Section 4.3. In addition to the selected activities, the City would maintain the practices already in place to encourage efficient water use. **Table IV-D** (Section 4.3) summarizes the projected water savings from these measures and programs and outlines the implementation period.

Table V-A summarizes the actions necessary to complete each selected activity as well as identifying miestone goals, annual budget costs, and the responsible entities. The quantitative analysis of short-listed water efficiency activities provides additional information on the estimated costs savings of operations and capital improvements, based on adoption of each activity (Table IV-B).

Discussion on how reductions in water use could impact revenue and actions taken to help mitigate negative impacts.

5.2 MONITORING PLAN

List of demand data to be collected. (see Worksheet K)

Other relevant data specific to implementation activities. (See Worksheet L)

Summary of process and frequency of monitoring and evaluation reporting to decision makers.

Frequency of data collection should be specified.

Table V-A
Selected Water Efficiency Implementation Plan

Activity	Period of Implementation	Implementation Actions	Milestones	Annual Budget	Entity/Staff Responsible for Implementation	Coordination & Public Involvement
Foundational Activities						
Meter Replacement Program	2018	Collect information about existing meters that need replacement. Replace old/damaged meters with automated meter readers each year.	Average 5 meters per year	$2,500.00	Water Utility	
Improve Water Utility data collection and analysis	Immediate	Begin compiling billing data based on customer type on a monthly basis. Report largest users on an annual basis. Track water demand for future water efficiency planning.			Billing	
Re-evaluate existing Water Utility rate schedule and tap fees	Immediate	Review existing water rate and tap fees. Hire consultant to perform economic evaluation of City's costs versus revenue. Adopt new rates and fees if acceptable.		$10,000 one time cost	Administration / City Council	
Upgrade existing well house pumps and plumbing	2017	Upgrades ongoing as part of the current Water Quality Improvements project. Continue to compare water pumped versus water billed.			Water Utility	Billing
Targeted Technical Assistance						
City Parks Irrigation System controller - rain off program	2018	Install irrigation system controls at City Parks.		$ 15,000 initial cost	Parks	
Ordinances and Regulations						
Water Restrictions Enforcement	Immediate	Dedicate Water Utility hours towards enforcement in summer months. Observe outdoor use and ticket violators of restrictions.		$5,000.00	Water Utility	
Education Activities						
Maintain an informational water efficiency page on the City's website.	Immediate	Create Water Efficiency Page on the City's existing webpage. Provide a link where customers can share feedback.		$ 100 annual plus, $1,000 initial cost	Public Works	
Include water efficiency information as a bill stuffer	Immediate	Include water conservation tip on monthly water utility bill.		$100.00	Billing	
Conservation Education through schools	Immediate	Publish Water Conservation handouts. Share educational information with teachers at local schools.		$500.00	Administration	Local Schools
Create a Citizens Advisory Board to incorporate public feedback	2020	Establish Board prior to the next Water Efficiency Plan review. Obtain public feedback about water conservation activities.		$1,000.00	Public Works	

SECTION 6.0 – ADOPTION, REVIEW, & APPROVAL

6.1 ADOPTION OF NEW POLICY

Adoption of this Water Efficiency Plan will result in the implementation the following key activities:

- Initiation and/or continuation of water efficiency measures and programs as detailed in the Implementation Plan presented in Section 5.1;
- Data collection to monitor and evaluate the water system performance, water savings, and other impacts directly related to this Plan;
- Continued involvement of the public through public education programs and feedback; and
- Periodic review and refinement of this Water Efficiency Plan.

6.2 PUBLIC REVIEW PROCESS

The public review process will follow the City's existing "Notice and hearing" policy as set forth in 17.44.030, Ordinance 774 §1 (part), 1999.

The City will publish a draft of this Water Efficiency Plan for download on its webpage; hard copies of the plan will also be available for public review at City Hall. The document will be made available at least 60 days prior to the public hearing. An advertisement for the public hearing will be posted on the City's webpage and in the *Burlington Record*. Proof of publication is documented in Appendix ##.

A summary of the public comments received and how the comments were addressed follows below. Full transcript of the hearing is provided in Appendix ##.

6.3 LOCAL ADOPTION AND STATE APPROVAL PROCESSES

The adoption, completion, and approval of the Water Conservation will occur through the following steps:

- Public review period from December 2, 2016 with hearing on February 6, 2017
- Revision to incorporate public comments, February – March 2017
- Initial approval by the City of Burlington
- State review and approval
- Final approval and adoption by the City of Burlington by December 1, 2017

A copy of the official adoption document will be included in Appendix ##.

6.4 PERIODIC REVIEW AND UPDATE

The City will update the Water Efficiency Plan every 7 years, at a minimum, or when significant changes to the water supply or distribution systems warrant its revision. During revisions to the Plan, the City will have the opportunity to compare projected

and actual water savings attributed to the activities implemented in the previous plan. From this information, the City can update costs and benefits for the actitivities implemented.

Based on the collected data and public feedback, the City can make informed decisions about which activities are working and which need modifications. The City will also consider additional water savings activities to add to the revised plan.

The periodic review will also illustrate how closely the actual water use matches forecasted water use and allow the City to make updated forecasts about its water supply and demand.

BURLINGTON COLORADO
SINCE 1888

www.burlingtoncolo.com

415 15th Street Burlington, CO 80807 Phone 719-346-8652 Fax 719-346-8397

CITY CLERK REPORT
11-14-2016

As you can see, we have a short agenda this meeting. I have been in communication with Steve and Lorraine several times this week discussing the budget. Steve asked that I share with you that the budget does not include the final audited numbers nor do we have faith in the accuracy of 2016 YTD. He has concerns with the Airport Fund and is having Lorraine do research for him. Steve is also concerned with the Water/Wastewater Fund and is having Lorraine do research on this as well. Lorraine found an error yesterday and with Caselle help Veronica and Becky were able to make the correction.

Lorraine was out on Wednesday and has started the process of going through our financials. She has been in contact with Steve and they are working on getting a budget put together by December 12th. Lorraine will be back out on Monday the 14th and Wednesday the 30th. She is having Veronica reconcile the books and helping her as she needs it. Lorraine is entering the 2015 audit numbers in the budget for Steve. Suzy was able to get her setup with remote access to our network so she can work offsite.

Under new business is the Water Efficiency Plan that Merrick and Company has drafted for the City. Allyson shared that this is a draft and there are still a few areas that need addressed. We will continue to work on it and should be prepared to submit it by December 1st. They do need your approval on the draft.

Things are moving quickly with the water project. The Notice of Awards will be issued by November 10th to Hitchcock on schedule A, Skarphol on schedule C and the best proposal for schedule B is Downey Drilling if we can negate the cost to $1,155,000.00. Mike is still working on the easements.

I have shared with Mayor Franklin that I will not be applying for the City Administrator opening. I am happy to do the Interim position until you have hired an Administrator. Steve has agreed to help me and he is also willing to help with hiring an Administrator. Mayor Franklin can share more information with you, I believe he has spoken with Steve.

Memorandum

To: Council

From: I.T. Department - Suzy Velasco

Date: 11/9/2016

Re: Council Report for 11/14/16

- Routine maintenance & updates performed on city workstations & equipment
- Troubleshooting & repair for reported user issues
- Performing monthly database maintenance for all databases in Caselle on 11/11
- Website updated to reflect current and upcoming events and information
- Working on e-discovery project for PD (automated electronic submission of case files and supporting documents)
- Submitted with my report is information requested by a member of council regarding audio equipment for council meetings. The quote from DK Audio is to install receivers and equipment to handle up to 10 wireless microphones in the Recreation Room (where the meetings would need to be held). The second document is a gathering of items that would need to be purchased to facilitate setting up the existing portable sound system instead.
- **Notify Me Statistics as of 11/9/16:**
    - **Calendar Subscriptions**
        - Activities – 73
        - Business - 25
        - Community - 52
        - Government – 31
        - Library – 32
        - Old Town – 35
    - **Newsflash Subscriptions**
        - Business - 29
        - Community - 56
        - Government – 32
    - **Jobs Module Subscriptions**
        - 21
    - **Bids Module Subscriptions**
        - 31
    - **Total Subscriptions**
        - 417
- **Facebook Statistics as of 11/9/16**
    - 476 likes (Burlington, CO page)

Lucas Lafferty, Owner
(719) 505-2861
Lucas@DKAudioVideo.com

DK AUDIO VIDEO

www.DKAudioVideo.com

Dan Keller, Owner
(785) 443-5220
Dan@DKAudioVideo.com

Proposal To

Susan

For:

Burlington Comm. Boardroom

November 9, 2016

Supporting only the world leaders in steerable sound.

ROOM 1

SCOPE

SYSTEM A

QTY	DESCRIPTION	PRICE	LABOUR	TOTAL
5	Audio Technica ATW-1312 System 10 PRO Digital Wireless	$789.00	$165.00	$4,770.00
1	Mackie 1604VLZ4 16-channel mixer, 16 Onyx mic preamps, 3-band EQ w/ sweepable midrange, 16 line inputs, TRS and XLR main outputs, mono output, 4 subgroups, 6 auxes, 4 stereo returns, control room output, 48v phantom power, 60mm faders, rackmountable, steel chassis.	$899.99	$25.00	$924.99
1	Middle Atlantic PTRK-2126 PORTABLE RACK,21SP,26"DP	$750.00	$100.00	$850.00
2	Juice Goose JG 8.0 19" PDU 8 out	$83.00	$0.00	$166.00
10	Atlas Desktop mic stand	$19.99	$0.00	$199.90
SYSTEM A TOTAL				**$6,910.89**
ROOM 1 TOTAL				**$6,910.89**

BOARDROOM

SCOPE

BOARDROOM TOTAL	**$0.00**

PROJECT SUMMARY

FINANCIAL

PAYMENT SCHEDULE

EQUIPMENT TOTAL	$5,960.89
SHIPPING TOTAL	$100.00
LABOR TOTAL	$950.00
PROJECT TOTAL	$7,010.89
TOTAL SALES TAX	$0.00
PROJECT TOTAL	$7,010.89

TERMS

I accept this proposal and hereby authorize DK Audio Video to proceed with the installation of the included systems at the facilities of Susan constructing at Burlington, Colorado as described in the totality of this document. I further authorize DK Audio Video to be granted the facility access that will be required to complete this project in a workmanlike and timely manner and for payment to be made to DK Audio Video. In keeping with the Terms of Payment listed above. It has been made clear to me that there exist no understandings regarding this project with any relevant party unless and until Susan and DK Audio Video agree to such additional or alternate understandings in writing. Project cost and pricing are dependent upon a continual flow of work without interruption or delays imposed by Susan or their staff, construction, other building trades or any other party, and additional costs may be incurred by Susan from DK Audio Video. If such delays result in additional costs that are not covered by the pricing in this proposal. I agree that any additions to and/or deletions from the materials and labor to be provided by my acceptance of this proposal and any resulting change(s) in cost of this project shall only be by way of written change order(s) and shall be valid only after being signed by Susan and DK Audio Video. This proposal is valid only if accepted in writing by Susan and deposit payment received no later than December 9, 2016.

Please remit payment to: 3828 Vaquero Circle South, Colorado Springs CO, 80918
All install projects require 80% of project as down payment, and the final 20% upon completion of the job.
All final sales projects require 100% of project before ordering of equipment.

ACCEPTANCE

SUSAN

SIGNED _____ DATE _____

PRINT NAME _____ TITLE _____

DK AUDIO VIDEO

SIGNED _____ DATE _____

PRINT NAME _____ TITLE _____

QUOTE FROM IT DEPARTMENT

RE: MICROPHONES FOR COUNCIL MEETINGS

To utilize existing portable sound system in rec room:

Shopping Cart

		Price	Quantity
	XLR Microphone Cable 20ft Foot 3-Pin VRT Pro Audio, 10-Pack by VRT Audio In Stock Shipped from: UniqueSquared Gift options not available Learn more Delete | Save for later	$39.99	1
	ChromaCast CC-DMIC-STAND Microphone Stand by ChromaCast In Stock √Prime This is a gift Learn more Delete | Save for later	$12.99	7
	Audio-Technica ATR2100-USB Cardioid Dynamic USB/XLR Microphone by Audio-Technica In Stock √Prime This is a gift Learn more Delete | Save for later	$79.00	9

Subtotal (17 items): $841.92