

Commissioners

- **Appoint Emilee Mendoza, Gibb Charron, Mattea Wabeke, Tory Hass, Anna Kirk, Lauren Howard, Emma Pattison, Alexandra McKenna, and Dylan McNally as YAC Commissioners.**
- **Appoint Sophia Beall, Payton Buhler, Kyle Brinkman, and Billie Anna Runions as YAC Alternates.**

**2. DEVELOPMENT SERVICES (presenter: Noreen Smyth)
KENDALL BROOK UTILITY EASEMENT VACATION**

A motion to approve and order published on second reading an Ordinance Vacating a Portion of a Utility Easement on Lot 5, Block 21, Kendall Brook First Subdivision, City of Loveland

This is a legislative action to adopt an ordinance on second reading vacating a portion of a utility easement for a single family residential lot in the Kendall Brook First Subdivision, located at 1670 Tennessee Street. The applicant is R + R Homes on behalf of property owners Ronald and Gail Ferguson. The side yard utility easement is not needed to accommodate existing or future utilities. This ordinance was approved unanimously by Council on May 21, 2013.

**3. DEVELOPMENT SERVICES (presenter: Bob Paulsen)
OIL & GAS MAILED NOTIFICATION AMENDMENT**

A motion to approve and order published on second reading an Ordinance Amending Sections 18.05.030 and 18.05.060 of the Loveland Municipal Code to Establish Mailed Notification Distances for Neighborhood Meetings and Public Hearings Associated with Oil and Gas Permit Applications under Chapters 18.77 and 18.78

This legislative item was approved unanimously by the City Council on May 21, 2013 as a public hearing matter. The ordinance establishes mailed notification distances for oil and gas permit applications. With the City's recent adoption of oil and gas regulations, it is necessary to establish mailed notification distances for neighborhood meetings and public hearings that are required as part of the oil and gas permitting process. Mailed notices are provided by applicants to all property owners within the specified distance at least 15 days in advance of required neighborhood meetings and public hearings. As specified in the ordinance, the recommended distance for mailed notice is 2,200 feet as measured from the boundary of property on which the oil and gas use will occur. This distance was derived by starting from a baseline distance of 1,200 feet (a notice distance that applies to several other types of applications in the Municipal Code) and adding 1,000 feet to account for the maximum setback distance that oil or gas operations require for certain buildings and outdoor uses. The purpose of the distance is to ensure that property owners that are potentially impacted by the surface activities associated with oil and gas development are notified.

**4. DEVELOPMENT SERVICES (presenter: Alison Hade)
REALLOCATION OF CDBG FUNDS TO HABITAT FOR HUMANITY**

A motion to approve a Resolution #R-35-2013 Approving the Grant Funding Recommendation of the Loveland Affordable Housing Commission for the Reallocation of Certain 2011 and 2012 Community Development Block Grant Funds

This is an administrative action to consider a resolution reallocating \$22,770.15 of 2011-2012 Community Development Block Grant funding and \$35,000 of 2012-2013 Community Development Block Grant (CDBG) funding for a total of \$57,770.15. Funds

were allocated by the U.S. Department of Housing and Urban Development and were initially appropriated in both the 2011 and 2012 City Budgets. Unspent funding in 2011 was rolled into and appropriated in the 2012 City Budget for a total of \$57,770.15 in unspent funds.

5. **ECONOMIC DEVELOPMENT** (presenter: Betsey Hale)
INCENTIVE AGREEMENT FOR “ROUGHING IT IN STYLE”
A motion to approve a Resolution #R-36-2013 Approving an Incentive Agreement for “Roughing It In Style”
 This is an administrative action to consider a resolution authorizing an incentive agreement. “Roughing It In Style” is a family owned custom furniture manufacturer and retailer. The ownership group is considering a Loveland location on Byrd Drive immediately north of the Thunder Mountain Harley Davidson dealership. The company is asking the City Council to consider a request for a sales tax rebate of one third of the municipal sales taxes over a period of 36 months, not to exceed a total of \$150,000. The estimated sales tax to be generated in 36 months of operation is \$450,000.

6. **PUBLIC WORKS** (presenter: Kevin Gingery)
TEMPORARY EASEMENT TO PUBLIC SERVICE COMPANY
A motion to approve a Resolution #R-37-2013 Granting a Temporary Easement to Public Service Company of Colorado
 This is an administrative action to approve a resolution granting a temporary easement to Public Service Company of Colorado (PSCo) to facilitate construction of a new 16” high pressure natural gas main along the west side of Wilson Avenue. There is no budget impact associated with this item.

7. **WATER & POWER** (presenter: Greg Dewey, Lindsey Bashline)
WATER CONSERVATION PLAN
A motion to approve a Resolution #R-38-2013 Adopting the City of Loveland Water Conservation Plan
 This is a legislative action to approve a resolution adopting the City of Loveland Water Conservation Plan. Both the Construction Advisory Board (CAB) and the Loveland Utilities Commission (LUC) unanimously recommend the adoption. The City Council also reviewed the Plan at its May 14, 2013 Study Session and indicated conceptual approval.

8. **WATER & POWER** (presenter: Greg Dewey)
DROUGHT MANAGEMENT PLAN
A motion to approve a Resolution #R39-2013 Adopting the City of Loveland Drought Management Plan
 This is a legislative action to adopt the City of Loveland Drought Management Plan. The Construction Advisory Board (CAB) and the Loveland Utilities Commission (LUC) unanimously recommend the adoption. The City Council also reviewed the Plan at its May 14, 2013 Study Session and indicated conceptual approval.

END OF CONSENT AGENDA

CITY CLERK READS TITLES OF ORDINANCES ON THE CONSENT AGENDA

CITY COUNCIL

- a. **Citizens’ Report** *Anyone who wishes to speak to an item NOT on the Agenda may address the*

Council at this time.

- b. Business from Council** *This is an opportunity for Council Members to report on recent activities or introduce new business for discussion at this time or on a future City Council agenda.*
- c. City Manager Report**
- d. City Attorney Report**

PROCEDURAL INFORMATION

Anyone who wishes to address the Council on any item on this part of the agenda may do so when the Mayor calls for public comment. All public hearings are conducted in accordance with Council Policy. When Council is considering adoption of an ordinance on first reading, Loveland's Charter only requires that a majority of the Council quorum present vote in favor of the ordinance for it to be adopted on first reading. However, when an ordinance is being considered on second or final reading, at least five of the nine members of Council must vote in favor of the ordinance for it to become law.

REGULAR AGENDA

CONSIDERATION OF ITEMS REMOVED FROM CONSENT AGENDA

- 9. **CITY CLERK** (presenter: Terry Andrews)
APPROVAL OF COUNCIL MINUTES
 This is an administrative action to approve the Council minutes.
 - A. A motion to approve Council minutes from the May 14, 2013 Study Session.**
Councilor Shaffer was not present for the entire meeting.
 - B. A motion to approve Council minutes from the May 21, 2013 Council Meeting.**
Councilor McKean was absent.

- 10. **ECONOMIC DEVELOPMENT** (presenter: Mike Scholl)
CRUNCHY GROCER, LLC TAX WAIVER
Refund of City Sales Tax and Fee & Materials Use Tax Waiver for Crunchy Grocer, LLC
 This is an information only item. Staff is looking for City Council direction. Crunchy Grocer, LLC is seeking a refund of 1/3 of City sales tax for a period of five years not to exceed \$175,000, in and fee and materials use tax waivers estimated at \$7,500. The Crunchy Grocer is a natural and organic food grocer that will be located at 1461 East Eisenhower in Loveland. According to the City's approved Economic Development Incentive Policy, any agreement that exceeds \$20,000 is required to go before Council as an informational item prior to final consideration. Pending Council review, the item is expected to be returned for final consideration at the regular meeting on Tuesday, June 18, 2013. If approved, the City will refund 1/3 of the sales tax collected for five years and waive \$7,500 in fees.

- 11. **ECONOMIC DEVELOPMENT** (presenter: Mike Scholl)
LEED FABRICATION DEFERRAL AND WAIVER
Fee Deferral and Waiver Agreement for Leed Fabrication (LEED)
 This is an information only item. Staff is looking for City Council direction. LEED, located at 5100 Boyd Lake Avenue is seeking a deferral of the cash-in-lieu payment for the required street improvements to Boyd Lake Avenue. Further, the City is offering a \$75,000 waiver of building permit fees and construction materials use tax. The street improvements are required as part of the City's site development standards, which were triggered by the proposed 40,200 square foot addition to the existing facility and the

proposed construction of an additional 28,100 square foot building.

According to the City's approved Economic Development Incentive Policy, any agreement that exceeds \$20,000 is required to go before Council as an informational item prior to final consideration. Pending Council review, the item is expected to be returned for final consideration at the regular meeting on Tuesday, June 18, 2013. If the final agreement is approved by the City Council, the City will waive \$75,000 in fees and materials use tax.

12. FINANCE (presenter: Brent Worthington)
APRIL 2013 FINANCIAL REPORT

This is an information only item. No action is required. The Snapshot Report includes the City's preliminary revenue and expenditures including detailed reports on tax revenue and health claims year to date, ending April 30, 2013.

13. FINANCE (presenter: Alan Krcmarik)
INVESTMENT REPORT FOR APRIL 2013

This is an information only item. No action is required. The budget estimate for investment earnings for 2013 is \$2,760,560. Through April, the amount posted to the investment account is \$641,255 including realized gains. Actual year-to-date earnings are lower than the budget projection by \$244,174. Based on the monthly statement, the estimated annualized 1.04% yield on the securities held by US Bank was down from last month and under the annual target rate of 1.20% for 2013. Reinvestment rates have been near record low levels, much lower than the budget projection.

ADJOURN



CITY OF LOVELAND
CITY MANAGER'S OFFICE

Civic Center • 500 East Third • Loveland, Colorado 80537
(970) 962-2303 • FAX (970) 962-2900 • TDD (970) 962-2620

AGENDA ITEM: 1
MEETING DATE: 6/4/2013
TO: City Council
FROM: City Manager's Office
PRESENTER: Bill Cahill

TITLE:

Appointments of Members to the Youth Advisory Commission

RECOMMENDED CITY COUNCIL ACTION:

Motion to appoint members to the Youth Advisory Commission.

OPTIONS:

1. Adopt the action as recommended
2. Deny the action

DESCRIPTION:

This is an administrative item recommending appointment of members to the Youth Advisory Commission.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

SUMMARY:

On May 25, 2013, ten of the current Youth Advisory Commission (YAC) members will be graduating from high school. Interviews were conducted by Jenni Dobson, Phil Farley, Erik Trenary, Logan Peiffer, Hope Skeen, Wes Walton and Mattea Wabeke on April 19 and 23 to fill these vacancies. YAC would also like to reappoint commissioners and alternates who are not graduating or leaving at this time. YAC has 12 total voting commissioners and four alternates. YAC recommends the following appointments or reappointments to serve as members and alternates from June, 2013 through May, 2014.

Reappoint as YAC Commissioners

Hope Skeen
Wesley Walton
Reid Maynard

Appoint as YAC Commissioners

Emilee Mendoza
Gibb Charron
Mattea Wabeke
Tory Hass
Anna Kirk
Lauren Howard
Emma Pattison

Alexandra McKenna
Dylan McNally

Appoint as YAC Alternates

Sophia Beall
Payton Buhler
Kyle Brinkman
Billie Anna Runions

REVIEWED BY CITY MANAGER:



LIST OF ATTACHMENTS:

None



CITY OF LOVELAND
 DEVELOPMENT SERVICES DEPARTMENT
 Civic Center • 500 East 3rd Street • Loveland, Colorado 80537
 (970) 962-2346 • FAX (970) 962-2945 • TDD (970) 962-2620

AGENDA ITEM: 2
MEETING DATE: 6/4/2013
TO: City Council
FROM: Greg George, Development Services Director
PRESENTER: Noreen Smyth, Current Planning

TITLE:

An Ordinance Vacating a Portion of a Utility Easement on Lot 5, Block 21, Kendall Brook First Subdivision, City of Loveland

RECOMMENDED CITY COUNCIL ACTION:

Move to adopt the ordinance on second reading.

OPTIONS:

1. Adopt the action as recommended
2. Deny the action
3. Adopt a modified action (specify in the motion)
4. Refer back to staff for further development and consideration
5. Adopt a motion continuing the item to a future Council meeting

DESCRIPTION:

The City Council adopted this ordinance as part of the Consent Agenda on May 21, 2013. The item is a legislative action vacating a portion of a utility easement for a single family residential lot in the Kendall Brook First Subdivision, located at 1670 Tennessee Street. The applicant is R + R Homes, on behalf of property owners, Ronald and Gail Ferguson. The side yard utility easement is not needed to accommodate existing or future utilities.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

SUMMARY:

This item proposes to vacate a portion of a utility easement on which there is an encroaching (overlapping) building. The house on the subject property was incorrectly situated at the 5-foot side yard setback line instead of the at the 6-foot utility easement line that runs along the side lot line.

There are no utility lines in the area proposed to be vacated and it is anticipated that no utilities will need to be located there in the future. Therefore, the portion of the easement to be vacated serves no greater public benefit and it will correct a minor encroachment issue. The required 5-foot wide building setback remains intact; and the existing 2.5-foot wide side yard drainage easement will remain in place.

REVIEWED BY CITY MANAGER:



LIST OF ATTACHMENTS:

Ordinance

Staff memorandum (listed as Exhibit 1)

FIRST READING: May 21, 2013

SECOND READING: June 4, 2013

ORDINANCE NO. 5770

**AN ORDINANCE VACATING A PORTION OF A UTILITY EASEMENT
ON LOT 5, BLOCK 21, KENDALL BROOK FIRST SUBDIVISION, CITY OF
LOVELAND**

WHEREAS, the City Council, at a regularly scheduled meeting, considered the vacation of a portion of a utility easement described on **Exhibit A** attached hereto and incorporated herein by this reference, located in Lot 5, Block 21, Kendall Brook First Subdivision, City of Loveland, County of Larimer, State of Colorado;

WHEREAS, the City Council finds and determines that no land adjoining the portions of the easement to be vacated is left without an established public or private easement connecting said land with another established public or private easement; and

WHEREAS, the City Council finds and determines that the portion of the utility easement to be vacated are no longer necessary for the public use and convenience; and

WHEREAS, the City Council further finds and determines that the application filed with the Current Planning Division was signed by the owners of more than 50% of property abutting the easement to be vacated.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the City Council hereby adopts and makes the findings set forth above.

Section 2. That based on the City Council's findings described above, the following portion of the utility easement be and the same is hereby vacated:

That portion of a utility easement located on **Lot 5, Block 21, Kendall Brook First Subdivision, City of Loveland, County of Larimer, State of Colorado described on Exhibit A attached hereto and incorporated herein by this reference**, containing 480 square feet more or less.

Section 3. That as provided in City Charter Section 4-9(a)(7), this Ordinance shall be published by title only by the City Clerk after adoption on second reading unless the Ordinance has been amended since first reading in which case the Ordinance shall be published in full or the amendments shall be published in full.

Section 4. This Ordinance shall be in full force and effect ten days after its final publication, as provided in City Charter Section 4-8(b).

Section 5. That the City Clerk is hereby directed to record the Ordinance with the Larimer County Clerk and Recorder after its effective date in accordance with State Statutes.

Signed this 4th day of June, 2013.

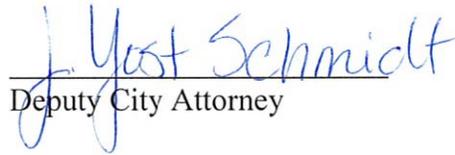
ATTEST:

CITY OF LOVELAND, COLORADO:

City Clerk

Cecil A. Gutierrez, Mayor

APPROVED AS TO FORM:



Deputy City Attorney

EXHIBIT A

P-13-7322
March 4, 2013

PROPERTY DESCRIPTION FOR UTILITY EASEMENT VACATION

That portion of Lot 5, Block 21, KENDALL BROOK FIRST SUBDIVISION to the City of Loveland, County of Larimer, State of Colorado being more particularly described as follows:

The Westerly Six (6) feet of said Lot 5, Block 21, KENDALL BROOK FIRST SUBDIVISION, Excepting Therefrom the Northerly Fourteen (14) Feet and the Southerly Six (6) Feet thereof.

Containing 480.0 square feet, more or less, and being subject to all existing easements and/or rights-of-way now existing or of record.

PREPARED BY AND ON BEHALF OF:

INTERMILL LAND SURVEYING, INC.
1301 North Cleveland Avenue
Loveland, Colorado 80537
P: (970) 669-0516
F: (970) 635-9775
E: rob.ils@qwestoffice.net

Robert George Persichitte
Colorado PLS No. 34174

Date: 03/04/2013

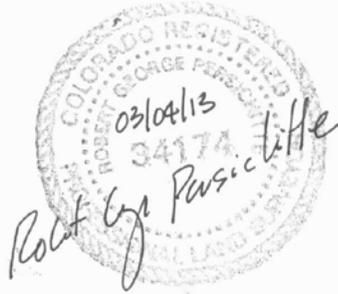


Exhibit B



**Development Services
Current Planning**

500 East Third Street, Suite 310 • Loveland, CO 80537
(970) 962-2523 • Fax (970) 962-2945 • TDD (970) 962-2620
www.cityofloveland.org

M E M O R A N D U M

TO: City Council

FROM: Noreen Smyth, Senior Planner, Current Planning Division

DATE: May 21, 2013

SUBJECT: Kendall Brook Utility Easement Vacation-1670 Tennessee Street
PZ-13-00042

I. EXHIBITS

- A. Vicinity Map
- B. Site Plan
- C. Slide presentation

II. KEY ISSUES

Staff believes that all key issues regarding the utility easement vacation have been resolved through the staff review process. The Planning Commission is not required to review vacations that do not concern access or rights-of-way, so there is no Planning Commission recommendation for this request. The item has been placed on the Council's consent agenda.

III. PUBLIC HEARING & NOTICE

The City Council review of the vacation request is a public hearing. An affidavit was received from the applicant's representative certifying that the required notice of the hearing for the vacation was conducted at least 15 days prior to the date of the hearing. Staff has not received any comments or inquiries on the application.

IV. BACKGROUND

The attached ordinance concerns a request to vacate a utility easement that runs along the side lot line of a single family residential lot at 1670 Tennessee Street, within the Kendall Brook PUD.

The easement was dedicated with the final plat of Kendall Brook First Subdivision (2002). An error in the siting of the foundation for the new single-family residence inadvertently placed the structure 1-foot into the platted 6-foot utility easement along the westerly lot line. The structure does not encroach into the 5-foot side yard setback required by the Kendall Brook PUD; thus, no setback variation is sought or needed. No water, wastewater or power utility lines or stormwater facilities are within the section of the easement to be vacated; therefore, the easement is not necessary for public use. The vacation, totaling 480 sq. ft. in area, would correct the building encroachment.

The utility easement is 6 feet wide. Overlapping with the utility easement is a 2.5-foot wide private drainage easement that is part of a corridor for carrying drainage runoff water away from nearby residential structures. The 2.5-foot wide drainage easement will remain intact and be unaffected by the utility easement vacation. The single-family house does not encroach into the 2.5-foot wide drainage easement; it only encroaches into the 1-foot into the 6-foot utility easement.

R+R Homes is the applicant acting on behalf of property owners Ronald and Gail Ferguson.

V. STAFF REVIEW/FINDINGS AND ANALYSIS

City staff is supportive of vacating the section of the utility easement on which the single family residential building stands. There are no water, sewer, or power lines or stormwater facilities in the area to be vacated and the City's ability to provide utility service to this lot or other lots will not be compromised by the vacation.

The following two findings must be met in order to vacate the portion of the easement. These findings are included in section 16.36.010.B of the Loveland Municipal Code.

***Finding 1.** That no land adjoining any right-of-way to be vacated is left without an established public or private right-of-way or easement connecting said land with another established public or private right-of-way or easement.*

Planning: No land adjoining the proposed vacation is being left without an established public or private right-of-way or easement connecting said land with another established public or private right-of-way or easement as a result of the requested vacation because the vacation does not concern matters of access.

***Finding 2.** That the easement to be vacated is no longer necessary for the public use and convenience.*

Water/Wastewater: The subject area to be vacated is the City's current service area for both water and wastewater. The Department finds that:

- The existing easement to be vacated does not impact the existing water and wastewater utility configuration within and adjacent to this development.
- The existing easement to be vacated is no longer necessary for public use and convenience.

Fire: Staff believes that this finding can be met, due to the following:

- The site will comply with the requirements in the ACF Ordinance for response distance requirements from the first due Engine Company (Station 2).
- The proposed easement vacation will not negatively impact fire protection for the subject development or surrounding properties.

No comments/concerns from any other City department.

VI. PLANNING COMMISSION REVIEW

Per Section 16.36 of the Municipal Code, requests to vacate easements (or portions of easements) require adoption of an ordinance by City Council, but only requests to vacate access easements or rights-of-way also require review by the Planning Commission. Because the easement to be vacated does not include an access easement, it was not reviewed by the Planning Commission.

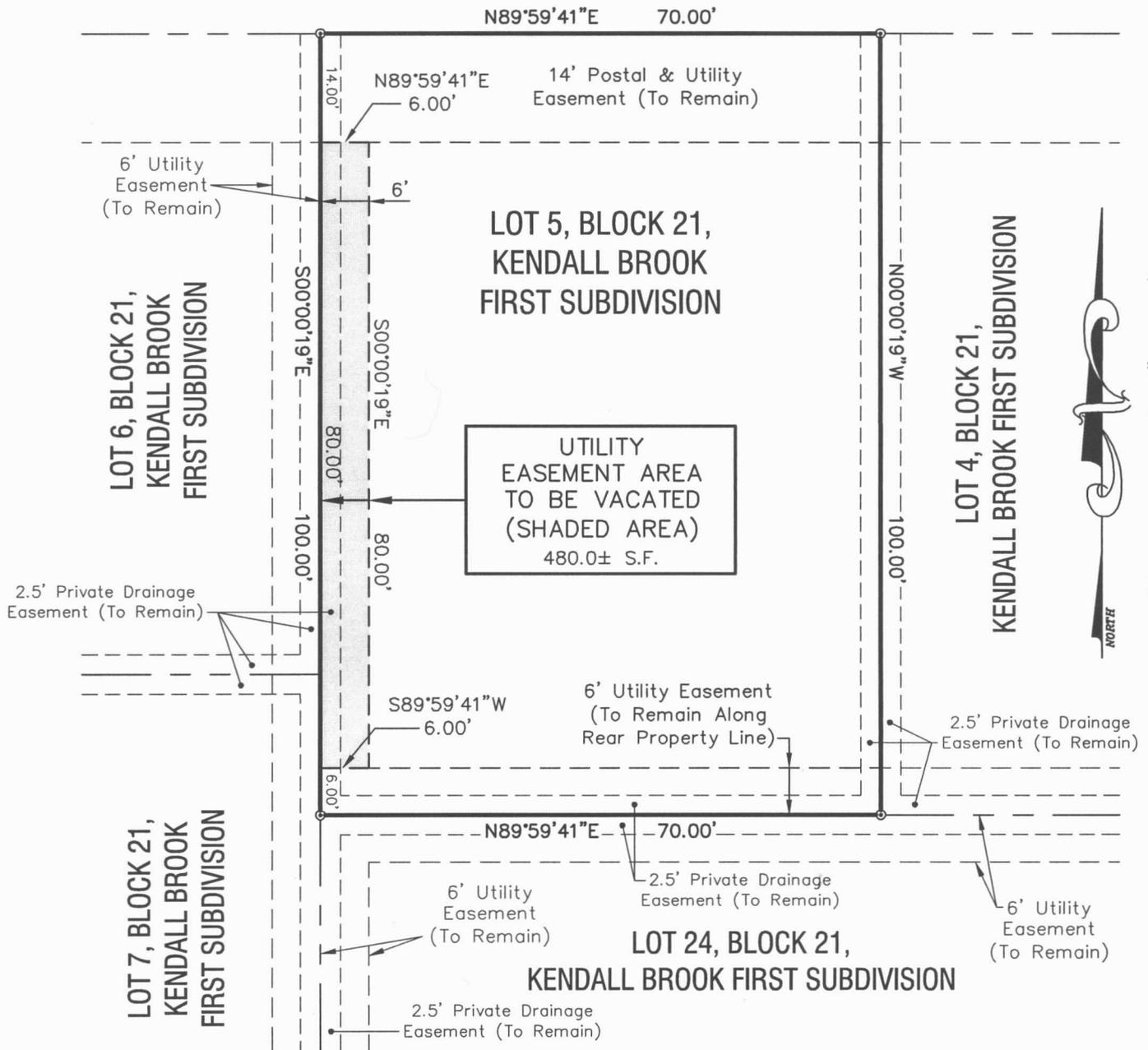
RECOMMENDATION

Staff recommends, subject to any further information that may be presented at the public hearing, that City Council adopt the ordinance on first reading.

EXHIBIT MAP DEPICTING THE PROPOSED EASEMENT VACATION AREA BEING A PORTION OF LOT 5, BLOCK 21, KENDALL BROOK FIRST SUBDIVISION TO THE CITY OF LOVELAND, COUNTY OF LARIMER, STATE OF COLORADO

TENNESSEE STREET

(50 Public Right-of-Way)

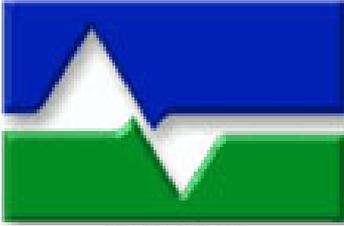


PROPERTY DESCRIPTION FOR UTILITY EASEMENT VACATION:

That portion of Lot 5, Block 21, KENDALL BROOK FIRST SUBDIVISION to the City of Loveland, County of Larimer, State of Colorado being more particularly described as follows:

The Westerly Six (6) feet of said Lot 5, Block 21, KENDALL BROOK FIRST SUBDIVISION, Excepting Therefrom the Northerly Fourteen (14) Feet and the Southerly Six (6) Feet thereof.

Containing 480.0 square feet, more or less, and being subject to all existing easements and/or rights-of-way now existing or of record.



CITY OF LOVELAND

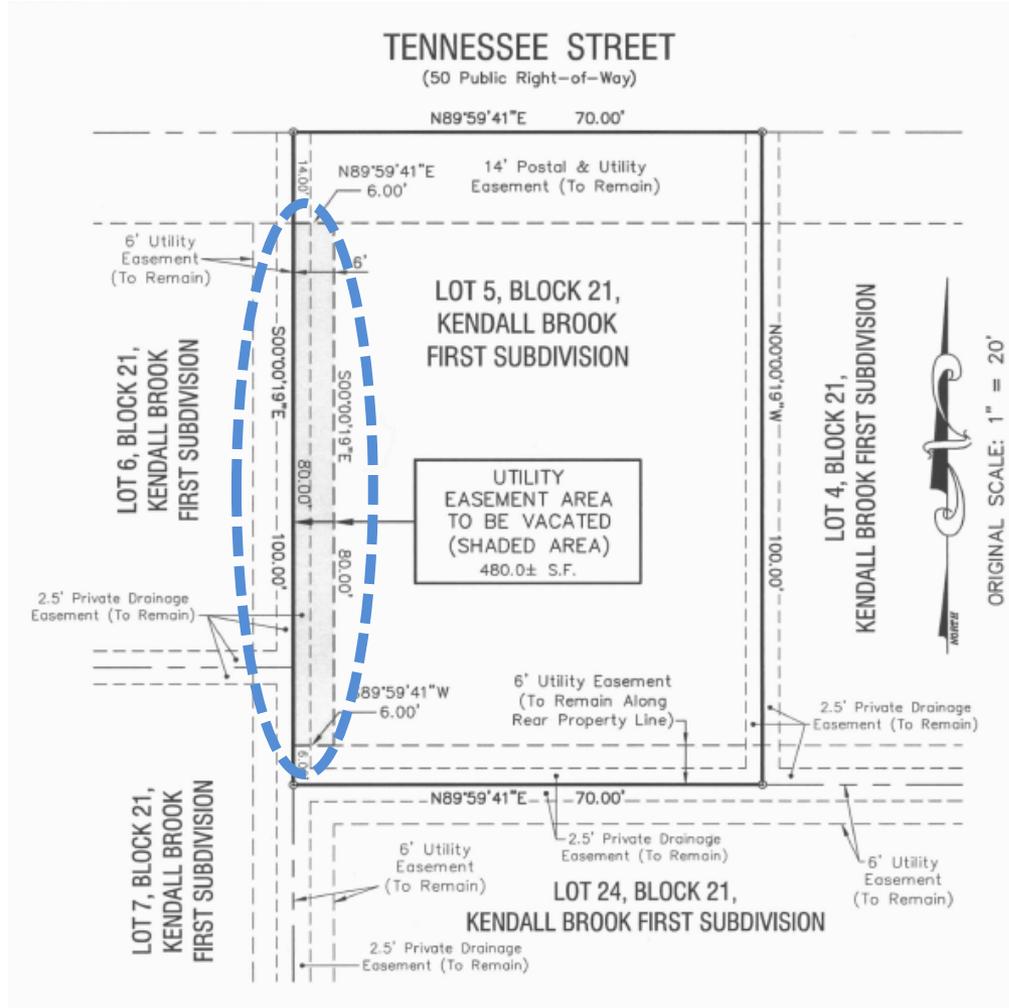


Exhibit C



CITY OF LOVELAND
 DEVELOPMENT SERVICES DEPARTMENT
 Civic Center • 500 East 3rd Street • Loveland, Colorado 80537
 (970) 962-2346 • FAX (970) 962-2945 • TDD (970) 962-2620

AGENDA ITEM: 3
MEETING DATE: 6/4/2013
TO: City Council
FROM: Greg George, Development Services Director
PRESENTER: Bob Paulsen, Current Planning Manager

TITLE:

An Ordinance Amending Sections 18.05.030 and 18.05.060 of the Loveland Municipal Code to Establish Mailed Notification Distances for Neighborhood Meeting and Public Hearings Associated with Oil and Gas Permit Applications under Chapters 18.77 and 18.78

RECOMMENDED CITY COUNCIL ACTION:

Move to adopt the ordinance on second reading.

OPTIONS:

1. Adopt the action as recommended
2. Deny the action
3. Adopt a modified action (specify in the motion)
4. Refer back to staff for further development and consideration
5. Adopt a motion continuing the item to a future Council meeting

DESCRIPTION:

This item was approved unanimously by the City Council on May 21, 2013 as a public hearing matter. The ordinance establishes mailed notification distances for oil and gas permit applications.

With the City's recent adoption of oil and gas regulations, it is necessary to establish mailed notification distances for neighborhood meetings and public hearings that are required as part of the oil and gas permitting process. Mailed notices are provided by applicants to all property owners within the specified distance at least 15 days in advance of required neighborhood meetings and public hearings.

As specified in the ordinance, the recommended distance for mailed notice is 2,200 feet as measured from the boundary of property on which the oil and gas use will occur. This distance was derived by starting from a baseline distance of 1,200 feet (a notice distance that applies to several other types of applications in the Municipal Code) and adding 1,000 feet to account for the maximum setback distance that oil or gas operations require for certain buildings and outdoor uses. The purpose of the distance is to ensure that property owners that are potentially impacted by the surface activities associated with oil and gas development are notified.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible
-

SUMMARY:

The proposed mailed notification distance of 2,200 feet is based on a recommendation from the city's *ad hoc* Title 18 Committee. This recommendation was forwarded to the Planning Commission with support from the Development Services Department staff.

At the April 22, 2013 public hearing, the Planning Commission voted unanimously to recommend that the City Council approve the amendment to Chapter 18.05 of the Municipal Code as recommended. The Planning Commission did not receive any written comments on this matter from the public, nor was anyone in attendance at the Planning Commission public hearing to voice an opinion on the amendment.

At the May 21st City Council hearing, questions arose as to the accuracy of one of the presentation slides that illustrated the 2,200 foot notification distance. A corrected map has been added as Exhibit 3.

REVIEWED BY CITY MANAGER:


LIST OF ATTACHMENTS:

Ordinance
Text Amendment highlighting changes
Staff Memorandum
Corrected Notification Distance Map

FIRST READING	<u>May 21, 2013</u>
SECOND READING	<u>June 4, 2013</u>

ORDINANCE NO. 5771

AN ORDINANCE AMENDING SECTIONS 18.05.030 AND 18.05.060 OF THE LOVELAND MUNICIPAL CODE TO ESTABLISH MAILED NOTIFICATION DISTANCES FOR NEIGHBORHOOD MEETINGS AND PUBLIC HEARINGS ASSOCIATED WITH OIL AND GAS PERMIT APPLICATIONS UNDER CHAPTERS 18.77 AND 18.78

WHEREAS, City Council adopted Ordinance #5753 on March 19, 2013, adding Chapters 18.77 and 18.78 to the Title 18 of the Loveland Municipal Code, establishing regulations pertaining to and requiring a permit for oil and gas operations within the City of Loveland; and

WHEREAS, City Council desires to amend Sections 18.05.040 and 18.05.060 of Chapter 18.05 of the Loveland Municipal Code to establish mailed notification distances for required neighborhood meetings and public hearings associated with oil and gas permit applications and make other clarifying changes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That Section 18.05.030 of the Loveland Municipal Code is hereby amended to read as follows:

18.05.030 Mailed Notice for Neighborhood Meetings.

A. **Deadline for Mailing.** At least fifteen (15) days prior to a neighborhood meeting, the applicant shall, by first class mail, send written notice to all property owners on the certified list required in Section 18.05.030.C(1), at the address listed for each owner. An affidavit of the applicant's compliance with the mailed notice requirements shall be provided to the City prior to the neighborhood meeting for which the notice was given and shall satisfy the requirements of Section 18.05.120

B. **Content.** The written (mailed) notice for neighborhood meetings shall include the following:

1. Time, date, and location of the meeting.
2. The application(s) to be considered.
3. Project name.
4. Applicant's name.
5. Vicinity map identifying the site within the neighborhood context.
6. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks

and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.

7. Description of the proposal for the subject property, including existing and proposed zoning, if applicable.
8. Primary contact (applicant or applicant’s consultant) information, including name of individual, name of company, phone number and e-mail address.
9. Secondary contact (City of Loveland Current Planning Division) information, including the name, phone number and email address of the reviewing planner.

C. Requirements for Mailing.

1. Ownership List. A list, certified by the applicant, of the names and addresses of all surface owners of record of all properties that fall within the distances provided in Table 18.05-1 and Sections 18.05.030.C (3) through (6), shall be submitted to the City’s Current Planning Division, using the names and addresses that appear on the latest records of the Larimer County Assessor. This list shall be current to within sixty (60) days prior to the mailing.
2. Area of Notification. For all applications requiring written (mailed) public notice, the distances specified in Table 18.05-1 Mailed Notice Distance Requirements, shall be used to determine the area to which such notice shall be given, except as provided in Sections 18.05.030.C (3) through (6). All properties that fall wholly or partially within the stated distance, as measured from the perimeter of the subject property, shall be included.

Table 18.05-1 MAILED NOTICE DISTANCE REQUIREMENTS FOR NEIGHBORHOOD MEETINGS			
Application Type	Application Size		
	Under 5 acres	5 – 50 acres	Greater than 50 acres
Oil & Gas Permit -per Chapter 18.77	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)
Annexation, Zoning	1,200 ft.	1,200 ft.	1,200 ft.
Comprehensive Plan Amendment	See Section 6.0 of the Loveland Comprehensive Master Plan		
Major Home Occupation	All members of the neighborhood <i>as defined in Section 18.48.020</i>		
PUD General Development Plan	1,200 ft.	1,200 ft.	1,200 ft.
PUD Preliminary Development Plan	600 ft.	900 ft.	1,200 ft.
Rezoning	600 ft.	900 ft.	1,200 ft.

Special Review	600 ft.	900 ft.	1,200 ft.
Variance	200 ft.	200 ft.	200 ft.

3. Public rights-of-way and streets. Notification distance shall be calculated inclusive of public rights-of-way and public streets.
4. Lake, golf course and park front notification.
 - a. If the subject property fronts a lake, public or private golf course or public park, written notice shall also be mailed to owners of other properties that front the lake, public or private golf course or public park that are within two times the distances specified in Table 18.05-1. For the purposes of this provision, lake front properties include those that are separated from the lake up to 50 feet by undevelopable property such as open space tracts and outlots.
 - b. The area of required notification may be expanded to include up to all properties fronting the lake, public or private golf course or public park if the Current Planning Manager reasonably anticipates that the proposal may impact the use, enjoyment or viewshed of other fronting properties beyond the distance specified in (a) above. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.
5. Reduction in Notification Area. All notification distances in Table 18.05-1 shall be reduced by fifty (50) percent, except for oil and gas permits and variances, for infill projects that are less than five (5) acres in size. For the purposes of this section, a project shall be considered an infill project if it is adjacent, on at least eighty (80) percent of its boundary, to properties within the existing city limits of the City of Loveland.
6. Expansion of Notification Area. The area of required notification may be expanded up to twice the distance specified in Table 18.05-1 if the Current Planning Manager reasonably anticipates interest or concern regarding the application from community members beyond the required distance. The reduction in notification area as described in subsection 5. above shall not apply when there is an expansion of the notification area. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.

Section 2. That Section 18.05.060 of the Loveland Municipal Code is hereby amended to read as follows:

18.05.060 Mailed Notice for Public Hearings.

A. **Deadline for Mailing.** At least fifteen (15) days prior to a public hearing, the applicant shall, by first class mail, send written notice to all property owners on the certified list required in Section 18.05.060.C(1), at the address listed for each owner. An affidavit of the applicant’s compliance with the mailed notice requirements shall be provided to the City prior to the public hearing for which the notice was given and shall satisfy the requirements of Section 18.05.120.

B. **Content.** The mailed notice for public hearings shall include the following:

1. Time, date, and location of the hearing.
2. The application(s) to be considered.
3. Project name.
4. Applicant’s name.
5. Vicinity map identifying the site within the neighborhood context.
6. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.
7. Description of the proposal for the subject property.
8. Primary contact (applicant or applicant’s consultant) information, including name of individual; name of company; phone number; e-mail address.
9. Secondary contact (City of Loveland Current Planning Division) information, including the name, phone number and email address of the reviewing planner.
10. A statement that interested parties may appear and speak on the matter at the public hearing and/or file written comments with the City’s Current Planning Division.

C. Requirements for Mailing.

1. Ownership List. A list, certified by the applicant, of the names and addresses of all surface owners of record of all properties that fall within the distances provided in Table 18.05-2 and Sections 18.05.060.C (3) through (7), shall be submitted to the City’s Current Planning Division, using the names and addresses that appear on the latest records of the Larimer County Assessor. This list shall be current to within sixty (60) days prior to the mailing.
2. Area of Notification. For all applications requiring written (mailed) public notice, the distances specified in Table 18.05-2 Mailed Notice Distance Requirements, shall be used to determine the area to which such notice shall be given, except as provided in Sections 18.05.060.C (3) through (7). All properties that fall wholly or partially within the stated distance, as measured from the perimeter of the subject property, shall be included.

Table 18.05-2 MAILED NOTICE DISTANCE REQUIREMENTS FOR PUBLIC HEARINGS			
Application Type	Application Size		
	Under 5 acres	5 – 50 acres	Greater than 50 acres
Oil & Gas Permit -per Chapter 18.77	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)
Annexation, Zoning	1,200 ft.	1,200 ft.	1,200 ft.

Be District Developments*	300 ft.	300 ft.	300 ft.
Comprehensive Plan Amendment	See Section 6.0 of the Loveland Comprehensive Master Plan		
Height Exception	300 ft.	300 ft.	300 ft.
PUD General Development Plan	1,200 ft.	1,200 ft.	1,200 ft.
PUD Preliminary Development Plan	600 ft.	900 ft.	1,200 ft.
Rezoning	600 ft.	900 ft.	1,200 ft.

* For Be District developments requiring approval of Planning Commission as indicated in 18.24.050

3. Public rights-of-way and streets. Notification distance shall be calculated inclusive of public rights-of-way and public streets.
4. Lake, golf course and park front notification.
 - a. If the subject property fronts a lake, public or private golf course or public park, written notice shall also be mailed to owners of other properties that front the lake, public or private golf course or public park that are within two times the distances specified in Table 18.05-2. For the purposes of this provision, lake front properties include those that are separated from the lake up to 50 feet by undevelopable property such as open space tracts and outlots.
 - b. The area of required notification may be expanded to include up to all properties fronting the lake, public or private golf course or public park if the Current Planning Manager reasonably anticipates that the proposal may impact the use, enjoyment or viewshed of other fronting properties beyond the distance specified in (a) above. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.
5. Reduction in Notification Area. All notification distances in Table 18.05-2 shall be reduced by fifty (50) percent, except for oil and gas permits and variances, for infill projects that are less than five (5) acres or less in size. For the purposes of this section, a project shall be considered an infill project if it is adjacent, on at least eighty (80) percent of its boundary, to properties within the existing city limits of the City of Loveland.
6. Expansion of Notification Area. The area of required notification may be expanded up to twice the distance specified in Table 18.05-2 if the Current Planning Manager reasonably anticipates interest or concern regarding the application from community members beyond the required distance. The reduction in notification area as described in subsection 5. above shall not apply when there is an expansion of the notification area. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the public hearing.

- 7. Mineral Estate Owners. The notification of mineral estate owners of the property which is the subject of a public hearing shall be given by the applicant at least thirty (30) days prior to the public hearing in accordance with the requirements of the Colorado Notification of Surface Development Act (C.R.S. § 24-65.5-101 et seq.)(the “act”). An affidavit of the applicant’s compliance with such requirements shall be provided to the City prior to the public hearing for which the notice was given and shall meet the provisions of the act.

Section 3. That as provided in City Charter Section 4-9(a)(7), this Ordinance shall be published by title only by the City Clerk after adoption on second reading unless the Ordinance has been amended since first reading in which case the Ordinance shall be published in full or the amendments shall be published in full. This Ordinance shall be in full force and effect ten days after its final publication, as provided in City Charter Section 4-8(b).

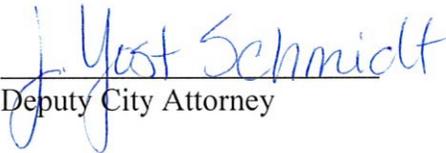
ADOPTED this 4th day of June, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:



Deputy City Attorney

**PROPOSED AMENDMENT TO CHAPTER 18.05,
PUBLIC NOTICE REQUIREMENTS:**

Below is the entirety of Chapter 18.05 of Title 18 (the zoning code) of the Municipal Code, with the inclusion of text adjustments relating to the mailed notice requirements for Oil and Gas permit applications. Other minor, clarifying adjustments are also provided.

- Text proposed to be added is shown in underlined, red font
- Text proposed to be deleted is shown in ~~red font with strike-through~~
- All text adjustments are also highlighted in yellow

Chapter 18.05

PUBLIC NOTICE REQUIREMENTS

Sections:

- 18.05.010 Purpose.**
- 18.05.020 Neighborhood Meetings.**
- 18.05.030 Mailed Notice for Neighborhood Meetings.**
- 18.05.040 Posted Notice for Neighborhood Meetings.**
- 18.05.050 Public Hearings.**
- 18.05.060 Mailed Notice for Public Hearings.**
- 18.05.070 Posted Notice for Public Hearings.**
- 18.05.080 Published Notice for Public Hearings.**
- 18.05.090 Staff Decisions.**
- 18.05.100 Computation of Time.**
- 18.05.110 Notice Cost.**
- 18.05.120 Applicant’s Certification.**
- 18.05.130 Failure to Provide Notice, Defective Notice.**
- 18.05.140 Continuation of Hearings.**
- 18.05.150 Notice for Appeals.**

18.05.010 Purpose.

This Chapter provides standards for public notice for neighborhood meetings, public hearings, and staff decisions as specified within Title 18.

18.05.020 Neighborhood Meetings.

Mailed and posted public notice is required for neighborhood meetings. It is the applicant’s responsibility to mail and post public notice for neighborhood meetings.

18.05.030 Mailed Notice for Neighborhood Meetings.

A. **Deadline for Mailing.** At least fifteen (15) days prior to a neighborhood meeting, the applicant shall, by first class mail, send written notice to all property owners on the certified list required in Section 18.05.030.C(1), at the address listed for each owner. An affidavit of the applicant's compliance with the mailed notice requirements shall be provided to the City prior to the neighborhood meeting for which the notice was given and shall satisfy the requirements of Section 18.05.120

B. **Content.** The written (mailed) notice for neighborhood meetings shall include the following:

1. Time, date, and location of the meeting.
2. The application(s) to be considered.
3. Project name.
4. Applicant's name.
5. Vicinity map identifying the site within the neighborhood context.
6. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.
7. Description of the proposal for the subject property, including existing and proposed zoning, if applicable.
8. Primary contact (applicant or applicant's consultant) information, including name of individual, name of company, phone number and e-mail address.
9. Secondary contact (City of Loveland Current Planning Division) information, including the name, phone number and email address of the reviewing planner.

C. **Requirements for Mailing.**

1. **Ownership List.** A list, certified by the applicant, of the names and addresses of all surface owners of record of all properties that fall within the distances provided in Table 18.05-1 and Sections 18.05.030.C (3) through (6), shall be submitted to the City's Current Planning Division, using the names and addresses that appear on the latest records of the Larimer County Assessor. This list shall be current to within sixty (60) days prior to the mailing.
2. **Area of Notification.** For all applications requiring written (mailed) public notice, the distances specified in Table 18.05-1 Mailed Notice Distance Requirements, shall be used to determine the area to which such notice shall be given, except as provided in Sections 18.05.030.C (3) through (6). All properties that fall wholly or partially within the stated distance, as measured from the perimeter of the subject property, shall be included.

Table 18.05-1 MAILED NOTICE DISTANCE REQUIREMENTS FOR NEIGHBORHOOD MEETINGS			
Application Type	Application Size		
	Under 5 acres	5 – 50 acres	Greater than 50 acres
Oil & Gas Permit -per Chapter 18.77	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)
Annexation, Zoning	1,200 ft.	1,200 ft.	1,200 ft.
Comprehensive Plan Amendment	See Section 6.0 of the Loveland Comprehensive Master Plan		
Major Home Occupation	All members of the neighborhood <i>as defined in Section 18.48.020</i>		
PUD General Development Plan	1,200 ft.	1,200 ft.	1,200 ft.
PUD Preliminary Development Plan	600 ft.	900 ft.	1,200 ft.
Rezoning	600 ft.	900 ft.	1,200 ft.
Special Review	600 ft.	900 ft.	1,200 ft.
Variance	200 ft.	200 ft.	200 ft.

3. Public rights-of-way and streets. Notification distance shall be calculated inclusive of public rights-of-way and public streets.
4. Lake, golf course and park front notification.
 - a. If the subject property fronts a lake, public or private golf course or public park, written notice shall also be mailed to owners of other properties that front the lake, public or private golf course or public park that are within two times the distances specified in Table 18.05-1. For the purposes of this provision, lake front properties include those that are separated from the lake up to 50 feet by undevelopable property such as open space tracts and outlots.
 - b. The area of required notification may be expanded to include up to all properties fronting the lake, public or private golf course or public park if the Current Planning Manager reasonably anticipates that the proposal may impact the use, enjoyment or viewshed of other fronting properties beyond the distance specified in (a) above. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.

5. Reduction in Notification Area. All notification distances in Table 18.05-1 shall be reduced by fifty (50) percent, **but shall not be less than three hundred (300) feet, except for oil and gas permits and variances, for infill projects that are less than twenty (20) five (5) acres or less in size.** For the purposes of this section, a project shall be considered an infill project if it is adjacent, on at least eighty (80) percent of its boundary, to properties within the existing city limits of the City of Loveland.
6. Expansion of Notification Area. The area of required notification may be expanded up to twice the distance specified in Table 18.05-1 if the Current Planning Manager reasonably anticipates interest or concern regarding the application from community members beyond the required distance. **The reduction in notification area as described in subsection 5. above shall not apply when there is an expansion of the notification area.** The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.

18.05.040 Posted Notice for Neighborhood Meetings.

A. Deadline for Posting. At least fifteen (15) days prior to a neighborhood meeting, the applicant shall post a notice on the subject property.

B. Content. The posted notice for neighborhood meetings shall include the following:

1. Time, date, and location of the meeting.
2. The application(s) to be considered.
3. Project name.
4. City of Loveland Current Planning Division contact information, including the division phone number.

C. Requirements for Posting.

1. It shall be the applicant's responsibility to have the sign(s) created by a sign company.
2. The posted notice shall be readily visible from each public street or highway adjoining the property. It is the applicant's responsibility to post the sign(s) on the site and ensure that the sign(s) remain in place during the full 15-day period leading up to the neighborhood meeting. The Current Planning Division shall provide the applicant with specifications for the posting location of the required signs.
3. An affidavit of the applicant's compliance with the posted notice requirements shall be provided to the City prior to the neighborhood meeting for which the notice was given and shall satisfy the requirements of Section 18.05.120.

18.05.050 Public Hearings.

Mailed, posted and published public notice is required for public hearings. It is the applicant's responsibility to mail and post public notice for public hearings; the City is responsible to publish notice for public hearings.

18.05.060 Mailed Notice for Public Hearings.

A. **Deadline for Mailing.** At least fifteen (15) days prior to a public hearing, the applicant shall, by first class mail, send written notice to all property owners on the certified list required in Section 18.05.060.C(1), at the address listed for each owner. An affidavit of the applicant's compliance with the mailed notice requirements shall be provided to the City prior to the public hearing for which the notice was given and shall satisfy the requirements of Section 18.05.120.

B. **Content.** The mailed notice for public hearings shall include the following:

1. Time, date, and location of the hearing.
2. The application(s) to be considered.
3. Project name.
4. Applicant's name.
5. Vicinity map identifying the site within the neighborhood context.
6. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.
7. Description of the proposal for the subject property.
8. Primary contact (applicant or applicant's consultant) information, including name of individual; name of company; phone number; e-mail address.
9. Secondary contact (City of Loveland Current Planning Division) information, including the name, phone number and email address of the reviewing planner.
10. A statement that interested parties may appear and speak on the matter at the public hearing and/or file written comments with the City's Current Planning Division.

C. **Requirements for Mailing.**

1. **Ownership List.** A list, certified by the applicant, of the names and addresses of all surface owners of record of all properties that fall within the distances provided in Table 18.05-2 and Sections 18.05.060.C (3) through (7), shall be submitted to the City's Current Planning Division, using the names and addresses that appear on the latest records of the Larimer County Assessor. This list shall be current to within sixty (60) days prior to the mailing.
2. **Area of Notification.** For all applications requiring written (mailed) public notice, the distances specified in Table 18.05-2 Mailed Notice Distance Requirements, shall be used to determine the area to which such notice shall be given, except as provided in Sections 18.05.060.C (3) through (7). All properties that fall wholly or partially within the stated distance, as measured from the perimeter of the subject property, shall be included.

Table 18.05-2 MAILED NOTICE DISTANCE REQUIREMENTS FOR PUBLIC HEARINGS

Application Type	Application Size		
	Under 5 acres	5 – 50 acres	Greater than 50 acres
Oil & Gas Permit -per Chapter 18.77	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)	2,200 ft. (measured from boundary of property on which surface use will occur under permit)
Annexation, Zoning	1,200 ft.	1,200 ft.	1,200 ft.
Be District Developments*	300 ft.	300 ft.	300 ft.
Comprehensive Plan Amendment	See Section 6.0 of the Loveland Comprehensive Master Plan		
Height Exception	300 ft.	300 ft.	300 ft.
PUD General Development Plan	1,200 ft.	1,200 ft.	1,200 ft.
PUD Preliminary Development Plan	600 ft.	900 ft.	1,200 ft.
Rezoning	600 ft.	900 ft.	1,200 ft.

* For Be District developments requiring approval of Planning Commission as indicated in 18.24.050

3. Public rights-of-way and streets. Notification distance shall be calculated inclusive of public rights-of-way and public streets.
4. Lake, golf course and park front notification.
 - a. If the subject property fronts a lake, public or private golf course or public park, written notice shall also be mailed to owners of other properties that front the lake, public or private golf course or public park that are within two times the distances specified in Table 18.05-2. For the purposes of this provision, lake front properties include those that are separated from the lake up to 50 feet by undevelopable property such as open space tracts and outlots.
 - b. The area of required notification may be expanded to include up to all properties fronting the lake, public or private golf course or public park if the Current Planning Manager reasonably anticipates that the proposal may impact the use, enjoyment or viewshed of other fronting properties beyond the

distance specified in (a) above. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.

5. Reduction in Notification Area. All notification distances in Table 18.05-2 shall be reduced by fifty (50) percent, **but shall not be less than three hundred (300) feet, except for oil and gas permits and variances, for infill projects that are twenty (20) less than five (5) acres or less in size.** For the purposes of this section, a project shall be considered an infill project if it is adjacent, on at least eighty (80) percent of its boundary, to properties within the existing city limits of the City of Loveland.
6. Expansion of Notification Area. The area of required notification may be expanded up to twice the distance specified in Table 18.05-2 if the Current Planning Manager reasonably anticipates interest or concern regarding the application from community members beyond the required distance. **The reduction in notification area as described in subsection 5. above shall not apply when there is an expansion of the notification area.** The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the public hearing.
7. Mineral Estate Owners. The notification of mineral estate owners of the property which is the subject of a public hearing shall be given by the applicant at least thirty (30) days prior to the public hearing in accordance with the requirements of the Colorado Notification of Surface Development Act (C.R.S. § 24-65.5-101 et seq.)(the “act”). An affidavit of the applicant’s compliance with such requirements shall be provided to the City prior to the public hearing for which the notice was given and shall meet the provisions of the act.

18.05.070 Posted Notice for Public Hearings.

A. Deadline for Posting. At least fifteen (15) days prior to a public hearing, the applicant shall post a notice on the subject property.

B. Content. The posted notice for public hearings shall include the following:

1. Time, date, and location of the hearing.
2. The application(s) to be considered.
3. Project name.
4. City of Loveland Current Planning Division contact information, including the division phone number.

C. Requirements for Posting.

1. It shall be the applicant’s responsibility to have the sign(s) created by a sign company.
2. The posted notice shall be readily visible from each public street or highway adjoining the property. It is the applicant’s responsibility to post the sign(s) on the site and ensure that the sign(s) remain in place during the full 15-day period leading up to

the public hearing. The Current Planning Division shall provide the applicant specifications for the location of signs required for the site.

3. An affidavit of the applicant’s compliance with the posted notice requirements shall be provided to the City prior to the public hearing for which the notice was given and shall satisfy the requirements of Section 18.05.120.

18.05.080 Published Notice for Public Hearings.

A. **Deadline for Publishing.** Notice shall be published by the current planning division at least fifteen (15) days prior to a public hearing.

B. **Content.** The published notice for public hearings shall include the following:

1. Time, date, and location of the hearing.
2. The application(s) to be considered.
3. Project name.
4. Applicant’s name.
5. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.
6. Description of the proposal for the subject property.
7. City of Loveland Current Planning Division contact information, including the division phone number.
8. A statement that interested parties may appear and speak on the matter at the public hearing and/or file written comments with the City’s Current Planning Division.

C. **Requirements for Publishing.** Notice of the public hearing shall be published one (1) time in a newspaper of general circulation.

18.05.090 Staff Decisions.

A. **Required Notice.** Mailed or posted public notice is required for certain staff decisions relating to special review and major home occupation applications. Refer to Code Section 18.40 for requirements applicable to special review application and Section 18.48.020 for requirements applicable to major home occupation application.

B. **Optional Notice.** Notice of staff decisions authorized under this Title but not otherwise subject to specific notice requirements may be required by the Current Planning Manager when the following circumstances exist:

1. A discretionary decision has been made by staff concerning the application of one or more regulations contained in this Title; and

2. The decision may impact the use or enjoyment of property within the vicinity of the subject site; and
3. There is reason to believe that there may be parties of interest residing or owning property within the vicinity of the affected property.

C. Type and Distance of Optional Notice. Notice type(s) and distance for optional notice shall be at the discretion of the Current Planning Manager. In no instance shall mailed notice exceed 300 feet from the boundary of the subject property.

18.05.100 Computation of Time.

In computing any period of time prescribed for the purpose of giving notice under the provisions of this Chapter, the day of the publication, mailing, or posting shall be included. The day of the meeting or hearing shall not be counted. Saturdays, Sundays, and legal holidays shall be counted as any other day.

18.05.110 Notice Cost.

All costs for providing public notice as required by this Chapter shall be the responsibility of the applicant except for Published Notice.

18.05.120 Applicant's Certification.

Prior to the neighborhood meeting or public hearing, the applicant shall provide the Current Planning Division with an affidavit certifying that the requirements as to the applicant's responsibility for the applicable forms of notice under this Chapter have been met. The Current Planning Division shall provide a sample of the certification, which shall address all applicable forms of public notice required of the applicant in Sections 18.05.020 and 18.05.050.

18.05.130 Failure to Provide Notice, Defective Notice.

Failure to provide the required affidavit, or evidence of a defective mailing list prior to a neighborhood meeting or public hearing, shall result in termination of the review process until proper notice is provided, meeting all applicable provisions herein.

18.05.140 Continuation of Hearings and Neighborhood Meetings.

A hearing or neighborhood meeting for which proper notice was given may be continued to a later date without again complying with the public notice requirements of this Chapter, provided that the date, time, and location of the continued hearing or meeting is announced to the public at the time of continuance.

18.05.150 Notice for Appeals.

Any final decision that is appealed under this chapter is subject to the same notice standards as the original notice.

Section 2. That Chapter 16.18 of the Loveland Municipal Code is hereby amended and restated in its entirety to read as follows:



**Development Services
Current Planning**

500 East Third Street, Suite 310 • Loveland, CO 80537
(970) 962-2523 • Fax (970) 962-2945 • TDD (970) 962-2620
www.cityofloveland.org

MEMORANDUM

TO: City Council

FROM: Bob Paulsen, Current Planning Manager

DATE: May 21, 2013

SUBJECT: **Municipal Code Text Amendment Concerning Mailed Notice Distance for Oil & Gas Permit Applications**

I. EXHIBITS

- A. Planning Commission packet
- B. Planning Commission Minutes from April 22, 2013
- C. Presentation slides

II. AMENDMENT SUMMARY

This text amendment to Chapter 18.05 (Public Notice Requirements) of the zoning code would establish the mailed notification distance for required neighborhood meetings and public hearings associated with oil and gas permit applications. The distance would be 2,200 feet as measured from the boundary of property on which the oil and gas surface use occurs.

III. KEY ISSUES

Staff is not aware of any issues or objections associated with the text amendment.

IV. BACKGROUND

Under the provisions of the Municipal Code, certain types of zoning, land use, and subdivision applications require neighborhood meetings and public hearings. When neighborhood meetings or public hearings are required, there is a corresponding

EXHIBIT 2

requirement for public notice, providing those who may be affected by the application with the opportunity to learn about the project and to provide input into the decision making process. Public notice includes published notice in the local newspaper, posted signs on the application site, and mailed notice (provided by the applicant) to property owners within a specified notice distance. The content requirements for mailed notice are specified in the Municipal Code.

On March 19, 2013, the City Council adopted Ordinance #5753, adding Chapters 18.77 and 18.78 to the Municipal Code, which established regulations for oil and gas development within the Loveland municipal limits. The adopted regulations require that neighborhood meetings be held as part of the review and approval process for all new oil and gas development; the regulations also require a public hearing by the Planning Commission for applications that undergo the “standard” review and approval process.

Now that the oil and gas regulations have become effective, the public notice provisions of the Municipal Code require amendment to set forth distances for mailed notification associated with oil and gas development applications.

V. TITLE 18 COMMITTEE REVIEW

On Thursday, April 11, 2013, the City's *ad hoc* Title 18 Committee evaluated the proposed amendment to Chapter 18.05 specifying required mailed notification distances for neighborhood meetings and public hearings associated with oil and gas permit applications. After a lengthy discussion, the Committee arrived at a consensus recommendation to set the notification distance at 2,200 feet from the property boundaries on which the oil and gas permit is being requested. A summary of the Committee's rationale for this distance was as follows:

1. Other application types as specified in the zoning code require mailed notice distances of up to 1,200 feet.
2. Surface activities relating to oil and gas operations have the potential to impact other properties at a distance at least equivalent to those application types requiring a 1,200 foot distance.
3. Due to the setback distances that oil and gas operations require from certain building types and outdoor assembly areas (up to 1,000 feet as stipulated by the Municipal Code and state statute), the mailed notice distances for oil and gas operations should be expanded an additional 1,000 feet beyond the 1,200 foot baseline distance; the recommended distance for mailed notice is therefore 2,200 feet from the boundaries of the subject property.

VI. PLANNING COMMISSION

On Thursday, April 22, 2013, the Planning Commission conducted a public hearing to consider amendments to Chapter 18.05 of the zoning code that would establish the mailed notification distance for neighborhood meetings and public hearings associated with oil and gas permit applications. The Planning Commission's deliberations reflected concurrence with the recommendation forwarded by the Title 18 Committee and Development Services staff. Overall, the Commission indicated support for the establishment of a broad notification area that was related to the surface activities associated with oil and gas development. The Commission also agreed that the mailed notification distance should not be reduced when the proposed oil and gas operations were to be located on an "infill site," but indicated that expansion of the mailed notice distance would be acceptable under existing code provisions.

After review and discussion, the Planning Commission voted unanimously to recommend that the City Council approve the establishment of a mailed notice distance of 2,200 feet from the boundaries of the property on which the oil and gas operations would occur.

It is worth noting that the notice for the Planning Commission public hearing was supplemented with emails sent to citizens who had participated in the meetings and hearings addressing the development and adoption of the City's oil and gas regulations. Notwithstanding this supplementary notice, no one from the public attended the meeting nor provided written comments to the Planning Commission.

VII. AMENDMENT

The following is a description of the proposed text changes to Chapter 18.05, Public Notice Requirements. The primary changes are reflected in two tables (18.05-1 and 18.05-2) within the Chapter which identify mailed notice distances for neighborhood meetings and public hearings. In both instances, text has been added to reflect a mailed notice distance of 2,200 feet for oil and gas applications.

Table 18.05-1 Mailed Notice Distance Requirements for Neighborhood Meetings.

New text has been added to indicate that the mailed notification distance for required neighborhood meetings associated with oil and gas permits is 2,200 feet as measured from the property boundaries on which the surface use will occur. The 2,200 foot distance is proposed for projects in all three identified categories relating to project size: under 5 acres; 5-50 acres; and, greater than 50 acres.

The effect of this additional text will require an applicant seeking an oil and gas permit to provide mailed notice to property owners within 2,200 feet of the boundaries of the property on which the oil and gas operations are proposed to occur at least 15 days in advance of any neighborhood meeting. The boundaries of the property would be based

on the lot(s) or tract(s) of land on which the (oil and gas) surface use occurs. The City requires applicants to use the current records of the Larimer County Assessor in determining the ownership for the properties within the notification distance area.

Sub Section 18.05.030.C.5. Reduction in Notification Area.

In relation to neighborhood meetings, the adjusted text would exempt oil and gas applications from qualifying for the 50% reduction in mailed notification area otherwise available to “infill” projects. The added text also excludes variance applications from the “infill” reduction as the notification area for variances is viewed as the minimum necessary to inform affected property owners.

Sub Section 18.05.030.C.6. Expansion of Notification Area.

The added text clarifies that when the Current Planning Manager decides to expand the neighborhood meeting notification area (as provided in this subsection), the area of notice can be expanded up to twice the distance indicated on Table 18.05-1.

Table 18.05-2 Mailed Notice Distance Requirements for Public Hearings.

The new text indicates that the mailed notice distance for required public hearings relating to oil and gas development is 2,200 feet as measured from the property boundaries on which the surface use will occur. This Table has been modified in the same manner as Table 18.05-1 and would have the impact on the mailed notice distance requirements for public hearings that the added text in Table 18.05-1 has on neighborhood meetings.

Sub Section 18.05.060.C.5. Reduction in Notification Area.

The adjusted text parallels the text adjustment provided in 18.05.030.C.5, and exempts oil and gas applications from qualifying for a reduction in mailed notification area from qualifying for the “infill” reduction. The adjustment also excludes variance applications from the “infill” reduction.

Sub Section 18.05.060.C.6. Expansion of Notification Area.

The added text to this sub section parallels the text addition to 18.05.030.C.6, clarifying that the mailed notification area as indicated in Table 18.05-2 can be expanded up to twice the distance for public hearings associated with oil and gas applications.



**Development Services
Current Planning**

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ITEM NO: **1 - Regular Agenda**

PLANNING COMMISSION MEETING: April 22, 2013

TITLE: Amendment to Chapter 18.05 of Title 18 regarding public notice requirements relating to oil and gas applications.

APPLICANT: City of Loveland, Current Planning Division

STAFF CONTACTS: Bob Paulsen, Current Planning Manager
Greg George, Development Services Director

APPLICATION TYPE: Amendments to Title 18 of the Municipal Code

ACTION: Legislative Action: Recommend Amendments to Title 18 for adoption by City Council

STAFF RECOMMENDATION: Subject to additional evidence at the public hearing, City Staff recommends the following motion:

Move to recommend that City Council approve the amendments to Chapter 18.05 of Title 18 as specified in the April 22, 2013 Planning Commission staff report, as amended on the record.

I. ATTACHMENTS

1. Proposed Amendment to Chapter 18.05, Public Notice Requirements

This document includes the recently amended (adopted) version of Chapter 18.05 and indicates in a redline/strike-through format the proposed text amendments to the public notice requirements associated with oil and gas development. The primary text amendments are provided in Tables 18.05-1 and 18.05-2. These tables specify the distance requirements for mailed notices for required neighborhood meetings and for public

hearings associated with various zoning and development applications. The proposed amendments set forth distances applicable to notices for proposed oil and gas permits under Chapter 18.77.

2. Ordinance # 5753, adding Chapters 18.77 and 18.78 to the Municipal Code

This ordinance was adopted on March 19, 2013 and added two chapters to the Municipal Code which regulate oil and gas development. This ordinance is provided for reference; there are no proposed changes to this ordinance or to the chapters 18.77 and 18.78.

II. BACKGROUND

The City Council's March 19th adoption of Ordinance #5753, adding Chapters 18.77 and 18.78 to the Municipal Code, was the culmination of months of research and deliberations addressing the regulation of oil and gas development within Loveland. Now that the oil and gas regulations have been approved, the public notice provisions of the Municipal Code require amendment to set forth notice distances for oil and gas development.

It is also worth noting that Chapter 18.05 has recently been amended. On April 16, 2013, the City Council passed an ordinance (on 2nd reading), which will become effective on April 30, 2013, amending the public notice requirements contained both the zoning code and the subdivision code. This amendment was designed to clarify a number of longstanding issues with public notice procedures. Because the provisions of Chapter 18.05 have just been approved and are not yet effective, the Municipal Code as available on the City's web site does not reflect this change.

III. TITLE 18 COMMITTEE REVIEW & RECOMMENDATION

On Thursday, April 11, 2013, the City's *ad hoc* Title 18 Committee evaluated the proposed amendment to Chapter 18.05 to specify required mailed notification distances for neighborhood meetings and public hearings associated with oil and gas permit applications. After a lengthy discussion, the Committee arrived at a consensus recommendation to set the notification distance at 2,200 feet from the property boundaries on which the oil and gas permit is being requested. A summary of the Committee's rationale for this distance was as follows:

1. Other application types as specified in the zoning code require mailed notice distances of up to 1,200 feet
2. Oil and gas operations have the potential to impact other properties at a distance at least equivalent to those application types requiring a 1,200 foot distance
3. Due to the setback distances that oil and gas operations require from buildings and outdoor assemble areas (up to 1,000 feet as stipulated by the Municipal Code and state statute), the mailed notice distances for oil and gas operations should be expanded an additional 1,000 feet beyond the 1,200 foot baseline distance

IV. STAFF REVIEW AND ANALYSIS

Under the provisions of the Municipal Code, certain types of zoning, land use, and subdivision applications require neighborhood meetings and public hearings. When neighborhood meetings or public hearings are required, there is a corresponding requirement for public notice, providing those who may be affected by the application the opportunity to learn about the project and to provide input into the decision making process. Public notice includes published notice in the local newspaper, posted signs on the application site, and mailed notice (provided by the applicant) to property owners within a specified notice distance. The content requirements for mailed notice are specified in the Municipal Code.

When Ordinance # 5753 was approved by City Council (establishing the regulations for oil and gas operations) notice of neighborhood meetings and public hearings were required in accordance with Chapter 18.05. Consequently, this is a follow-up effort to specify mailed notice distance applicable to neighborhood meetings and public hearings in connection with an application for an oil and gas permit.

The Title 18 Committee determined that the existing maximum mailed notice distance of 1,200 feet as specified for other application types would be an appropriate starting point or baseline. Because oil and gas operations are anticipated to concentrate in more rural areas of the City, where parcels are larger and distances between development is greater, a wide notification area makes sense. Another factor adding rationale for a wide notice area identified by the Title 18 Committee is the established setback requirements from oil and gas facilities. Chapter 18.78 specifies that occupied buildings shall be setback 500 feet from an existing or abandoned oil and gas facility; buildings with an occupancy rating for 50 persons or more and “outdoor assembly areas” shall be setback a minimum of 1000 feet from an existing or abandoned “oil and gas well.” Given this latter provision, the Title 18 Committee recognized that an oil or gas well near the edge of a property would have the effect of precluding the development of certain uses within 1000 feet of the well site. Therefore, the Committee determined that the baseline maximum notification distance as specified in Chapter 18.05 of 1,200 feet should be expanded an additional 1000 feet and applied to oil and gas permit applications.

The Development Services Department has concluded that the Title 18 Committee’s analysis was sound and its recommendation is supportable; consequently, staff is recommending that the mailed notice distance for oil and gas permit applications is 2,200 feet from the boundary of the property on which the surface use will occur.

V. DESCRIPTION OF THE PROPOSED CHANGES TO CHAPTER 18.05

The following is a description of amendments to Chapter 18.05 of as proposed to the Planning Commission as identified in **Attachment 1**:

Table 18.05-1 Mailed Notice Distance Requirements for Neighborhood Meetings.

New text has been added to indicate that the mailed notification distance for required neighborhood meetings associated with oil and gas permits is 2,200 feet as measured from the property boundaries on which the surface use will occur under the permit. The 2,200 foot distance is proposed for projects in all three identified categories relating to project size: under 5 acres; 5-50 acres; and, greater than 50 acres.

The effect of this additional text will require an applicant seeking an oil and gas permit to provide mailed notice at least 15 days in advance of any neighborhood meeting required by the Municipal Code to property owners within 2,200 feet of the boundaries of the property on which the oil and gas operations are proposed to be located on. The boundaries of the property would be based on the lot(s) or tract(s) of land on which the (oil and gas) surface use occurs. The City requires applicants to use the current records of the Larimer County Assessor in determining the ownership for the properties within the notification distance area.

Sub Section 18.05.030.C.5. Reduction in Notification Area.

The adjusted text would exempt oil and gas applications from qualifying for a reduction in mailed notification area for neighborhood meetings. The added text also excludes variance applications from the “infill” reduction. The infill reduction allows qualifying projects a 50% reduction in notice area.

Sub Section 18.05.030.C.6. Expansion of Notification Area.

The added text clarifies that when the Current Planning Manager decides to expand the neighborhood meeting notification area (as provided in this subsection), the area of notice can be expanded up to twice the distance indicated on Table 18.05-1.

Table 18.05-2 Mailed Notice Distance Requirements for Public Hearings.

The new text indicates that the mailed notice distance for required public hearings relating to oil and gas development is 2,200 feet as measured from the property boundaries on which the surface use will occur. This Table has been modified in the same manner as Table 18.05-1 and would have the impact on the mailed notice distance requirements for public hearings that the added text in Table 18.05-1 has on neighborhood meetings.

Sub Section 18.05.060.C.5. Reduction in Notification Area.

The adjusted text parallels the text adjustment provided in 18.05.030.C.5, and exempts oil and gas applications from qualifying for a reduction in mailed notification area from qualifying for the “infill” reduction. The adjustment also excludes variance applications from the “infill” reduction.

Sub Section 18.05.060.C.6. Expansion of Notification Area.

The added text to this sub section parallels the text addition to 18.05.030.C.6, clarifying that the mailed notification area as indicated in Table 18.05-2 can be expanded up to twice the distance for public hearings associated with oil and gas applications.

VI. CONCLUSION

Staff has reviewed the recommendation of the Title 18 Committee and supports their recommendation. Given the nature of oil and gas operations, and in consideration of the setbacks for buildings from oil and gas facilities established in the recently adopted Chapter 18.78, the establishment of the proposed 2,200 foot mailed notice distance is reasonable.

VII. ACTION TO BE TAKEN BY THE PLANNING COMMISSION

Conduct a public hearing on the proposed amendment to Chapter 18.05, taking comments from the public if requested. Following deliberation, the Commission shall vote to determine a recommendation to the City Council on the amendment. The Commission's recommendation may include modifications to the proposed amendment. If the Commission acts on this matter on April 22nd, it is anticipated that this matter will be scheduled for a public hearing by City Council on May 21st.

**PROPOSED AMENDMENT TO CHAPTER 18.05,
PUBLIC NOTICE REQUIREMENTS:**

Below is the entirety of Chapter 18.05 of Title 18 (the zoning code) of the Municipal Code, with the inclusion of proposed amendments relating to the public notice requirements for Oil and Gas Permits. Other minor, clarifying adjustments have also been provided. The amendments addressing notification for oil and gas permits respond to Ordinance #5753 that was adopted by the Loveland City Council on 2nd Reading on March 19, 2013. This ordinance (#5753) added chapters 18.77 and 18.78 to Title 18 of the Municipal Code for the purpose of regulating oil and gas development.

Please note that Chapter 18.05 was amended by the City Council on April 16, 2013 (2nd Reading). The amendment incorporated various clarifications and a restructuring of the chapter—but did not incorporate notification provisions for oil and gas development projects. Due to the recent adoption of the amendments to Chapter 18.05, the Municipal Code provisions assembled for access through the City’s web site do not reflect the recent changes.

- Text proposed to be added is shown in underlined, red font
- Text proposed to be deleted is shown in ~~red font with strike-through~~

Chapter 18.05

PUBLIC NOTICE REQUIREMENTS

Sections:

18.05.010	Purpose.
18.05.020	Neighborhood Meetings.
18.05.030	Mailed Notice for Neighborhood Meetings.
18.05.040	Posted Notice for Neighborhood Meetings.
18.05.050	Public Hearings.
18.05.060	Mailed Notice for Public Hearings.
18.05.070	Posted Notice for Public Hearings.
18.05.080	Published Notice for Public Hearings.
18.05.090	Staff Decisions.
18.05.100	Computation of Time.
18.05.110	Notice Cost.
18.05.120	Applicant’s Certification.
18.05.130	Failure to Provide Notice, Defective Notice.
18.05.140	Continuation of Hearings.
18.05.150	Notice for Appeals.

18.05.010 Purpose.

This Chapter provides standards for public notice for neighborhood meetings, public hearings, and staff decisions as specified within Title 18.

18.05.020 Neighborhood Meetings.

Mailed and posted public notice is required for neighborhood meetings. It is the applicant's responsibility to mail and post public notice for neighborhood meetings.

18.05.030 Mailed Notice for Neighborhood Meetings.

A. **Deadline for Mailing.** At least fifteen (15) days prior to a neighborhood meeting, the applicant shall, by first class mail, send written notice to all property owners on the certified list required in Section 18.05.030.C(1), at the address listed for each owner. An affidavit of the applicant's compliance with the mailed notice requirements shall be provided to the City prior to the neighborhood meeting for which the notice was given and shall satisfy the requirements of Section 18.05.120

B. **Content.** The written (mailed) notice for neighborhood meetings shall include the following:

1. Time, date, and location of the meeting.
2. The application(s) to be considered.
3. Project name.
4. Applicant's name.
5. Vicinity map identifying the site within the neighborhood context.
6. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.
7. Description of the proposal for the subject property, including existing and proposed zoning, if applicable.
8. Primary contact (applicant or applicant's consultant) information, including name of individual, name of company, phone number and e-mail address.
9. Secondary contact (City of Loveland Current Planning Division) information, including the name, phone number and email address of the reviewing planner.

C. **Requirements for Mailing.**

1. **Ownership List.** A list, certified by the applicant, of the names and addresses of all surface owners of record of all properties that fall within the distances provided in Table 18.05-1 and Sections 18.05.030.C (3) through (6), shall be submitted to the City's Current Planning Division, using the names and addresses that appear on the latest records of the Larimer County Assessor. This list shall be current to within sixty (60) days prior to the mailing.
2. **Area of Notification.** For all applications requiring written (mailed) public notice, the distances specified in Table 18.05-1 Mailed Notice Distance Requirements, shall be

used to determine the area to which such notice shall be given, except as provided in Sections 18.05.030.C (3) through (6). All properties that fall wholly or partially within the stated distance, as measured from the perimeter of the subject property, shall be included.

Application Type	Application Size		
	Under 5 acres	5 – 50 acres	Greater than 50 acres
<u>Oil & Gas Permit</u> <u>per Chapter 18.77</u>	<u>2,200 ft.</u> <u>(measured from</u> <u>boundary of</u> <u>property on which</u> <u>surface use will</u> <u>occur under permit)</u>	<u>2,200 ft.</u> <u>(measured from</u> <u>boundary of</u> <u>property on which</u> <u>surface use will</u> <u>occur under permit)</u>	<u>2,200 ft.</u> <u>(measured from</u> <u>boundary of</u> <u>property on which</u> <u>surface use will</u> <u>occur under permit)</u>
Annexation, Zoning	1,200 ft.	1,200 ft.	1,200 ft.
Comprehensive Plan Amendment	See Section 6.0 of the Loveland Comprehensive Master Plan		
Major Home Occupation	All members of the neighborhood <i>as defined in Section 18.48.020</i>		
PUD General Development Plan	1,200 ft.	1,200 ft.	1,200 ft.
PUD Preliminary Development Plan	600 ft.	900 ft.	1,200 ft.
Rezoning	600 ft.	900 ft.	1,200 ft.
Special Review	600 ft.	900 ft.	1,200 ft.
Variance	200 ft.	200 ft.	200 ft.

3. Public rights-of-way and streets. Notification distance shall be calculated inclusive of public rights-of-way and public streets.
4. Lake, golf course and park front notification.
 - a. If the subject property fronts a lake, public or private golf course or public park, written notice shall also be mailed to owners of other properties that front the lake, public or private golf course or public park that are within two times the distances specified in Table 18.05-1. For the purposes of this provision, lake front properties include those that are separated from the lake up to 50 feet by undevelopable property such as open space tracts and outlots.
 - b. The area of required notification may be expanded to include up to all properties fronting the lake, public or private golf course or public park if the Current Planning Manager reasonably anticipates that the proposal may impact the use, enjoyment or viewshed of other fronting properties beyond the distance specified in (a) above. The applicant shall be notified in writing of any determination to expand the required notification area, including the

reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.

5. Reduction in Notification Area. All notification distances in Table 18.05-1 shall be reduced by fifty (50) percent, ~~but shall not be less than three hundred (300) feet, except for oil and gas permits and variances,~~ for infill projects that are less than twenty (20)-five (5) acres or less in size. For the purposes of this section, a project shall be considered an infill project if it is adjacent, on at least eighty (80) percent of its boundary, to properties within the existing city limits of the City of Loveland.
6. Expansion of Notification Area. The area of required notification may be expanded up to twice the distance specified in Table 18.05-1 if the Current Planning Manager reasonably anticipates interest or concern regarding the application from community members beyond the required distance. The reduction in notification area as described in subsection 5. above shall not apply when there is an expansion of the notification area. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.

18.05.040 Posted Notice for Neighborhood Meetings.

A. Deadline for Posting. At least fifteen (15) days prior to a neighborhood meeting, the applicant shall post a notice on the subject property.

B. Content. The posted notice for neighborhood meetings shall include the following:

1. Time, date, and location of the meeting.
2. The application(s) to be considered.
3. Project name.
4. City of Loveland Current Planning Division contact information, including the division phone number.

C. Requirements for Posting.

1. It shall be the applicant's responsibility to have the sign(s) created by a sign company.
2. The posted notice shall be readily visible from each public street or highway adjoining the property. It is the applicant's responsibility to post the sign(s) on the site and ensure that the sign(s) remain in place during the full 15-day period leading up to the neighborhood meeting. The Current Planning Division shall provide the applicant with specifications for the posting location of the required signs.
3. An affidavit of the applicant's compliance with the posted notice requirements shall be provided to the City prior to the neighborhood meeting for which the notice was given and shall satisfy the requirements of Section 18.05.120.

18.05.050 Public Hearings.

Mailed, posted and published public notice is required for public hearings. It is the applicant's responsibility to mail and post public notice for public hearings; the City is responsible to publish notice for public hearings.

18.05.060 Mailed Notice for Public Hearings.

A. **Deadline for Mailing.** At least fifteen (15) days prior to a public hearing, the applicant shall, by first class mail, send written notice to all property owners on the certified list required in Section 18.05.060.C(1), at the address listed for each owner. An affidavit of the applicant's compliance with the mailed notice requirements shall be provided to the City prior to the public hearing for which the notice was given and shall satisfy the requirements of Section 18.05.120.

B. **Content.** The mailed notice for public hearings shall include the following:

1. Time, date, and location of the hearing.
2. The application(s) to be considered.
3. Project name.
4. Applicant's name.
5. Vicinity map identifying the site within the neighborhood context.
6. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.
7. Description of the proposal for the subject property.
8. Primary contact (applicant or applicant's consultant) information, including name of individual; name of company; phone number; e-mail address.
9. Secondary contact (City of Loveland Current Planning Division) information, including the name, phone number and email address of the reviewing planner.
10. A statement that interested parties may appear and speak on the matter at the public hearing and/or file written comments with the City's Current Planning Division.

C. **Requirements for Mailing.**

1. **Ownership List.** A list, certified by the applicant, of the names and addresses of all surface owners of record of all properties that fall within the distances provided in Table 18.05-2 and Sections 18.05.060.C (3) through (7), shall be submitted to the City's Current Planning Division, using the names and addresses that appear on the latest records of the Larimer County Assessor. This list shall be current to within sixty (60) days prior to the mailing.
2. **Area of Notification.** For all applications requiring written (mailed) public notice, the distances specified in Table 18.05-2 Mailed Notice Distance Requirements, shall be used to determine the area to which such notice shall be given, except as provided in Sections 18.05.060.C (3) through (7). All properties that fall wholly or partially within the stated distance, as measured from the perimeter of the subject property, shall be included.

Table 18.05-2 MAILED NOTICE DISTANCE REQUIREMENTS FOR PUBLIC HEARINGS

Application Type	Application Size		
	Under 5 acres	5 – 50 acres	Greater than 50 acres
<u>Oil & Gas Permit</u> <u>-per Chapter 18.77</u>	<u>2,200 ft.</u> <u>(measured from</u> <u>boundary of</u> <u>property on which</u> <u>surface use will</u> <u>occur under permit)</u>	<u>2,200 ft.</u> <u>(measured from</u> <u>boundary of</u> <u>property on which</u> <u>surface use will</u> <u>occur under permit)</u>	<u>2,200 ft.</u> <u>(measured from</u> <u>boundary of</u> <u>property on which</u> <u>surface use will</u> <u>occur under permit)</u>
Annexation, Zoning	1,200 ft.	1,200 ft.	1,200 ft.
Be District Developments*	300 ft.	300 ft.	300 ft.
Comprehensive Plan Amendment	See Section 6.0 of the Loveland Comprehensive Master Plan		
Height Exception	300 ft.	300 ft.	300 ft.
PUD General Development Plan	1,200 ft.	1,200 ft.	1,200 ft.
PUD Preliminary Development Plan	600 ft.	900 ft.	1,200 ft.
Rezoning	600 ft.	900 ft.	1,200 ft.

* For Be District developments requiring approval of Planning Commission as indicated in 18.24.050

3. Public rights-of-way and streets. Notification distance shall be calculated inclusive of public rights-of-way and public streets.
4. Lake, golf course and park front notification.
 - a. If the subject property fronts a lake, public or private golf course or public park, written notice shall also be mailed to owners of other properties that front the lake, public or private golf course or public park that are within two times the distances specified in Table 18.05-2. For the purposes of this provision, lake front properties include those that are separated from the lake up to 50 feet by undevelopable property such as open space tracts and outlots.
 - b. The area of required notification may be expanded to include up to all properties fronting the lake, public or private golf course or public park if the Current Planning Manager reasonably anticipates that the proposal may impact the use, enjoyment or viewshed of other fronting properties beyond the distance specified in (a) above. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the neighborhood meeting.

5. Reduction in Notification Area. All notification distances in Table 18.05-2 shall be reduced by fifty (50) percent, ~~but shall not be less than three hundred (300) feet,~~ except for oil and gas permits and variances, for infill projects that are ~~twenty (20)~~ less than five (5) acres or less in size. For the purposes of this section, a project shall be considered an infill project if it is adjacent, on at least eighty (80) percent of its boundary, to properties within the existing city limits of the City of Loveland.
6. Expansion of Notification Area. The area of required notification may be expanded up to twice the distance specified in Table 18.05-2 if the Current Planning Manager reasonably anticipates interest or concern regarding the application from community members beyond the required distance. The reduction in notification area as described in subsection 5. above shall not apply when there is an expansion of the notification area. The applicant shall be notified in writing of any determination to expand the required notification area, including the reasons for the expansion, at least twenty one (21) days prior to the public hearing.
7. Mineral Estate Owners. The notification of mineral estate owners of the property which is the subject of a public hearing shall be given by the applicant at least thirty (30) days prior to the public hearing in accordance with the requirements of the Colorado Notification of Surface Development Act (C.R.S. § 24-65.5-101 et seq.) (the "act"). An affidavit of the applicant's compliance with such requirements shall be provided to the City prior to the public hearing for which the notice was given and shall meet the provisions of the act.

18.05.070 Posted Notice for Public Hearings.

- A. Deadline for Posting. At least fifteen (15) days prior to a public hearing, the applicant shall post a notice on the subject property.
- B. Content. The posted notice for public hearings shall include the following:
 1. Time, date, and location of the hearing.
 2. The application(s) to be considered.
 3. Project name.
 4. City of Loveland Current Planning Division contact information, including the division phone number.
- C. Requirements for Posting.
 1. It shall be the applicant's responsibility to have the sign(s) created by a sign company.
 2. The posted notice shall be readily visible from each public street or highway adjoining the property. It is the applicant's responsibility to post the sign(s) on the site and ensure that the sign(s) remain in place during the full 15-day period leading up to the public hearing. The Current Planning Division shall provide the applicant specifications for the location of signs required for the site.
 3. An affidavit of the applicant's compliance with the posted notice requirements shall be provided to the City prior to the public hearing for which the notice was given and shall satisfy the requirements of Section 18.05.120.

18.05.080 Published Notice for Public Hearings.

A. Deadline for Publishing. Notice shall be published by the current planning division at least fifteen (15) days prior to a public hearing.

B. Content. The published notice for public hearings shall include the following:

1. Time, date, and location of the hearing.
2. The application(s) to be considered.
3. Project name.
4. Applicant's name.
5. General description of the size and location of the subject property using street address and nearest street intersection. For platted properties and for mineral estate notices, include the legal description of the subject property, referencing lots, blocks and tracts of identified subdivisions or additions. For metes and bounds properties, include a statement that the full legal description is available at the Current Planning Division office.
6. Description of the proposal for the subject property.
7. City of Loveland Current Planning Division contact information, including the division phone number.
8. A statement that interested parties may appear and speak on the matter at the public hearing and/or file written comments with the City's Current Planning Division.

C. Requirements for Publishing. Notice of the public hearing shall be published one (1) time in a newspaper of general circulation.

18.05.090 Staff Decisions.

A. Required Notice. Mailed or posted public notice is required for certain staff decisions relating to special review and major home occupation applications. Refer to Code Section 18.40 for requirements applicable to special review application and Section 18.48.020 for requirements applicable to major home occupation application.

B. Optional Notice. Notice of staff decisions authorized under this Title but not otherwise subject to specific notice requirements may be required by the Current Planning Manager when the following circumstances exist:

1. A discretionary decision has been made by staff concerning the application of one or more regulations contained in this Title; and
2. The decision may impact the use or enjoyment of property within the vicinity of the subject site; and
3. There is reason to believe that there may be parties of interest residing or owning property within the vicinity of the affected property.

C. Type and Distance of Optional Notice. Notice type(s) and distance for optional notice shall be at the discretion of the Current Planning Manager. In no instance shall mailed notice exceed 300 feet from the boundary of the subject property.

18.05.100 Computation of Time.

In computing any period of time prescribed for the purpose of giving notice under the provisions of this Chapter, the day of the publication, mailing, or posting shall be included. The day of the meeting or hearing shall not be counted. Saturdays, Sundays, and legal holidays shall be counted as any other day.

18.05.110 Notice Cost.

All costs for providing public notice as required by this Chapter shall be the responsibility of the applicant except for Published Notice.

18.05.120 Applicant's Certification.

Prior to the neighborhood meeting or public hearing, the applicant shall provide the Current Planning Division with an affidavit certifying that the requirements as to the applicant's responsibility for the applicable forms of notice under this Chapter have been met. The Current Planning Division shall provide a sample of the certification, which shall address all applicable forms of public notice required of the applicant in Sections 18.05.020 and 18.05.050.

18.05.130 Failure to Provide Notice, Defective Notice.

Failure to provide the required affidavit, or evidence of a defective mailing list prior to a neighborhood meeting or public hearing, shall result in termination of the review process until proper notice is provided, meeting all applicable provisions herein.

18.05.140 Continuation of Hearings and Neighborhood Meetings.

A hearing or neighborhood meeting for which proper notice was given may be continued to a later date without again complying with the public notice requirements of this Chapter, provided that the date, time, and location of the continued hearing or meeting is announced to the public at the time of continuance.

18.05.150 Notice for Appeals.

Any final decision that is appealed under this chapter is subject to the same notice standards as the original notice.

Section 2. That Chapter 16.18 of the Loveland Municipal Code is hereby amended and restated in its entirety to read as follows:

FIRST READING: March 5, 2013

SECOND READING: March 19, 2013

ORDINANCE # 5753

AN ORDINANCE ADDING TO THE LOVELAND MUNICIPAL CODE CHAPTER 18.77 FOR THE REGULATION OF OIL AND GAS OPERATIONS AND CHAPTER 18.78 FOR SETBACKS FOR DEVELOPMENT FROM OIL AND GAS OPERATIONS WITHIN THE CITY OF LOVELAND

WHEREAS, on May 15, 2012, the City Council adopted Ordinance No. 5685 as an emergency ordinance; and

WHEREAS, Ordinance No. 5685 imposed a nine (9) month moratorium on the City's acceptance, processing and approval of all applications for City licenses, permits and any other approvals needed to conduct oil and gas operations within the City; and

WHEREAS, this moratorium began on May 16, 2012, and was set to expire on February 16, 2013; and

WHEREAS, on December 18, 2012, the City Council adopted Ordinance No. 5735 to extend the moratorium from February 16, 2013, to the earlier of April 15, 2013, or on the date that an ordinance adopted by City Council to enact local oil and gas regulations becomes law; and

WHEREAS, the primary purpose of the moratorium has been to give City staff and this Council a reasonable opportunity to investigate the extent of the City's legal authority to regulate oil and gas operations occurring within the City and to consider the adoption and implementation of local oil and gas regulations consistent with that authority in order to protect the environment, wildlife resources and the public's health, safety and welfare; and

WHEREAS, in that process it was determined that under Colorado law the regulation of oil and gas operations by home rule municipalities, such as Loveland, is a matter of mixed statewide and local concern and, as such, the City has the legal authority to enact its own oil and gas regulations so long as those regulations are not in "operational conflict" with state law, including the oil and gas regulations which have been adopted by the Colorado Oil and Gas Conservation Commission ("Commission"); and

WHEREAS, in the exercise of that legal authority, the Council finds that it is important for the City to have a role in minimizing the adverse impacts that oil and gas development within the City will likely have on the City's environment and on its residents' health, safety and welfare; and

WHEREAS, the Council therefore finds that this Ordinance is a proper and necessary

exercise of the City's general police power and of its home rule authority to regulate zoning and land use, in order to regulate oil and gas operations and facilities within the City to the full extent permitted by law; and

WHEREAS, the development of oil and gas resources presents unique public health, safety and welfare issues that are inadequately addressed in the City's current zoning and land use regulations; and

WHEREAS, City staff has completed a review of applicable state law and of the Commission's regulations concerning oil and gas operations, a review of the oil and gas regulations adopted by other local governments throughout Colorado, and has received and considered input from the public, including from the Anadarko Petroleum Corporation, currently the only oil and gas operator known to have plans to begin new oil and gas operations within the City; and

WHEREAS, as a result of that process, the oil and gas regulations and the building setbacks from oil and gas activities as set out in this Ordinance are necessary to protect the City's environment and wildlife resources, and the public's health, safety and welfare.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That a new Chapter 18.77 is hereby added to the Loveland Municipal Code to read in full as follows:

Chapter 18.77

Oil and Gas Regulations

Sections:

- 18.77.010 Authority.
- 18.77.015 Purpose.
- 18.77.020 Applicability.
- 18.77.025 Rules of Construction and Definitions.
- 18.77.030 Zoning.
- 18.77.035 Alternative Permit Processes.
- 18.77.040 Conceptual Review.
- 18.77.045 Planning Commission Review Process.
- 18.77.050 Administrative Review Process.
- 18.77.055 Baseline Standards for Planning Commission Review Process.
- 18.77.060 Baseline Standards for Planning Commission and Administrative Review Processes.
- 18.77.065 Enhanced Standards for Administrative Review Process.
- 18.77.070 Application Requirements.
- 18.77.075 Variances.
- 18.77.080 Transfer of Permits.
- 18.77.085 Other Applicable Code Provisions.
- 18.77.090 Emergency Response Costs.

- 18.77.095** **Application and Inspection Fees.**
- 18.77.100** **Capital Expansion Fees.**
- 18.77.105** **Reimbursement for Consultant Costs.**
- 18.77.110** **Adequate Transportation Facilities**
- 18.77.115** **Insurance and Performance Security.**
- 18.77.120** **Inspections, Right to Enter and Enforcement.**
- 18.77.125** **Violations, Suspension and Revocation of Permits, Civil Actions and Penalties.**
- 18.77.130** **Conflicting Provisions.**

18.77.010 **Authority.**

This Chapter 18.77 is enacted pursuant to the city's police powers and land-use authority under Article XX of the Colorado Constitution, Title 31 of the Colorado Revised Statutes, the OGC Act, the COG regulations and under all other applicable laws, rules and regulations. It is the intent of this chapter that these powers and authority be exercised in a manner that will not create an operational conflict with the provisions of the OGC Act or the COG regulations, which conflict could arise if any application of this chapter has the effect of materially impeding or destroying a state interest as expressed in the OGC Act or the COG regulations. The provisions of this chapter are therefore to be interpreted and applied in a manner that is consistent and in harmony with any conflicting provisions of the OGC Act or the COG regulations, so as to avoid an operational conflict.

18.77.015 **Purpose.**

The purpose of this chapter is to generally protect the public's health, safety and welfare and the environment and more specifically to regulate oil and gas operations within the city so as to minimize the potential land use conflicts and other adverse impacts that may negatively affect existing and future land uses when oil and gas operations occur within the city near those uses. This purpose is intended to be achieved in a manner that recognizes the state's interests in oil and gas operations as expressed in C.R.S. § 34-60-102, which include: fostering the responsible and balanced development of the state's oil and gas resources in a manner consistent with the protection of the public's health, safety and welfare, including protection of the environment and wildlife resources; protecting public and private interests against waste in both the production and use of oil and gas; and allowing Colorado's oil and gas pools to produce up to their maximum efficient rate subject to the prevention of waste, protection of the public's health, safety and welfare, protection of the environment and wildlife resources, and the protection and enforcement of the rights of owners and producers to a common source of oil and gas so that each owner and producer obtains a just and equitable share of production from that source.

18.77.020 **Applicability.**

Except as otherwise provided in this section, the provisions of this chapter shall apply to all surface oil and gas operations occurring within the city's boundaries, which shall include, without limitation, any oil and gas operation requiring the commission's issuance or reissuance of a drilling permit or any other permit under the COG regulations. Prior to any person commencing any such operations within the city, that person shall apply for and receive an oil

and gas permit from the city in accordance with the provisions of this chapter. This chapter, however, shall not apply to those surface oil and gas operations for which a drilling permit was issued under the COG regulations prior to April 2, 2013, the effective date of this chapter, and under which permit the oil and gas operations were commenced before April 2, 2013. It shall also not apply to any surface oil and gas operations occurring on real property annexed into the city on or after April 2, 2013, provided those operations are occurring as of the effective date of the annexation pursuant to a drilling permit issued under the COG regulations. This chapter shall apply to all other surface oil and gas operations occurring within the city's boundaries after April 2, 2013.

18.77.025 Rules of Construction and Definitions.

A. The words, terms and phrases expressly defined in this section shall have the meaning hereafter given them, unless the context requires otherwise. The words, terms and phrases used in this chapter not defined in this section shall have the meaning given to them in the OGC Act, the COG regulations or in chapter 18.04 of this code, and where there is more than one definition, the controlling definition shall be the one that is most consistent with the city's authority described in Section 18.77.010 and with the city's purposes for enacting this chapter as described in Section 18.77.015. Words, terms and phrases not defined in this section, the Act, the COG regulations or chapter 18.04, shall be given their commonly accepted meaning unless they are technical in nature, in which case they should be given their technical meaning generally accepted by the industry in which they are used. Therefore, for those words, terms and phrases peculiar to the oil and gas industry, they shall be given that meaning which is generally accepted in the oil and gas industry. Words, terms and phrases of a legal nature shall be given their generally accepted legal meaning.

B. When determining the end date of a time period under this chapter, the day on which the time period begins shall not be counted and the last day shall be included in the count. If the last day is a Saturday, Sunday or federal or state legal holiday, that day shall be excluded in the count.

C. "Abandonment" shall mean the plugging process of cementing a well, the removal of its associated production facilities, the removal or abandonment in-place of its flowline, and the remediation and reclamation of the wellsite.

D. "Act" or "OGC Act" shall mean the Colorado Oil and Gas Conservation Act as found in Title 34, Article 60 of the Colorado Revised Statutes, as amended.

E. "Adverse effect" or "adverse impact" shall mean the impact of an action that is considerable or substantial and unfavorable or harmful. The term includes social, economic, physical, health, aesthetic, historical impact, and/or biological impacts, including but not limited to, effects on natural resources or the structure or function of affected ecosystems.

F. "Administrative review process" shall mean the expedited and enhanced review process set out in section 18.77.050.

G. "Applicant" shall mean any person possessing the legal right to develop oil or gas underlying land located within the city's boundaries and who has applied for an oil and gas permit under this chapter.

H. "Application" shall mean an application filed with the city by any person requesting an oil and gas permit under this chapter.

I. "Baseline standards" shall mean those review standards and operation requirements set out in sections 18.77.055 and 18.77.060.

J. "Best management practices" shall mean the best proven and commercially practicable techniques, technologies and practices that are designed to prevent or minimize adverse impacts caused by oil and gas operations to the public health, safety or welfare, including the environment and wildlife resources.

K. "Building" shall mean any residential or non-residential structure designed and permitted to be occupied by natural persons.

L. "City manager" shall mean the city's duly appointed city manager or his or her designee.

M. "Code" shall mean the duly adopted ordinances of the city including, without limitation, the Loveland Municipal Code, as amended.

N. "COG permit" shall mean a permit issued by the commission to drill, deepen, re-enter or recomplete and conduct any other oil and gas operation as allowed under the COG regulations.

O. "COG rule" or "COG regulations" shall mean the Colorado oil and gas rules and regulations duly adopted by the commission, as amended, including 2 Colo. Code Regs. 400; et seq.

P. "Commission" shall mean the Oil and Gas Conservation Commission of the State of Colorado.

Q. "Completion" shall mean, for the completion of an oil well, that the first new oil is produced through wellhead equipment into leased tanks from the ultimate producing interval after the production string has been run. A gas well shall be considered completed when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after the production string has been run. A dry hole shall be considered completed when all provisions of plugging are complied with as set out in the COG regulations. Any well not previously defined as an oil or gas well, shall be considered completed ninety (90) days after reaching total depth. If approved by the director of the commission, a well that requires extensive testing shall be considered completed when the drilling rig is released or six months after reaching total depth, whichever is later.

R. "Completion combustion device" shall mean any ignition device, installed horizontally or vertically used in exploration and production operations to combust otherwise vented emissions from completions.

S. "Current planning" shall mean the city's current planning division.

T. "Day" shall mean a calendar day.

U. "Designated agent" shall mean the designated representative of any operator.

V. "Development review team" or "DRT" shall mean the city's development review team.

W. "Director" shall mean the director of the city's development services department or his or her designee.

X. "Enhanced standards" shall mean those review standards and best management practices set out in section 18.77.065.

Y. "Gas" shall mean all natural gases and all hydrocarbons not defined in this section as oil.

Z. "Hydraulic fracturing" shall mean all the stages of the treatment of a well by the application of hydraulic fracturing fluid under pressure that is expressly designed to initiate or propagate fractures in a target geological formation to enhance production of oil and gas.

AA. "Inspector" shall mean any person designated by the city manager who shall have the authority to inspect a well site to determine compliance with this chapter and any other applicable city ordinances.

BB. "Minimize adverse impacts" shall mean, whenever reasonably practicable, to avoid significant adverse impacts to wildlife resources, the environment, or to the public's health, safety or welfare from oil and gas operations, minimize the extent and severity of those impacts that cannot be avoided, mitigate the effects of unavoidable remaining impacts, and take into consideration cost-effectiveness and technical feasibility with regard to actions and decisions taken to minimize adverse impacts.

CC. "Natural area" shall mean those areas described or identified as natural areas in the City of Loveland Open Lands Plan, dated March 2003.

DD. "Oil" shall mean crude petroleum oil and any other hydrocarbons, regardless of gravities, which are produced at the well in liquid form by ordinary production methods, and which are not the result of condensation of gas before or after it leaves the reservoir.

EE. "Oil and gas facility" shall mean equipment or improvements used or installed at an oil and gas location for the exploration, production, withdrawal, gathering, treatment or processing of oil or gas.

FF. "Oil and gas operations" or "operations" shall mean exploration for oil and gas, including the conduct of seismic operations and the drilling of test bores; the siting, drilling, deepening, re-entering, recompletion, reworking or abandonment of an oil and gas well, underground injection well or gas storage well; production operations related to any such well including the installation of flowlines and gathering lines; the generation, transportation, storage, treatment or disposal of exploration and production wastes; and any construction, site preparation or reclamation activities associated with such operations.

GG. "Operator" shall mean a person who has the legal right under a permit issued under this chapter 18.77 and under a COG permit issued by the commission to conduct oil and gas operations on the surface within the city's boundaries by drilling into and producing from a pool and to appropriate the oil or gas produced therefrom either for the operator or for the operator and an owner.

HH. "Outdoor assembly area" shall mean an improved facility, not within a building, designed to accommodate and provide a place for natural persons to congregate, but shall not include the backyards of residential buildings.

II. "Owner" shall mean any person having an ownership interest in the oil and gas resources underlying land either as the owner of a corporeal estate in realty or as an owner of a leasehold interest therein.

JJ. "Permit" or "oil and gas permit" shall mean a permit issued by the city to an applicant under this chapter.

KK. "Person" shall mean any natural person, corporation, association, partnership, limited liability company, receiver, trustee, executor, administrator, guardian, fiduciary or any other kind of entity or representative, and includes any department, agency or instrumentality of the state or any political subdivision thereof and any county, city and country, home rule municipality, statutory municipality, authority or special district.

LL. "Pit" shall mean any natural or man-made depression in the ground used for oil or gas exploration or production purposes. A pit does not include steel, fiberglass, concrete or other similar vessels which do not release their contents to surrounding soils. This shall include, without limitation and as applicable, "production pits," "special purpose pits," "reserve pits," "multi-well pits" and "drilling pits," as these are defined in the COG regulations.

MM. "Planning commission" shall mean the city's planning commission as established in code section 2.60.210.

NN. "Planning commission review process" shall mean the review process set out in section 18.77.045.

OO. "Seismic operations" shall mean all activities associated with the acquisition of seismic data including, but not limited to, surveying, shothole drilling, recording, shothole plugging and reclamation.

PP. "Setback" shall mean the distance on the surface estate between the following, as applicable: a wellhead, intermediate line, gathering line or oil and gas facility structure boundary and the closest projection of a building or structure, property line of a platted lot or unplatted tract of land or a permitted oil and gas operation.

QQ. "Significant degradation" shall mean any degradation to the environment that will require significant efforts and expense to reverse or otherwise mitigate that degradation.

RR. "State" shall mean the State of Colorado.

SS. "Surface water body" shall include, but not be limited to, rivers, streams, ditches, reservoirs, and lakes.

TT. "Surface owner" shall mean any person having title or right of ownership in the surface estate of real property or any leasehold interest therein.

UU. "VOCs" shall mean volatile organic compounds.

VV. "Well" shall mean an oil or gas well, a hole drilled for the purpose of producing oil or gas, or a well into which fluids are injected, a stratigraphic well, a gas storage well, or a well used for the purpose of monitoring or observing a reservoir.

WW. "Well blowdown" shall mean the maintenance activity designed to remove fluids from mature wells during which time gas is often vented to the atmosphere.

XX. "Well completion" shall mean the process that perforates well casing, stimulates the reservoir using various techniques including, but not limited to, acid treatment and hydraulic fracturing, allows for the flowback of oil or natural gas from wells to expel drilling and reservoir fluids, and tests the reservoir flow characteristic, which may vent produced hydrocarbons to the atmosphere via an open pit or tank.

YY. "Wellhead" shall mean the equipment attached to the casinghead of an oil, gas or injection well above the surface of the ground.

ZZ. "Wetlands" shall have the same meaning as this word is defined in code section 18.41.110.

18.77.030 Zoning.

Notwithstanding any provision in this code to the contrary, oil and gas operations shall be permitted in all of the city's zoning districts, planned unit developments, general development plans, unit developments and within any other city-approved land uses, but only if a permit has been issued to the extent required by this chapter and a COG permit has been issued by the commission for those oil and gas operations.

18.77.035 Alternative Permit Processes.

Any person applying for a permit under this chapter must proceed under the planning commission review process as provided in section 18.77.045, unless the applicant voluntarily chooses to proceed under and qualifies for the expedited and enhanced administrative review process as provided in section 18.77.050. The permit application under the planning commission review process shall be reviewed and granted or denied on the basis of the applicable baseline standards set out in sections 18.77.055 and 18.77.060 and any other applicable standards and requirements in this chapter and code. A permit application under the administrative review process shall be reviewed and granted or denied under the applicable baseline and enhanced standards set out in sections 18.77.060 and 18.77.065 and any other applicable standards and requirements in this chapter and code.

18.77.040 Conceptual Review.

Prior to any person submitting an application under this chapter, that person shall first schedule with current planning and attend a conceptual review meeting with the city's development review team. Current planning shall schedule such meeting within fifteen (15) days after a written request for the meeting has been received. At least fifteen (15) days before the scheduled conceptual review meeting, the person requesting the meeting shall submit to current planning in electronic form or one (1) hard-copy set of all applications, plans, studies and other documents that such person has filed or will be required to file with the commission under the COG regulations to obtain a COG permit for the oil and gas operations proposed to be conducted within the city. The purpose of the conceptual review meeting is to give the prospective applicant and the city's development review team the opportunity to discuss the proposed oil and gas operations and to discuss the city's application and review processes under this chapter. This will include a discussion as to whether the prospective applicant is interested in using the expedited and enhanced administrative review process rather than the planning commission review process. Within ten (10) days after the meeting, current planning shall provide the prospective applicant with the development review team's written comments and recommendations concerning the proposed oil and gas operations. When these comments and recommendations are sent to the prospective applicant by current planning, the prospective applicant shall have three (3) months thereafter in which to file with current planning an application for the proposed oil and gas operations. Failure to file that application within this time period will require the prospective applicant to schedule and conduct another conceptual review meeting under this section for those oil and gas operations. However, in the event current planning fails to timely provide DRT's written comments and recommendations to the prospective applicant, the prospective applicant may proceed to file its application with current planning within three (3) months thereafter.

18.77.045 Planning Commission Review Process.

A. *Application Completeness Review.* After an application has been filed with current planning, the director shall review the application for completeness to determine its compliance with the applicable requirements of section 18.77.070. If the director determines that any of those applicable requirements have not been satisfied, the director shall, within fifteen (15) days after the application is filed, notify the applicant in writing of any deficiencies in the application. This process of review and notice of deficiency shall continue until the director determines the application satisfies all applicable requirements of section 18.77.070 and is, therefore, a complete

application. The director shall notify the applicant in writing that the application is complete within fifteen (15) days after the later of the filing of the application or the filing of the last application resubmittal in response to a notice of deficiency from the director. Promptly thereafter, current planning shall post the complete application on the city's website for public review, but excluding any information required in this chapter to be kept confidential.

B. *Development Review Team.* After an application is filed with current planning and has been determined by the director to be a completed application, it shall be reviewed by the DRT. The DRT shall review the application for conformance with the applicable provisions of this chapter and any other applicable provisions of this code. As part of this review, the DRT may meet with the applicant or the applicant's representatives to discuss the application and to present the DRT's questions, concerns and recommendations. Within thirty (30) days after the application has been determined by the director to be a complete application, the DRT shall complete its review by submitting a written report of its findings and recommendations to the applicant and the director. The report shall also be posted on the city's website with the application, but excluding any information required under this chapter to be kept confidential. Within thirty (30) days of the issuance of the DRT's report, the applicant may supplement its application in response to the DRT report.

C. *Neighborhood Meeting.* Promptly after the director has issued the written determination that the application is complete, current planning shall schedule a neighborhood meeting to be held within forty-five (45) days of the director's written determination of completeness. Once that neighborhood meeting has been scheduled, notices of the neighborhood meeting shall be provided in accordance with all applicable requirements of code chapter 18.05. The mailed notice required for neighborhood meetings under chapter 18.05 shall also be sent to the surface owner or owners of the parcel or parcels of real property on which the oil and gas operations are proposed to be located. In addition to the other contents required for the mailed notice under chapter 18.05, the mailed notice shall state that the application can be reviewed prior to the neighborhood meeting on the city's website or at current planning's office. The neighborhood meeting shall be conducted by current planning. The applicant or a representative of the applicant shall attend the neighborhood meeting and be available to answer questions concerning the application. The objective of a neighborhood meeting shall be to inform noticed persons and other interested citizens attending the meeting of the scope and nature of the proposed oil and gas operations under the application and how the operations will be regulated under this chapter and the COG regulations. Notwithstanding the foregoing, the director may waive the provisions of this paragraph C. if the director determines that the City's required notices and neighborhood meeting under this paragraph will be duplicative of the notice and neighborhood meeting requirements under the COG regulations for the applicant's COG permit. To be considered duplicative, the commission's neighborhood meeting must be held within the city.

D. *Planning Commission Hearing.* Current planning shall schedule the application for a public hearing before the planning commission within forty-five (45) days after the DRT has finished its review of the application. Notice of the hearing shall be provided in accordance with all applicable requirements of chapter 18.05. The mailed notice required in chapter 18.05 for this hearing shall also be mailed to the surface owner or owners of the parcel or parcels of real property on which the oil and gas operations are to be located. In addition, the mailed and

published notices shall state that the complete application can be reviewed by the public on the city's website or at current planning's office.

E. Planning Commission Hearing Procedures. The planning commission's public hearing shall be conducted as a quasi-judicial proceeding. Subject to the planning commission chairperson's discretion to limit the time and scope of testimony and to make allowances for the adequate presentation of evidence and the opportunity for rebuttal, the order of the hearing shall be as follows: (1) explanation and nature of application by current planning staff; (2) applicant's presentation of evidence and testimony in support of the application; (3) public comment and presentation of evidence; (4) applicant's rebuttal presentation; and (5) motion, discussion and vote by the planning commission on the application. No person making a presentation and providing testimony or comment at the hearing shall be subject to cross-examination. However, during the hearing members of the planning commission and the city attorney may make inquiries for the purposes of eliciting new information and to clarify information presented.

F. Planning Commission Decision. The planning commission shall consider the application based solely on the testimony and evidence submitted at the hearing, the applicable provisions of this chapter and any other applicable provisions of this code. At the conclusion of the presentation of testimony and evidence, the planning commission shall vote to grant, grant with conditions or deny the oil and gas permit requested in the application under consideration. A condition may only be imposed on the grant of an oil and gas permit if the applicant agrees to that condition on the record of the hearing. Any such condition agreed to shall be submitted by the applicant to the commission to be included as an express condition on the applicant's COG permit. An applicant's refusal to agree to any such condition shall not be used by the planning commission as a basis, in whole or part, to deny the applicant's requested oil and gas permit, unless the condition is expressly required by this chapter 18.77. In granting, granting with conditions or denying an application for an oil and gas permit, the planning commission shall adopt its written findings and conclusions within thirty (30) days of its decision at the hearing.

G. Appeal of Planning Commission Decision. The planning commission's decision described in paragraph F. of this section may be appealed to the city council by the applicant and any "party in interest" as defined in section 18.80.020. The written notice of appeal shall be filed with current planning within ten (10) days of the effective date of the planning commission's final decision, which date shall be the date the planning commission adopts its written findings and conclusions. The appeal shall be filed and conducted in accordance with the applicable provisions in chapter 18.80 for appeals from the planning commission to the city council. The council's decision in the appeal hearing to grant, grant with conditions or deny the applicant's request for an oil and gas permit shall, like the planning commission's decision, be based on the applicable provisions of this chapter and any other applicable provisions of this code. The council shall also not impose any condition on its grant of the oil and gas permit unless the applicant agrees to the condition on the record of the council's appeal hearing. Any condition agreed to shall be added to the permit and the applicant shall submit the condition to the commission to be included as a condition on the applicant's COG permit. An applicant's refusal to agree to any such condition shall not be used by the city council to deny the permit unless the condition is expressly required by this chapter 18.77.

18.77.050 Administrative Review Process.

A. *Applicant's Election to Use Administrative Review Process.* As an alternative to processing an application using the planning commission review process set out in section 18.77.045, an applicant may elect to use the expedited and enhanced administrative review process set out in this section. In electing to use this administrative review process, the applicant must acknowledge and agree in its application to all of the following: (1) that by using this administrative review process to obtain an expedited review, the applicant's application will not only be subject to the baseline standards in section 18.77.060, but also the enhanced standards in section 18.77.065, which enhanced standards might be interpreted to be in operational conflict in one or more respects with the COG regulations; (2) that to the extent the enhanced or negotiated standards imposed through this administrative review process are not already included as conditions in the applicant's COG permit, the applicant will request the commission to add such enhanced standards as additional conditions to the applicant's COG permit; and (3) that if for any reason the applicant wishes to revoke its election to use this administrative review process or to withdraw from the process once started, but still desires an oil and gas permit under this chapter, it will be required to follow and meet all of the requirements of the planning commission review process.

B. *Application Completeness Review.* An application reviewed under this section shall be reviewed by the director for completeness using the same process used in the planning commission review process as set out in section 18.77.045.A.

C. *Development Review Team.* After an application is filed with current planning and determined by the director to be a complete application, it shall be reviewed by the DRT. The DRT shall review the application for conformance with the applicable provisions of this chapter and any other applicable provisions of this code. As part of this review, the DRT may meet with the applicant or the applicant's representatives to discuss the application and to present the DRT's questions, concerns and recommendations. Within thirty (30) days after the application has been determined by the director to be a complete application, the DRT shall complete its review by submitting a written report of its findings and recommendations to the applicant and the director. The report shall also be posted on the city's website with the application, but excluding any information required under this chapter to be kept confidential. Within thirty (30) days of the issuance of the DRT's report, the applicant may supplement its application in response to the DRT report.

D. *Neighborhood Meeting.* The neighborhood meeting for an application reviewed under this section shall be scheduled, noticed and conducted or waived in the same manner as under the planning commission review process set out in section 18.77.045.C., but with one addition. The notices mailed under section 18.77.045.C. shall state that the application is being reviewed under the administrative review process and notify the recipients of the notice that they will have until fifteen (15) days after the neighborhood meeting is held or after such other date set by the director if the neighborhood meeting is waived by the director as provided in section 18.77.045.C. in which to submit to current planning for the director's consideration any comments and information, in written, electronic or photographic form, related to the subject application as provided in paragraph E. of this section.

E. *Public Comment.* Within fifteen (15) days after the neighborhood meeting is held or after such other date set by the director if the neighborhood meeting is waived by the director as provided in section 18.77.045.C., any person may file with current planning for the director's consideration and to be included in any record on appeal taken under paragraph H. of this section, any comments and information, in written, electronic or photographic form, relevant to the director's consideration of the subject application under this section. Current planning shall preserve all of the comments and information received under this section to ensure that they are included in any record of appeal. These comments and information shall also be made available for review by the applicant. The applicant may supplement its application in response or rebuttal to the comments and information submitted by the public. The applicant must file this supplemental information with current planning within fifteen (15) days after the deadline for the public's submittal of its comments and information. Any comments and information received by current planning after the deadlines set forth herein, shall not be considered by the director in his or her decision and shall not be included in the record of any appeal under paragraph H. of this section.

F. *Director's Negotiations with Applicant.* After receiving the DRT report and all of the public comments and information provided under paragraph E. of this section, the director shall negotiate with the applicant for standards to be added as conditions to the oil and gas permit in addition to or in substitution of those baseline standards required in section 18.77.060 and the enhanced standards in section 18.77.065, if in the director's judgment such conditions will result in the increased protection of the public's health, safety or welfare or further minimize adverse impacts to surrounding land uses, the environment or wildlife resources. The director shall have ten (10) days after the last of the public comments and information have been submitted under paragraph E. of this section in which to conduct those negotiations. If after those negotiations the applicant agrees in writing to these new standards, they shall be added as conditions to the oil and gas permit if the permit is granted by the director. The condition shall also be submitted by the applicant to the commission to be added as an express condition on the applicant's COG permit. If the applicant does not agree to these conditions, they shall not be added as conditions to any granted oil and gas permit. In addition, the applicant's refusal to agree to any such conditions shall not be used by the director as a basis, in whole or part, to deny the applicant's requested oil and gas permit, unless the condition is expressly required by this chapter 18.77.

G. *Director's Decision.* Within fifteen (15) days after the expiration of the negotiation period in paragraph F. of this section, the director shall issue his or her written findings and conclusion, granting, granting with conditions to the extent agreed by the applicant under paragraph F. of this section or denying the applicant's requested oil and gas permit. The record which the director must consider in issuing his or her written findings and conclusions shall consist solely of the application, the applicant's supplementals to the application, the DRT report and the public comments and information submitted under paragraph E. of this section. This record shall be used by the director to then determine the application's compliance or noncompliance with the applicable provisions of this chapter and any other applicable provisions in this code.

H. *Appeal of Director's Decision.* The director's decision as set out in his or her written findings and conclusions shall constitute the director's final decision. The director's final decision is not appealable to the planning commission or the city council. The director's final

decision may only be appealed by the applicant or a "party in interest," as defined in section 18.80.020, to the district court for Larimer County under Rule 106(a)(4) of the Colorado Rules of Civil Procedure. The record to be considered in the appeal shall consist of the director's written findings and conclusion, the application, the applicant's supplementals to the application, the DRT report, all comments and information provided by the public under paragraph E. of this section and any other evidentiary information the district court orders to be included in the record.

18.77.055 Baseline Standards for Planning Commission Review Process.

All applications considered in the planning commission review process and all oil and gas operations approved under this process shall be subject to and comply with the setback and mitigation requirements set forth in COG rule 604, as amended, in addition to the standards and requirements in code section 18.77.060.

18.77.060 Baseline Standards for Planning Commission and Administrative Review Processes.

All applications considered in the planning commission review process and the administrative review process and all oil and gas operations approved under either process shall be subject to and comply with the following standards and requirements, as applicable:

A. *COG regulations for setback requirements.* All oil and gas operations shall comply with COG rule 603, as amended.

B. *COG regulations for groundwater baseline sampling and monitoring.* All permits for oil and gas operations shall comply with COG rule 318.A.e, as amended.

C. *COG regulations for protection of wildlife resources.* All permits for oil and gas operations shall comply with COG rule series 1200, as amended. The operator shall notify the director if consultation with Colorado Division of Parks and Wildlife is required pursuant to COG rule 306.c.

D. *COG regulations for reclamation.* All permits for oil and gas operations shall comply with COG rule series 1000, as amended. The operator shall provide copies of the commission's drill site reclamation notice to the director at the same time as it is provided to the surface owner.

E. *COG regulations for well abandonment.*

1. All oil and gas facilities shall comply with the requirement for well abandonment set forth in COG rule 319, as amended. The operator shall provide a copy of the approval granted by the commission for the abandonment to the director within thirty (30) days from receiving such approval.

2. The operator shall provide copies of the commission's plugging and abandonment report to the director at the same time as it is provided to the commission.

3. The operator shall notify the Loveland Fire Rescue Authority not less than two (2) hours prior to commencing plugging operations.

F. *Applications and permits.* Copies of all county, state and federal applications and permits that are required for the oil and gas operation shall be provided to the director.

G. *Burning of trash.* No burning of trash shall occur on the site of any oil and gas operations.

H. *Chains.* Traction chains on heavy equipment shall be removed before entering a city street.

I. *COG regulations for hydraulic fracturing chemical disclosure.* All operators shall comply with COG rule 205.A, as amended. Each operator shall also provide to the Loveland Fire Rescue Authority in hard copy or electronic format the operator's chemical disclosure form that the operator has filed with the chemical disclosure registry under COG rule 205.A. Such form shall be filed with the director within five (5) days after the form is filed in the chemical disclosure registry.

J. *Color.* Oil and gas facilities, once development of the site is complete, shall be painted in a uniform, non-contrasting, non-reflective color, to blend with the surrounding landscape and with colors that match the land rather than the sky. The color should be slightly darker than the surrounding landscape.

K. *Cultural and historic resources standards.* The installation and operation of any oil and gas facility shall not cause significant degradation of cultural or historic resources, of sites eligible as City Landmarks, or the State or National Historic Register, as outlined in code section 15.56.030.

L. *Stormwater quality and dust control.* All permits for oil and gas operations shall comply with COG rule 805, as amended, plus code chapter 13.20.

M. *Electric equipment.* The use of electric-powered equipment during production operations shall be required if a provider of electric power agrees at the provider's customary rates, fees and charges to provide electric service to an oil and gas facility and the cost to make the electrical connection is economically practicable. If available, electric service to the oil and gas facility shall be acquired by the operator within the shortest time period reasonably practicable. Temporary use of natural gas or diesel generators may be used until electric service is provided. Electric equipment shall not be required during drilling and well completion operations.

N. *Emergency response standards.*

1. In General. Operators agree to take all reasonable measures to assure that oil and gas operations shall not cause an unreasonable risk of emergency situations such as explosions, fires, gas, oil or water pipeline leaks, ruptures, hydrogen sulfide or other toxic gas or fluid emissions, hazardous material vehicle accidents or spills.

2. **Emergency Preparedness Plan.** Each operator with an operation in the city is required to provide to the City its emergency preparedness plan for operations within the City, which shall be in compliance with the applicable provisions of the International Fire Code as adopted in the city code. The plan shall be filed with the Loveland Fire Rescue Authority and updated on an annual basis. The emergency preparedness plan shall contain at least all of the following information:

(a) The designation of the operator's office group or individual(s) responsible for emergency field operations. An office group or individual(s) designated to handle first response situations, emergency field operations or on-scene incident commands will meet this requirement. A phone number and address of such office group or individual(s) operation shall be required.

(b) A map identifying the location of pipelines, isolation valves and/or a plot plan, sufficient in detail to enable the Loveland Fire Rescue Authority to respond to potential emergencies. The information concerning pipelines and isolation valves shall be kept confidential by the Loveland Fire Rescue Authority, and shall only be disclosed in the event of an emergency or as otherwise required by law.

(c) A provision that any spill outside of the containment area that has the potential to leave the facility or to threaten waters of the state and that is required to be reported to the commission or the commission's director shall be immediately reported to the Loveland Fire Rescue Authority emergency dispatch at 911 and to the director promptly thereafter.

(d) Access or evacuation routes and health care facilities anticipated to be used in the case of an emergency.

(e) A project-specific emergency preparedness plan for any operation that involves drilling or penetrating through known zones of hydrogen sulfide gas.

(f) A provision obligating the operator to reimburse the appropriate emergency response service providers for costs incurred in connection with any emergency caused by oil and gas operations and not promptly handled by the operator or its agents.

(g) Detailed information showing that the applicant has adequate personnel, supplies and funding to implement the emergency response plan immediately at all times during construction and operations.

O. *Noise mitigation.* All permits for oil and gas operations shall comply with COG rule 802, as amended, plus the following:

1. The exhaust from all engines, coolers and other mechanized equipment shall be vented up and in a direction away from the closest existing residences.

2. Additional noise mitigation may be required based on specific site characteristics, including, but not limit to, the following:

- (a) Nature and proximity of adjacent development;
- (b) Prevailing weather patterns, including wind direction;
- (c) Vegetative cover on or adjacent to the site; and
- (d) Topography.

3. The level of required noise mitigation may increase with the proximity of the well and well site to existing residences and platted subdivision lots, and the level of noise emitted by the well site. To the extent feasible and not inconsistent with its operations, operator may be required to use one (1) or more of the following additional noise mitigation measures to mitigate noise impacts:

- (a) Acoustically insulated housing or cover enclosures on motors, engines and compressors;
- (b) Vegetative screens consisting of trees and shrubs;
- (c) Solid wall or fence of acoustically insulating material surrounding all or part of the facility;
- (d) Noise mitigation plan identifying and limiting hours of maximum noise emissions, type, and frequency, and level of noise to be emitted and proposed mitigation measures; and
- (e) Lowering the level of pumps or tank batteries.

P. *Fencing.* After the drilling, well completion and interim reclamation operations are completed, the operator shall install permanent perimeter fencing six (6) feet in height around the entire perimeter of the production operations site, including gates at all access points. Such gates shall be locked when employees of the operators are not present on the site. Such fencing and gates shall be solid, opaque and consist of masonry, stucco, steel or other similar materials. The director may allow chain link fencing if solid and opaque fencing creates a threat to public safety or interferes with emergency or operations access to the production site.

Q. *Flammable material.* All land within twenty five (25) feet of any tank, pit or other structure containing flammable or combustible materials shall be kept free of dry weeds, grass or rubbish.

R. *Land disturbance standards.* The following mitigation measures shall be used to achieve compatibility and reduce land use impacts:

1. Pad dimensions for a well shall be the minimum size necessary to accommodate operational needs while minimizing surface disturbance.
2. Oil and gas operations shall use structures and surface equipment of the minimal size necessary to satisfy present and future operational needs.
3. Oil and gas operations shall be located in a manner that minimizes the amount of cut and fill.
4. To the maximum extent feasible, oil and gas operations shall use and share existing infrastructure, minimize the installation of new facilities and avoid additional disturbance to lands in a manner that reduces the introduction of significant new land use impacts to the environment, landowners and natural resources.
5. Landscaping plans shall include drought tolerant species that are native and less desirable to wildlife and suitable for the climate and soil conditions of the area. The operator shall submit to the city a temporary irrigation plan and implement said plan, once approved by the city, for the first two years after the plant material has been planted. If it is practicable to provide a permanent irrigation system, the operator shall submit an irrigation plan for permanent watering and the operator shall provide a performance guarantee for such landscaping that is acceptable to the director. Produced water may not be used for landscaping purposes.
6. The application shall include an analysis of the existing vegetation on the site to establish a baseline for re-vegetation upon temporary or final reclamation or abandonment of the operations. The analysis shall include a written description of the species, character and density of existing vegetation on the site and a summary of the potential impacts to vegetation as a result of the proposed operations. The application shall include any commission-required interim and final reclamation procedures and any measures developed from a consultation with current planning regarding site specific re-vegetation plan recommendations.

S. *Landscaping.* When an oil and gas operation site is less than one hundred (100) feet from a public street, a Type D Bufferyard shall be required between the oil and gas operation and the public street in accordance with the City of Loveland Site Development Performance Standards and Guidelines as adopted in code chapter 18.47.

T. *Lighting.* All permits for oil and gas operations shall comply with COG rule 803, as amended, plus the following:

1. Except during drilling, completion or other operational activities requiring additional lighting, down-lighting shall be required, meaning that all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture; and

2. A lighting plan shall be developed to establish compliance with this provision. The lighting plan shall indicate the location of all outdoor lighting on the site and on any structures, and include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures.

U. *Maintenance of machinery.* Routine field maintenance of vehicles and mobile machinery shall not be performed within three hundred (300) feet of any water body.

V. *Mud tracking.* An operator shall take all practical measures to ensure that the operator's vehicles do not track mud or leave debris on city streets. Any such mud or debris left on city streets by an operator's operation shall be promptly cleaned up by the operator.

W. *Reclamation plan.* The application shall include any interim and final reclamation requirements required by the COG regulations.

X. *Recordation of flowlines.* The legal description of all flowlines, including transmission and gathering systems, shall be filed with the director and recorded with the Larimer County Clerk and Recorder within thirty (30) days of completion of construction. Abandonment of any flowlines shall be filed with the director and recorded with the Larimer County Clerk and Recorder within thirty (30) days after abandonment.

Y. *Removal of debris.* When oil and gas operations become operational, all construction-related debris shall be removed from the site for proper disposal. The site shall be maintained free of debris and excess materials at all times during operation. Materials shall not be buried on-site.

Z. *Removal of equipment.* All equipment used for drilling, re-drilling, maintenance and other oil and gas operations shall be removed from the site within thirty (30) days of completion of the work. Permanent storage of equipment on well pad sites shall be prohibited.

AA. *Signs.* A sign permit shall be obtained for all signs at the oil and gas facility or otherwise associated with the oil and gas operations in accordance with code chapter 18.50 except such permit shall not be required for those signs required by the COG regulations or this chapter.

BB. *Spills.* Chemical spills and releases shall be reported in accordance with applicable state and federal laws, including, without limitation, the COG regulations, the Emergency Planning and Community Right to Know Act, the Comprehensive Environmental Response Compensation and Liability Act, the Oil and Pollution Act, and the Clean Water Act, as applicable. If a spill or release impacts or threatens to impact a water well, the operator shall comply with existing COG regulations concerning reporting and notification of spills, and the spill or release shall also be reported to the director within twenty-four (24) hours of the operator becoming aware of the spill or release.

CC. *Temporary access roads.* Temporary access roads associated with oil and gas operations shall be reclaimed and re-vegetated to the original state in accordance with COG rule series 1000.

DD. *Development standards for street, electric, water/wastewater, and stormwater infrastructure.* All permits for oil and gas operations shall comply with the development standards for street, electric, water/wastewater and stormwater infrastructure set forth in code chapter 16.24.

EE. *Transportation and circulation.* All applicants shall include descriptions of all proposed access routes for equipment, water, sand, waste fluids, waste solids, mixed waste and all other material to be hauled on the city's streets. The submittal shall also include the estimated weights of vehicles when loaded, a description of the vehicles, including the number of wheels and axles of such vehicles, and any other information required by the city engineer. In addition to any other bonding or indemnification requirements of the city as may be reasonably imposed, all applicants shall provide the city with a policy of insurance in an amount determined by the city engineer to be sufficient to protect the city against any damages that may occur to the city's streets, roads or rights-of-way as a result of any weight stresses or spillage of hauled materials including, without limitation, water, sand, waste fluids, waste solids and mixed wastes.

FF. *Water supply.* The operator shall identify on the site plan its primary source(s) for water used in both the drilling and well completion phases of operation. In addition, if requested by the city's Water and Power Department director, the applicant's source(s) and amounts of water used in the city shall be documented and a record of it shall be provided to the city. The disposal of water used on site shall also be reported to the Water and Power Department director if requested to include the operator's anticipated haul routes and the approximate number of vehicles needed to supply and dispose of the water. When operationally feasible, the operator shall minimize adverse impacts caused by the delivery of water to the operation site by truck. If available and commercially viable, the operator shall make a service line connection to a domestic water supplier who is willing to provide such water at the same rates, fees and charges and provided that the amount of the water that can be supplied by that provider can be done so without delay or negative impact to the operator's drilling and well completion operations. When operationally feasible, the operator may alternatively purchase non-potable water from any other sources and transfer that water through ditches or other waterways and/or through above or below ground lines.

GG. *Weed control.* The applicant shall be responsible for ongoing weed control at oil and gas operations sites, pipelines and along access roads during construction and operations, until abandonment and final reclamation is completed pursuant to commission rules. Control of weeds shall comply with the standards in code chapter 7.18.

HH. *Well abandonment.* The operator shall comply with the COG regulations regarding well abandonment. Upon plugging and abandonment of a well, the operator shall provide the director with surveyed coordinates of the abandoned well and shall leave onsite a physical marker of the well location.

II. *Federal and state regulations.* The operator shall comply with all applicable federal and state regulations including, without limitation, the OGC act and the COG regulations.

JJ. *Building permits.* A building permit shall be obtained for all structures as required by the International Fire Code and/or International Building Code as adopted in the city code.

KK. *Floodplains.* All surface oil and gas operations within the city's floodway and flood fringe districts, as these districts are defined and established in code chapter 18.45, shall be conducted, to the extent allowed under COG regulations, in accordance with all applicable COG regulations, including, without limitation, COG rules 603.k. and 1204. In addition, if the operator's oil and gas operations will involve any development or structures regulated under the city's Floodplain Building Code in code chapter 15.14, the operator shall also obtain a floodplain development permit before beginning such regulated operations.

LL. *Trash and recycling enclosures.* All applications for oil and gas operations shall comply with the requirements contained in code chapter 7.16, to the maximum extent feasible.

MM. *Representations.* The approved project development plan shall be subject to all conditions and commitments of record, including verbal representations made by the applicant on the record of any hearing or review process and in the application file, including without limitation compliance with all approved mitigation plans.

NN. *Seismic operations.* The operator shall provide at least a fifteen (15) day advance notice to the director and the Loveland Rural Fire Authority whenever seismic activity will be conducted within the city.

OO. *Access roads.* All private roads used to access the tank battery or the wellhead shall, at a minimum, be:

1. A graded gravel roadway at least twenty (20) feet wide with a minimum unobstructed overhead clearance of thirteen (13) feet six (6) inches, having a prepared subgrade and an aggregate base course surface a minimum of six (6) inches thick compacted to a minimum density of ninety-five percent (95%) of the maximum density determined in accordance with generally accepted engineering sampling and testing procedures approved by the City Engineer. The aggregate material, at a minimum, shall meet the requirements for a Class 6, Aggregate Base Course as specified in the *Colorado Department of Highways Standard Specifications for Road and Bridge Construction*, latest edition.

2. Grades shall be established so as to provide drainage from the roadway surface and shall be constructed to allow for cross-drainage to waterway (i.e. roadside swells, gulches, rivers, creeks, etc.) by means of an adequate culvert pipe. Adequacy of culvert pipes shall be subject to approval by the city engineer.

PP. *Visual impacts.*

1. To the maximum extent practicable, oil and gas facilities shall be:

- (a) Located away from prominent natural features such as distinctive rock and land forms, vegetative patterns, river crossings, and other landmarks;
 - (b) Located to avoid crossing hills or ridges;
 - (c) Located to avoid the removal of trees; and
 - (d) Located at the base of slopes to provide a background of topography and/or natural cover.
2. Access roads shall be aligned to follow existing grades and minimize cuts and fills.
3. One (1) or more of the landscaping practices may be required on a site specific bases:
- (a) Establishment and proper maintenance of adequate ground cover, shrubs and trees;
 - (b) Shaping cuts and fills to appear as natural forms;
 - (c) Cutting rock areas to create irregular forms; and
 - (d) Designing the facility to utilize natural screens.

QQ. *COG regulations for odor.* All oil and gas operations shall comply with COG rule 805.

RR. *COG regulations for abandonment of pipelines.* Any pipelines abandoned in place shall comply with COG rule 1103 and the operator's notice to the commission of such abandonment shall be promptly filed thereafter by the applicant with the director.

SS. *Temporary Housing.* Temporary housing shall be prohibited on any oil and gas operations site, including, without limitation, trailers, modular homes and recreational vehicles, except for the temporary housing customarily provided and required during twenty-four hour drilling, well completion and flowback operations.

18.77.065 Enhanced Standards for Administrative Review Process.

All applications considered in the administrative review process and all oil and gas operations approved under this process shall be subject to and comply with the following standards and requirements, as applicable, in addition to the standards and requirements in code section 18.77.060. The operator shall designate these standards and requirements, to the extent applicable, as agreed upon best management practices on any application the operator files with the commission.

A. *Setbacks.* The following setbacks shall apply to the oil and gas operations. Unless specified otherwise herein, setbacks shall be measured from the closest edge of the oil and gas facility to the nearest wall or corner of the building.

1. Except as required under subparagraph 5, below, all oil and gas facilities shall be located at least five hundred (500) feet from any building, or such greater distance as may be required by the commission.
2. All oil and gas facilities shall be at least two hundred (200) feet from public roads, major above ground utility lines, railroads or any property or lease area line of the oil and gas facility, or such greater distance as may be required by the commission.
3. All oil and gas facilities shall be located at least five hundred (500) feet from: (i) the boundary of any natural area or wetland; (ii) the property line of any property managed by the city's Parks and Recreation Department and any city park; (iii) the operating high water line of any surface water body; (iv) the boundary of the FEMA floodway zoning district as set forth in code chapter 18.45; and (v) the property line of any property subject to a conservation easement managed by a public or non-profit entity, or such greater distance as required by the commission.
4. All oil and gas facilities shall be located at least five hundred (500) feet from any domestic or commercial water well, or such greater distance as required by the commission.
5. All oil and gas facilities shall be located at least one thousand (1,000) from any building with an occupancy rating for fifty (50) persons or more and any outdoor assembly area with a capacity of fifty (50) persons or more, or such greater distance as required by the commission.

B. *Commission mitigation regulations.* All oil and gas operations shall comply with the mitigation measures required under commission Rule 604.c, as amended.

C. *Bufferyards.* The bufferyards set forth in Table 1 below, shall be established once the well is in production around the entire perimeter of the oil and gas production site, excluding vehicular access points, and maintained until the site has been restored in accordance with the final reclamation plan approved by the city and the commission. Bufferyards shall not be required during drilling and well completion operations. The use of xeriscape plant types shall be used unless a permanent irrigation system is provided by the operator. A temporary irrigation system shall be provided, maintained and operated for xeriscape plant types for a period of two years from planting.

Table 1 - Bufferyards			
Base Standard (plants per 100 linear feet)	Optional Width (feet)	Plant Multiplier	Option: add 6 foot opaque masonry wall

5 canopy trees	150	1.00	.85
6 evergreen trees	170	0.90	
4 large shrubs	190	0.80	
	210	0.70	
	230	0.60	
	250	0.50	

D. *Air quality standards.* Air emissions from oil and gas facilities shall be in compliance with the permit and control provisions of the Environmental Protection Agency, Air Quality Control Commission and Colorado Oil and Gas Conservation Commission. In addition, the operator of the oil and gas facility agrees to employ the following enhanced standards for air quality mitigation.

1. *General duty to minimize emissions.* All continuously operated equipment, including but not limited to, storage vessels and dehydrators shall route vapors to a capture and control device with at least a ninety-eight percent (98%) destruction efficiency. Operators shall submit to the director test data of like equipment or manufacturer's data demonstrating the control device can meet the destruction efficiency. Any combustion device, auto ignition system, recorder, vapor recovery device or other equipment used to meet the destruction efficiency shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instruction and operating manuals.

2. *Combustion devices.* All flares shall be designed and operated as follows:

(a) The combustion devices shall be designed and operated in a matter that will ensure it complies with 40 Code of Federal Regulations ("CFR") §60.18 (General control device and work practice requirements);

(b) The combustion device, during production operations, shall be operated with a pilot flame present at all times vapors may be routed to it. Presence of a pilot flame shall be continuously monitored and recorded; and

(c) Combustion devices shall be equipped with automatic flame ignition systems in the event the pilot flame is extinguished.

3. *Fugitive emissions.* The operator shall develop and follow a leak detection and repair plan to minimize emissions from fugitive components. The plan will be submitted to the director for incorporation into the permit.

4. *Pneumatic controllers.* The operator shall use only no- or low-bleed pneumatic controllers, where such controllers are available for the proposed application. High-bleed pneumatic controllers may be used where air is the motive gas for operation of the controller and valve.

5. *Well completion practices.* For each well completion operation, the operator shall minimize emissions from the operation as set forth below:

- (a) For the duration of flowback, route the recovered gas to the sales pipeline once the well has enough gas to safely operate the separator, or like device, and liquid control valves;
- (b) If flow and gathering lines are not available to comply with subparagraph (a) above, the operator shall capture the recovered gas to a completion combustion device, equipped with a continuous ignition system, to oxidize the recovered gas stream except in conditions that may result in a fire hazard or explosion, or where high heat emissions from the completion device may negatively impact a sensitive area or nearby structure;
- (c) Operators shall have a general duty to safely maximize resource recovery and minimize releases to the atmosphere during flowback; and
- (d) Operators shall maintain a log for each well completion operation. The log shall be completed in accordance with the methods outlined in the Environmental Protection Agency's Code of Federal Regulations, specifically 40 CFR Part 60, Subpart OOOO.

6. *Well maintenance and blowdowns.* The operator shall utilize best management practices during well maintenance and blowdowns to minimize or eliminate venting emissions.

7. *Capture of produced gas from wells.* Gas produced during normal production shall be captured, to the maximum extent feasible, and not flared or vented, except in situations where flaring or venting is required to ensure that associated natural gas can be safely disposed of in emergency shutdown situations.

8. *Rod-packing maintenance.* Operators shall replace rod-packing from reciprocating compressors located at facilities approved after April 15, 2013, every twenty-six thousand (26,000) hours of operation or thirty-six (36) months, whichever occurs first.

9. *Monitoring compliance and reporting.* Operators shall submit to the director an annual report providing the following information concerning the operator's oil and gas operations as related to air emissions:

- (a) Dates when the operator or its agent inspected its oil and gas facilities under its leak detection and repair plan;
- (b) A record of the expected and actual air emissions measured at the facilities;
- (c) The operator's emissions data collected during well completion activities;

(d) Dates and duration when operator conducted well maintenance activities to minimize air emissions;

(e) If venting occurred at any time during the reporting period, an explanation as to why best management practices could not have been used to prevent such venting; and

(f) Dates when reciprocating compressor rod-packing is replaced.

E. *Pipelines.* Any newly constructed or substantially modified pipelines on site shall meet the following requirements:

1. Flowlines, gathering lines and transmission lines shall be sited at a minimum of fifty (50) feet away from residential and non-residential buildings, as well as the high-water mark of any surface water body. This distance shall be measured from the nearest edge of the pipeline. Pipelines and gathering lines that pass within one hundred fifty (150) feet of residential or non-residential building or the high water mark of any surface water body shall incorporate leak detection, secondary containment or other mitigation, as appropriate;

2. To the maximum extent feasible, pipelines shall be aligned with established roads in order to minimize surface impacts and reduce habitat fragmentation and disturbance;

3. To the maximum extent feasible, operators shall share existing pipeline rights-of-way and consolidate new corridors for pipeline rights-of-way to minimize surface impacts; and

4. Operators shall use boring technology when crossing streams, rivers, irrigation ditches or wetlands with a pipeline to minimize negative impacts to the channel, bank and riparian areas.

F. All oil and gas facilities shall comply with the sound limitation standards set forth in code chapter 7.32 after development of the well is complete, meaning while the well is in production. A noise mitigation study shall be submitted with the application to demonstrate compliance with said code chapter. If necessary to comply with said chapter, a noise screen shall be constructed along the edge of the oil and gas facility between the facility and existing residential development or land zoned for future residential development.

18.77.070 Application Requirements.

All applications submitted to current planning shall contain the information required for a COG permit and any additional information required by the city's "Oil and Gas Development Application Submittal Checklist" approved by the city manager.

18.77.075 Variances.

A. *Variance Request.* In both the planning commission review and administrative review processes, an applicant may request a variance from any provision of this chapter. A request for a variance under this section may be included in the applicant's application and shall be processed, reviewed and granted, granted with conditions or denied in accordance with and as part of the planning commission review process or the administrative review process, as applicable. The variance provisions of chapter 18.60 shall not be applicable to a variance request under this chapter.

B. *Grounds for Variance.* A variance from the application of any provision in this chapter shall be granted on the basis of one or more of the following grounds:

1. The provision is in operational conflict with the OGC act or the COG regulations, meaning the application of the provision would have the effect of materially impeding or destroying a state interest as expressed in the COG act or the COG regulations.
2. There is no technology commercially available at a reasonable cost to conduct the proposed oil and gas operations in compliance with the provision and granting a variance from the operation of the provision will not have an adverse effect on the public health, safety or welfare or on the environment.
3. Protection of the public health, safety and welfare and of the environment would be enhanced by an alternative approach not contemplated by the provision.
4. Application of the provision will constitute a regulatory taking of property without just compensation by the city under Article II, Section 3 of the Colorado Constitution.
5. Application of the provision is impractical or would create an undue or unnecessary hardship because of unique physical circumstances or conditions existing on or near the site of the oil and gas operations, which may include, without limitation, topographical conditions, shape or dimension of the operation site, inadequate public infrastructure to the site, or close proximity of occupied buildings.

18.77.080 Transfer of Permits.

Oil and gas permits may be assigned to another operator only with the prior written consent of the director and upon a showing to the director that the new operator can and will comply with all conditions of the transferred permit and with all of the applicable provisions of this chapter. The existing operator shall assign the permit to the new operator on a form provided by the city and the new operator shall also sign the form agreeing to comply with all of the conditions of the permit and all applicable provisions of this chapter.

18.77.085 Other Applicable Code Provisions.

In addition to the provisions of this chapter, all oil and gas operations conducted within the city shall comply with all applicable provisions of the following code chapters: 3.16, Sales and Use Tax; 7.12, Nuisances - Unsanitary Conditions; 7.16, Solid Waste Collection and

Recycling; 7.18, Weed Control; 7.26, Accumulations of Waste Materials; 7.30, Graffiti; 7.36, Fire Protection; 10.04, Traffic Regulations; 10.20, Parking; 12.16, Use of City Rights-of-Way; 12.28, Prohibited Uses of Streets and Other Public Places; 13.18, Stormwater Management; 13.20, Stormwater Quality; 15.08, Building Code; 15.12, Property Maintenance Code; 15.14, Floodplain Building Code; 15.16, Mechanical Code; 15.24, Electrical Code; 15.28, Fire Code, 16.38, Capital Expansion Fees; 16.41, Adequate Community Facilities; 16.42, Street Maintenance Fee; 18.45, Floodplain Regulations; 18.50, Signs; 13.04, Water Service; 13.06, Cross Connection Control; and 19.06, Irrigation.

18.77.090 Emergency Response Costs.

The operator shall reimburse the Loveland Fire Rescue Authority for any emergency response costs incurred by the Authority in connection with fire, explosion or hazardous materials at the well or production site, except that the operator shall not be required to pay for emergency response costs where the response was precipitated by mistake of the Authority or in response to solely a medical emergency.

18.77.095 Application and Inspection Fees.

The city council may establish by resolution fees to be collected at the time an application is filed with current planning for the city's reasonable costs in processing applications under this chapter and for fees thereafter imposed for the city's reasonable costs to conduct inspections to ensure compliance with this chapter. Fees established for inspections shall be nondiscriminatory to only cover the city's reasonable costs to inspect and monitor for road damage and for compliance with the city's fire code, building codes and the conditions of any permit issued under this chapter. However, such inspection fees shall not be based on any costs the city might incur to conduct inspections or monitoring of oil and gas operations with regard to matters that are subject to rule, regulation, order or permit condition administered by the commission.

18.77.100 Capital Expansion Fees.

Oil and gas operations within the city shall be subject to the capital expansion fees established under code chapter 18.38. The city council may adopt and set such fees by resolution. Any such fees adopted, shall be paid by the operator to the city at the time of issuance of an oil and gas permit under this chapter.

18.77.105 Reimbursement for Consultant Costs.

If the city contracts with an outside consultant to review and advise the city concerning any applicant's application or in connection with any applicant's hearing conducted under this chapter, the applicant shall reimburse the city for the city's reasonable costs incurred with that consultant. No permit shall be issued and no suspended permit shall be reinstated until the applicant reimburses the city in full for any such costs.

18.77.110 Adequate Transportation Facilities.

All applications submitted and all permits issued under this chapter shall be subject to all of the applicable adequate community facilities requirements of code chapter 16.41 as they relate solely to the transportation facilities required in code section 16.41.110.

18.77.115 Insurance and Performance Security.

A. *Insurance.* Every operator granted a permit under this chapter shall procure and maintain throughout the duration of the operator's oil and gas operations a policy of comprehensive general liability insurance, or a self-insurance program approved by the Colorado Insurance Commission, insuring the operator and naming the city as an additional insured, against any liability for personal injury, bodily injury or death arising out of the operator's permitted operations, with coverage of at least one million dollars (\$1,000,000) per occurrence. Unless the operator is self-insured, insurance required by this paragraph A. shall be with companies qualified to do business in the State of Colorado and may provide for a deductible as the operator deems reasonable, but in no event greater than ten thousand dollars (\$10,000). The operator shall be responsible for payment of any deductible. No such policy shall be subject to cancellation or reduction in coverage limits or other modification except after thirty (30) days prior written notice to the city. The operator shall identify whether the type of coverage is "occurrence" or "claims made." If the type of coverage is "claims made," which at renewal the operator changes to "occurrence," the operator shall carry a twelve (12) month tail. The operator shall not do or permit to be done anything that shall invalidate the policies. In addition, the insurance required by this paragraph A. shall cover any and all damages, claims or suits arising out of the actual, alleged or threatened discharge, disbursement, seepage, migration, release or escape of pollutants, and shall not exclude from coverage any liability or expense arising out of or related to any form of pollution, whether intentional or otherwise. Further, the policies required by this paragraph A. shall be deemed to be for the mutual and joint benefit and protection of the operator and the city and shall provide that although the city is named as additional insured, the city shall nevertheless be entitled to recover under said policies for any loss occasioned to the city or its officers, employees or agents by reason of negligence of the operator or of its officers, employees, agents, subcontractors or business invitees and such policies shall be written as primary policies not contributing to or in excess of any insurance coverage the city may carry. Prior to the issuance of the operator's permit, the operator shall furnish to the city certificates of insurance evidencing the insurance coverage required herein. In addition, the operator shall, upon request by the city and not less than thirty (30) days prior to the expiration of any such insurance coverage, provide the city with a certificate of insurance evidencing either new or continuing coverage in accordance with the requirements of this section.

B. *Performance Security for Road Damage.* Prior to the issuance of a permit to an applicant, the applicant shall provide the city with a twenty-five thousand dollar (\$25,000) performance security for each well that is permitted while the well is in operation in the form of an irrevocable letter of credit or equivalent financial security acceptable to the director to cover the city's costs to repair any damages to the city's public rights-of-way caused by the operator's use of said rights-of-way. In the event this security is insufficient to cover the city's costs to repair any such damages, the operator shall be liable to the city for those additional costs and the city may pursue a civil action against the operator to recover those costs as provided in section 18.77.125.C. Reclamation and other activities and operations which fall under the COG regulations are exempted from this performance security coverage.

18.77.120 Inspections, Right to Enter and Enforcement.

A. *Inspections.* All oil and gas operations and facilities may be inspected by the city's duly appointed inspectors at reasonable times to determine compliance with the applicable provisions of this chapter and all other applicable provisions in this code. However, the city's inspections shall be limited to the inspection of those matters directly enforceable by the city under this chapter 18.77 as provided in paragraph C. of this section. In the event an inspection is desired by the city relating to a matter not directly enforceable by the city under this chapter, the city shall contact the commission to request that it conduct the inspection and take appropriate enforcement action.

B. *Right to Enter.* Notwithstanding any other provision in this code to the contrary, for the purpose of implementing and enforcing the provisions of this chapter and the other applicable provisions of this code, the city's inspectors shall have the right to enter upon the private property of a permitted operator after reasonable notification to the operator's designated agent, in order to provide the operator with the opportunity to be present during such inspection. Such notice shall not be required in the event of an emergency that threatens the public's health or safety. By accepting an oil and gas permit under this chapter, the operator grants its consent to this right to enter.

C. *Enforcement.* The city's enforcement of the provisions of this chapter 18.77 and of the conditions included in permits issued under this chapter shall be limited to those provisions and conditions that are not in operational conflict with state law or COG regulations. Notwithstanding the foregoing, the city may also enforce any provision or condition that is an enhanced standard imposed and agreed to by the applicant through the administrative review process or agreed to by the applicant in the planning commission review process, unless such provision or condition is made an express condition of the applicant's COG permit.

D. *Designated Agent.* The applicant shall include in its application the telephone number and email address of its designated agent and at least one back-up designated agent who can be reached twenty-four (24) hours a day, seven (7) days a week for the purpose of being notified of any proposed city inspection under this section or in case of an emergency. The applicant shall notify the city in writing of any change in the primary or back-up designated agent or their contact information.

18.77.125 Violations, Suspension and Revocation of Permits, Civil Actions and Penalties.

A. *Violations.* It shall be unlawful and a misdemeanor offense under this chapter for any person to do any of the following:

1. Conduct any oil and gas operation within the city without a validly issued permit;
2. Violate any enforceable condition of a permit; or

3. Violate any applicable and enforceable provision of this chapter and code.

B. *Suspension and Revocation.* If at any time the director has reasonable grounds to believe than an operator is in violation of any enforceable provision of this chapter or code, the director may suspend the operator's permit. The director shall give the operator's designated agent written notice of the suspension and, upon receiving such notice, the operator shall immediately cease all operations under the permit, except those reasonably required to protect the public's health and safety. The director's written notice shall state with specificity the operator's violation(s). The suspension shall continue in effect until the director determines that the violation(s) has been satisfactorily corrected. At any time during the suspension, the operator may appeal the director's action to the City Council by filing with the City Clerk a written notice of appeal stating with specificity the operator's grounds for appeal. Within thirty (30) days of the City Clerk's receipt of that notice, a public hearing shall be held before the City Council. The hearing shall be conducted as a quasi-judicial proceeding with the operator having the burden of proof and with the director defending the suspension of the permit. After hearing and receiving evidence and testimony from the operator, from the director and from other city staff and consultants, and after receiving public comment, the City Council may revoke the permit, terminate the suspension of the permit or take such other action as it deems appropriate under the circumstances taking into consideration and balancing the protection of the public's health, safety and welfare and the operator's rights under this chapter and state law to conduct its oil and gas operations. Within twenty five (25) days after the hearing, the Council shall adopt its written findings and conclusion supporting its decision. The Council's written findings and conclusions shall constitute the Council's final decision that may be appealed to the Larimer County District Court under Rule 106(a)(4) of the Colorado Rules of Civil Procedure.

C. *Civil Actions.* In addition to any other legal remedies provided under this chapter to enforce violations of this chapter, the city may commence a civil action against an operator committing any such violations in any court of competent jurisdiction and request any remedy available under the law or in equity to enforce the provisions of this chapter, to collect any damages suffered by the city as the result of any violation and to recover any fees, reimbursements and other charges owed to the city under this chapter and code. If the city prevails in any such civil action, the operator shall be liable to the city for all of the city's reasonable attorney's fees, expert witness costs and all other costs incurred in that action.

D. *Penalties.* A violation of any enforceable provision of this chapter shall constitute a misdemeanor offense punishable by a fine not exceeding one thousand dollars (\$1,000) or imprisonment for a term not exceeding one (1) year, or both such fine and imprisonment. A person committing such offense shall be guilty of a separate offense for each and every day, or a portion thereof, during which the offense is committed or continued to be permitted by such person, and shall be punished accordingly.

18.77.130 Conflicting Provisions.

In the event of any conflict between any provision of this chapter and any other provision of this code, the provision of this chapter shall control.

Section 2. That a new Chapter 18.78 is hereby added to the Loveland Municipal Code to read in full as follows:

Chapter 18.78

Building Setbacks from Oil and Gas Facilities

Sections:

- 18.78.010 Purpose**
- 18.78.020 Building Setbacks from Oil and Gas Facilities**
- 18.78.030 Variances.**

- 18.78.010 Purpose.**

The purpose of this chapter is to generally protect the public’s health, safety and welfare and more specifically to establish setbacks for new development from existing or abandoned oil and gas facilities.

18.78.020 Building Setbacks from Oil and Gas Facilities.

All “buildings,” as defined in code section 18.77.025, except such buildings with an occupancy rating for fifty (50) persons or more, shall be setback a minimum distance of five hundred (500) feet from an existing or abandoned oil and gas facility. All such buildings with an occupancy rating for fifty (50) persons or more and “outdoor assembly areas,” as this term is defined in code section 18.77.025, shall be set back a minimum of one thousand (1,000) feet from any existing or abandoned “oil and gas well,” as this term is defined in code section 18.77.025. Land included in such setback areas shall be restricted to use only as open space and recreational uses within that open space, such as play fields, parks and playgrounds, shall not be permitted.

18.78.030 Variances.

The owner of any real property subject to the setback requirements of section 18.78.020 may request a variance from those setbacks in accordance with the provisions of section 18.77.075 using the planning review process set out in Chapter 18.77.

Section 3. That Ordinance No. 5685 and Ordinance No. 5735 are hereby repealed.

Section 4. That as provided in City Charter Section 4-9(a)(7), this Ordinance shall be published by title only by the City Clerk after adoption on second reading unless the Ordinance has been amended since first reading in which case the Ordinance shall be published in full or the amendments shall be published in full. This Ordinance shall be in full force and effect ten days after its final publication, as provided in City Charter Section 4-8(b).

ADOPTED this _____ day of _____, 2013.



Cecil A. Gutierrez
Cecil A. Gutierrez, Mayor

ATTEST:

Teresa G. Andrews
City Clerk

APPROVED AS TO FORM:

John R. [unclear]
City Attorney

Ordinance # 5753

I, Teresa G. Andrews, City Clerk of the City of Loveland, Colorado, hereby certify that the above and foregoing Ordinance was introduced at a regular (or special) meeting of the City Council, held on March 5, 2013 and was initially published in the Loveland Daily Reporter-Herald, a newspaper published within the city limits in full on March 9, 2013, and by title except for parts thereof which were amended after such initial publication which parts were published in full in said newspaper on March 23, 2013.

Teresa G. Andrews
City Clerk

Effective Date: April 2, 2013

**CITY OF LOVELAND
PLANNING COMMISSION MINUTES
April 22, 2013**

A meeting of the City of Loveland Planning Commission was held in the City Council Chambers on April 22, 2013 at 6:30 p.m. Members present: Chairman Meyers; and, Commissioners Massaro, Molloy, Dowding, Crescibene, Krenning, and Prior. City Staff present: Bob Paulsen, Current Planning Manager; Judy Schmidt, Deputy City Attorney.

These minutes are a general summary of the meeting. For more detailed information, audio and videotapes of the meeting are available for review in the Community Services office.

CITIZEN REPORTS

There were no citizen reports.

STAFF MATTERS

1. Informational: Withdrawl by applicant Steve MacMillan of the appeal of the Planning Commission's denial of the height exception for a 3-story, multi-family development at South Shore Plaza.
2. Request to cancel the Planning Commission meeting scheduled for Monday, May 27th due to the Memorial Day holiday.

COMMITTEE REPORTS

There were no committee reports.

COMMISSIONER COMMENTS

Chairman Meyers announced that he would like to let any Loveland residents with ties to Boston who are watching the Commission broadcast know that the Commission grieves with them, supports them, and wishes them the best of luck in the wake of the Boston marathon bombing tragedy.

APPROVAL OF THE MINUTES

Chairman Meyers asked for a motion to approve the minutes from the April 8, 2013 meeting. **Commissioner Dowding** moved to approve the minutes. *The motion to approve the minutes was seconded by Commissioner Massaro and it was approved unanimously.*

OTHER BUSINESS

Commissioner Dowding made a motion to cancel the meeting scheduled for May 27, 2013 because it falls on Memorial Day. *It was seconded by Commissioner Crescibene and it passed unanimously.*

APPROVED: April 22, 2013 Planning Commission Minutes

REGULAR AGENDA

1. Amendment to Chapter 18.05 of the Municipal Code

Chairman Meyers introduced this item indicating that it is a public hearing to consider an amendment to Chapter 18.05 of the Municipal Code establishing mailed notification distances for oil and gas permit applications.

Bob Paulsen, Current Planning Manager, provided a summary of the proposed code amendment and its purpose, and indicated that the Commission's role was to review the amendment and make a recommendation to the City Council for final action. He described the amendment as a follow-up to the City Council's recent adoption of Ordinance #5753 that established regulations for oil and gas operations within the municipal limits.

Mr. Paulsen explained that now that the oil and gas regulations have been approved, the public notice provisions of the Municipal Code require amendment to set forth mailed notice distances for oil and gas development applications. He elaborated that the new code provisions have two processes for oil and gas permit applicants. One is "Enhanced Standards" and the other is "Mandatory Process." Both involve neighborhood meetings; the Mandatory Process includes a public hearing before the Planning Commission and possible appeal to the City Council. The proposed mailed notice provisions would apply to both neighborhood meetings and public hearings, he explained.

Mr. Paulsen indicated that the Title 18 Committee had reviewed the proposed amendment to Chapter 18.05. He indicated that following a lengthy discussion, the Committee agreed on a recommendation to set the notification distance at 2,200 feet from the boundaries of the property where the permit is requested. **Mr. Paulsen** reported that the Committee's rationale for the distance of 2,200 feet included the following:

1. Other application types as specified in the code require mailed notice distances of up to 1,200 feet.
2. Oil and gas operations have the potential to impact other properties at a distance at least equivalent to those application types requiring a 1,200 distance
3. Due to the setback distances that oil and gas operations require from certain buildings and outdoor assembly areas (up to 1,000 feet as stipulated by the Municipal Code and state statute), the mailed notice distances for oil and gas operations should be expanded an additional 1,000 feet beyond the 1,200 foot baseline distance in order to ensure that impacted property owners are notified.

Mr. Paulsen went on to say that while the existing maximum mailed notice distance of 1,200 feet was an appropriate starting point or baseline for analysis, oil and gas operations are anticipated to locate in more rural areas of the City, and a wider notification area makes more sense where properties are larger and distances are greater between uses. **Mr. Paulsen** also emphasized that the regulatory set back requirements from occupied buildings of up to 1,000 feet could result in potentially significant impacts on properties adjacent to oil and gas operations; future development within the setback radius from the well-head, whether 500 or 1,000 feet, would be limited. He indicated that the setback factors weighed heavily into the

decision of the Title 18 Committee. As a result, the Committee felt it appropriate to establish the recommended 2,200 foot mailed notice distance.

Mr. Paulsen indicated that Development Services Department staff agrees with the Committee's analysis and recommends that the mailed notice distance for oil and gas permit applications is 2,200 feet from the boundary of the property on which the surface use will occur. **Mr. Paulsen** reviewed the redline version of the amendment specifying the changes.

Chairman Meyers added that the Title 18 Committee voted unanimously on this recommendation.

*After a short discussion, **Commissioner Dowding** made the motion to recommend to City Council to approve the amendments to Chapter 18.05 of Title 18 as specified in the April 22, 2013 Planning Commission staff report. The motion was seconded by **Commissioner Prior** and it passed unanimously.*

2. 2012 Accomplishments/2013 Goals

Chairman Meyers introduced the item as an administrative matter.

Bob Paulsen called the Commission's attention to the submitted report, including adjustments made in response Commission comments from a previous meeting. He asked for comments. Commissioner Dowding said she was very pleased with the report. All Commissioners agreed.

The Commission accepted the report without further discussion.

At this juncture, Chairman Meyers adjourned the Planning Commission and called to order a meeting of the Zoning Board of Adjustment.

ZONING BOARD OF ADJUSTMENT

1. ZBA Hearing Officer decision on Variance Application #2013-1

Chairman Meyers called the Zoning Board of Adjustment to order.

Bob Paulsen indicated that the variance application concerned a property in the Boyd Lake North Subdivision. He reported that the applicant had just recently withdrawn pursuit of their variance application.

ZBA Hearing Officer Crescibene provided a summary of the application and his decision. He explained that the property had a 100 foot setback restriction and a maximum building size limitation. The owner wanted to build a larger building, a horse barn, at a 50 foot setback and,

APPROVED: April 22, 2013 Planning Commission Minutes

therefore, applied for the two-part variance. **ZBA Hearing Officer Crescibene** said his decision was to adhere to the adopted restrictions.

Commissioner Dowding requested that, as an alternate hearing officer, she receive the decision findings prior to receiving them at the ZBA meetings.

Mr. Paulsen indicated that in the future staff would provide Commissioner Dowding with a staff report in advance of the ZBA hearings.

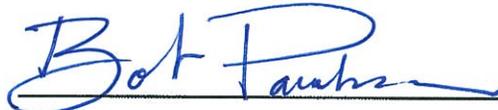
Chairman Meyers adjourned the Zoning Board of Adjustment and reconvened the Planning Commission meeting.

PLANNING COMMISSION

ADJOURNMENT

Commissioner Prior made a motion to adjourn. Upon a second by Commissioner Massaro, the motion was unanimously adopted.

Approved By: 
Buddy Meyers, Planning Commission Chairman


Bob Paulsen, Acting Planning Commission Secretary



CITY OF LOVELAND

Code Amendment: Mailed Notice for Oil & Gas

City Council

May 21, 2013



Mailed Notice for Oil & Gas

Amendment to Chapter 18.05 **[Public Notice Requirements]**

Establish Mailed Notice Distances

- *Neighborhood Meetings*
- *Public Hearings*
- *Appeals to City Council*



Mailed Notice for Oil & Gas

Amendment to Chapter 18.05:

- Necessary to Ensure Clear Mailed Notice Requirements
- Will Not Change Recently Adopted Oil & Gas Regulations



Mailed Notice for Oil & Gas

Recommended Distance:

2,200 feet as measured from the boundary of the property on which surface use will occur under the oil and gas permit

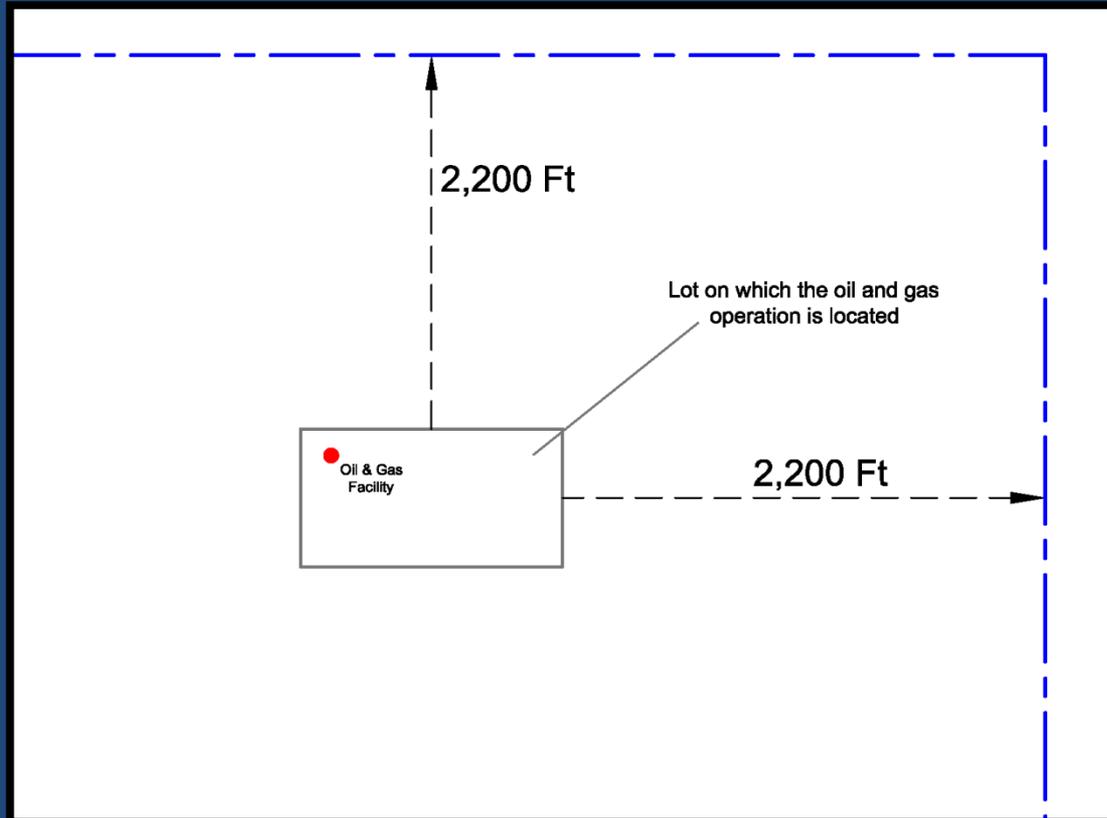


Mailed Notice for Oil & Gas

Recommended 2,200 foot Distance:

- Developed by Title 18 Committee
- Recommended by Planning Commission
- Supported by staff

Proposed Mailing Notification Distance



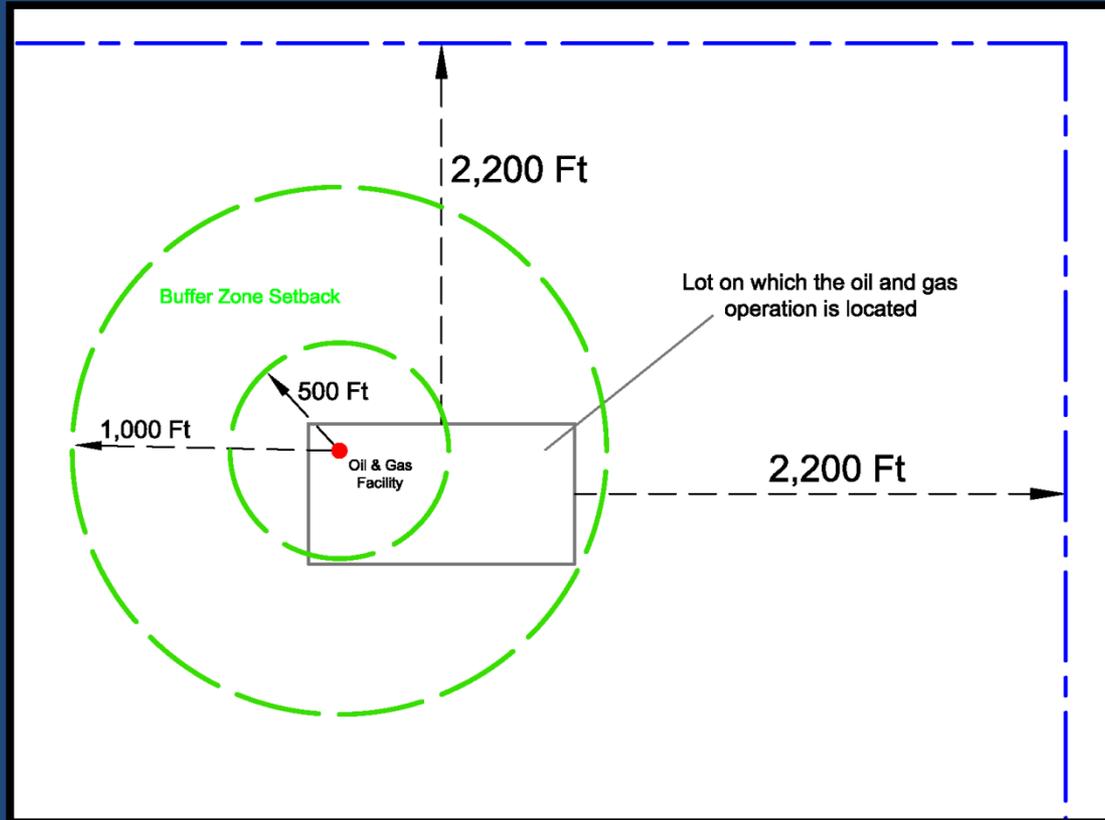


Mailed Notice for Oil & Gas

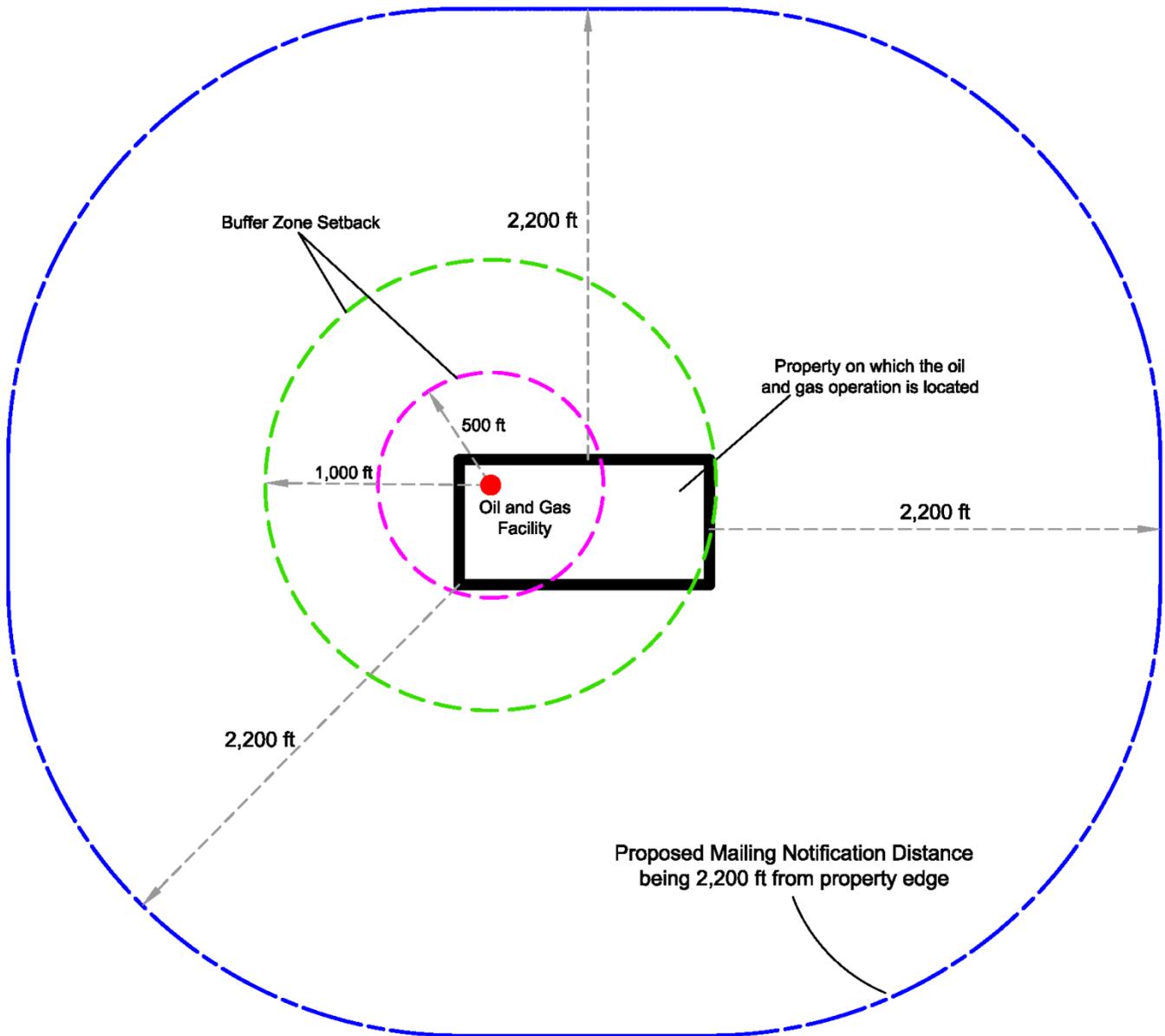
Rationale for 2,200 foot Mailed Notice Distance:

- 1,200 foot Distance Required for Other Projects
- Oil & Gas Operations as Impactful as Other Projects
- Required 1,000' Setback Distances from High-Occupancy Buildings and Outdoor Assembly Areas
- $1,200' + 1,000' = 2,200 \text{ ft.}$

Proposed Mailing Notification Distance With Setbacks



OIL & GAS NOTIFICATION DISTANCE MAP



The proposed 2,200 foot Mailed Notification Distance is indicated by the blue line as measured from the boundaries of the property on which the oil and gas facility will occur. The Buffer Zone Setbacks (500 feet and 1,000 feet from the proposed oil & gas facility) are also illustrated.



CITY OF LOVELAND
 DEVELOPMENT SERVICES DEPARTMENT
 Civic Center • 500 East 3rd Street • Loveland, Colorado 80537
 (970) 962-2346 • FAX (970) 962-2945 • TDD (970) 962-2620

AGENDA ITEM: 4
MEETING DATE: 6/4/2013
TO: City Council
FROM: Greg George, Development Services
PRESENTER: Alison Hade, Community Partnership Office

TITLE:

A Resolution Approving the Grant Funding Recommendation of the Loveland Affordable Housing Commission for the Reallocation of Certain 2011 and 2012 Community Development Block Grant Funds

RECOMMENDED CITY COUNCIL ACTION:

Move to adopt the resolution.

OPTIONS:

1. Adopt the action as recommended
2. Deny the action
3. Adopt a modified action (specify in the motion)
4. Refer back to staff for further development and consideration
5. Adopt a motion continuing the item to a future Council meeting

DESCRIPTION:

This is an administrative action to consider a resolution reallocating \$22,770.15 of 2011-2012 Community Development Block Grant funding and \$35,000 of 2012-2013 Community Development Block Grant (CDBG) funding for a total of \$57,770.15.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

Funds were allocated by the U.S. Department of Housing and Urban Development and were initially appropriated in both the 2011 and 2012 City Budgets. Unspent funding in 2011 was rolled into and appropriated in the 2012 City Budget for a total of \$57,770.15 in unspent funds.

SUMMARY:

In 2011 and 2012, the Housing Authority of the City of Loveland received the following CDBG funding amounts that remained unspent at the end of the 2011-2012 program year:

- \$8,537 to the Larimer Home Improvement Program to provide low interest loans to rehabilitate single family homes
- \$1,294.48 to the Larimer Home Improvement Emergency Program to provide grants of up to \$1,000 to homeowners for a limited number of emergency projects
- \$5,988.67 to the Larimer Home Improvement Emergency Program from funding that was reallocated from Alternatives to Violence in 2012
- \$6,950 to rehabilitate the balusters at Willow Park that was also reallocated from Alternatives to Violence in 2012

In 2012, ArtSpace Projects received \$35,000 for multi-family housing. This funding needed to be spent by December 31, 2012.

The City's policy for use of unspent CDBG grant funds is to ask the Affordable Housing Commission to make a recommendation regarding the use of the grant funds. The Affordable Housing Commission recommends that the \$57,770.15 of unspent CDBG funds be reallocated to Loveland Habitat for Humanity to purchase lots in the Sierra Valley subdivision to build multi-family housing.

REVIEWED BY CITY MANAGER:


LIST OF ATTACHMENTS:

Resolution

RESOLUTION #R-35-2013**A RESOLUTION APPROVING THE GRANT FUNDING RECOMMENDATION OF THE LOVELAND AFFORDABLE HOUSING COMMISSION FOR THE REALLOCATION OF CERTAIN 2011 AND 2012 COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS**

WHEREAS, the City Council of the City of Loveland recognizes the need to provide opportunities for the well-being of less fortunate citizens; and

WHEREAS, the City receives federal Community Development Block Grant (“CDBG”) funds through the U.S. Department of Housing and Urban Development to assist in meeting the housing needs for Loveland citizens with low incomes; and

WHEREAS, the City Council has charged the Affordable Housing Commission with the task of reviewing all “bricks and mortar” grant applications made to the City for CDBG funds related to housing and making a recommendation to the City Council regarding such grant funds distribution; and

WHEREAS, the City Council has, by resolution approved the allocation of CDBG funds to the Housing Authority of the City of Loveland (“HACOL”) for various projects during the 2011 program year, of which a total of \$22,770.15 was not expended by contract deadlines and has reverted to the City; and

WHEREAS, the City Council by resolution approved the allocation of \$35,000 in CDBG funds to ArtSpace, Inc., for multi-family housing, the total amount of which has not been expended by contract deadlines and has reverted to the City; and

WHEREAS, a total of \$57,770.15 in CDBG funds is available for reallocation for projects that must be completed by September 30, 2013; and

WHEREAS, the \$57,770.15 in CDBG funds were initially a portion of the CDBG funds appropriated in the 2011 and 2012 City budgets, and the unspent balance has been rolled into and appropriated in the 2013 City Budget; and

WHEREAS, the Affordable Housing Commission has since reviewed the grant applications made to the City for these CDBG funds, and has recommended that the City Council reallocate the \$57,770.15 to Loveland Habitat for Humanity to purchase lots in the Sierra Valley subdivision to build multi-family affordable housing; and

WHEREAS, the City Council desires to approve the grant funding recommendation of the Affordable Housing Commission.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the recommendation of the Affordable Housing Commission for the reallocation of the unexpended 2011 and 2012 Community Development Block Grant funds is hereby approved and the total of \$57,770.15 is hereby reallocated to Loveland Habitat for Humanity to purchase lots in the Sierra Valley subdivision to build multi-family housing, subject to Agency or Project Owner execution of a subrecipient contract with the City of Loveland on or before July 31, 2013 and completion of the acquisition and expenditure of these sums on or before September 30, 2013.

Section 2. That this Resolution shall be effective as of the date of its adoption.

ADOPTED this 4th day of June, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:



Deputy City Attorney



CITY OF LOVELAND
ECONOMIC DEVELOPMENT OFFICE
 Civic Center • 500 East Third • Loveland, Colorado 80537
 (970) 962-2304 • FAX (970) 962-2900 • TDD (970) 962-2620

AGENDA ITEM: 5
MEETING DATE: 6/4/2013
TO: City Council
FROM: Betsey Hale, Economic Development Director
PRESENTER: Betsey Hale

TITLE:

A Resolution Approving an Incentive Agreement for “Roughing It In Style”

RECOMMENDED CITY COUNCIL ACTION:

Move to adopt the resolution.

OPTIONS:

1. Adopt the action as recommended
2. Deny the action
3. Adopt a modified action (specify in the motion)
4. Refer back to staff for further development and consideration
5. Adopt a motion continuing the item to a future Council meeting

DESCRIPTION:

This is an administrative action to consider a resolution authorizing an incentive agreement. “Roughing It In Style” is a family owned custom furniture manufacturer and retailer. The ownership group is considering a Loveland location on Byrd Drive immediately north of the Thunder Mountain Harley Davidson dealership. The company is asking the City Council to consider a request for a sales tax rebate of one third of the municipal sales taxes over a period of 36 months, not to exceed a total of \$150,000. At the April 16, 2013 Study Session the City Council directed staff to bring the request to a future council meeting for further consideration and approval. The project meets all of the retail incentive standards required by the incentive policy.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

The estimated sales tax to be generated in 36 months of operation is \$450,000. The applicant is asking the City to consider rebating up to but not to exceed \$150,000 of sales taxes paid.

SUMMARY:

Goal #2 of the City of Loveland Economic Development Strategy states, "Make Loveland a destination which attracts businesses, visitors, and consumers." Action Step 6 encourages the City Council to partner with the private sector on the recruitment and retention of retail businesses throughout the City. A retail leakage analysis completed by the City's Executive Fiscal Advisor has established that conservatively over \$12 million of retail sales of furniture and furnishings are leaving Loveland. "Roughing It In Style" market research estimates the potential for annual sales to reach \$5 million. This would generate \$150,000 of sales tax annually for the City. "Sales shifting" from other furniture retailers is estimated to be negligible as this category of custom furniture has limited competition in Loveland. The company will invest \$4.42 million on the project. They will employ 8-10 people initially with only 1 employee relocating from Wisconsin. They plan to add 2-4 employees by the third year for a total of 12-14 employees.

REVIEWED BY CITY MANAGER:



LIST OF ATTACHMENTS:

Resolution
Signed Incentive Agreement (listed as Exhibit A)

RESOLUTION #R-36-2013

**A RESOLUTION APPROVING AN INCENTIVE AGREEMENT FOR
ROUGHING IT IN STYLE**

WHEREAS, Roughing It In Style, a Wisconsin corporation (the “Company”), currently owns and operates two retail furniture and interior design stores in Wisconsin; and

WHEREAS, the Company recently purchased a 4 acre commercial property on Byrd Drive (address yet to be determined) in Loveland (the “Property”); and

WHEREAS, the Company intends to develop the Property to construct and operate a 17,500 square-foot retail store and showroom, with additional warehouse and storage space, similar to those operated by the Company in other locations (the “Store”); and

WHEREAS, before purchasing the Property, the Company asked the City for certain economic incentives to assist the Company in redeveloping the Property in the form of a refund of sales taxes in an amount equal to one-third (1/3) of all City sales taxes collected by the Company and received by the City with respect to transactions in or from the Store during a thirty-six (36) month period; and

WHEREAS, the Company estimates that it’s construction and operation of the Store will employ 8-10 people initially, increasing to 12-14 employees within a 3-year period, with averages between \$35,000 and \$60,000 per year depending on position and qualifications, and estimated revenues of \$4.5-5 million in the first year and \$5-6 million by the second and third year; and; and

WHEREAS, the City Council believes that granting the Company assistance in the form of a refund of sales taxes on the terms and conditions set forth in the Roughing It in Style Sales Tax Refund Agreement attached hereto as **Exhibit A** and incorporated herein (the “Agreement”) will provide significant social and economic benefits to the citizens of Loveland, primarily in the form of jobs, economic development, and increased property tax revenues to the City, and is in the best interests of the public and the City.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the City Council hereby finds that granting the Company a refund of sales taxes as set forth in the Agreement, will serve a public purpose because the Company’s construction and operation of the Store in Loveland will provide significant social and economic benefits to the citizens of Loveland, primarily in the form of jobs, economic development, and increased property tax revenues to the City,

Section 2. That the Agreement attached hereto as **Exhibit A** and incorporated by reference is hereby approved.

Section 3. That the City Manager is authorized, following consultation with the City Attorney, to modify the Agreement in form or substance as deemed necessary to effectuate the purposes of this Resolution or to protect the interests of the City.

Section 4. That the City Manager and the City Clerk are hereby authorized and directed to execute the Agreement on behalf of the City of Loveland.

Section 5. That this Resolution shall be effective as of the date of its adoption.

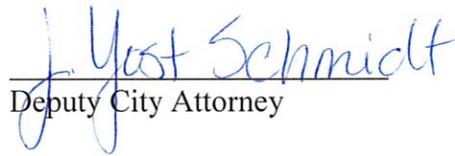
ADOPTED this ___ day of _____, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:



Deputy City Attorney

EXHIBIT A

ROUGHING IT IN STYLE SALES TAX REFUND AGREEMENT

This **SALES TAX REFUND AGREEMENT** is made and entered into this ___ day of _____, 2013, by and between the **CITY OF LOVELAND, COLORADO**, a home rule municipality (the "City"), and **ROUGHING IT IN STYLE.**, a Wisconsin corporation (the "Company").

WHEREAS, the Company currently owns and operates two retail furniture and interior design stores in Wisconsin; and

WHEREAS, the Company recently purchased a 4 acre commercial property, located on Byrd Drive (address yet to be determined) in Loveland (the "Property"); and

WHEREAS, the Company intends to develop the Property to construct and operate a 17,500 square-foot retail store and showroom, with additional warehouse and storage space, similar to those operated by the Company in other locations (the "Store"); and

WHEREAS, before purchasing the Property the Company asked the City for certain economic incentives to assist the Company in redeveloping the Property in the form of a refund of sales taxes in an amount equal to one-third (1/3) of all City sales taxes collected by the Company and received by the City with respect to transactions in or from the Store during a thirty-six (36) month period; and

WHEREAS, by the adoption of Resolution #R-____-2013, the City Council has made a finding that the terms of the this Agreement are in the best interests of the City and serve the public purposes of establishing the operation of the Store, thereby producing significant economic benefits to the citizens of Loveland, primarily in the form of jobs, increased assessed values for property tax purposes, and sales tax revenues to the City; and

WHEREAS, by the adoption of Resolution #R-____-2008, the City Council has approved this Agreement thereby agreeing to the Company's requested refund of City sales taxes as set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

1. Refund of City Sales Taxes Collected and Paid

Subject to the provisions of Section 2 below, and only in the event that the Company shall construct and open the Store on the Property within eighteen (18) months after the date of this Agreement, the Company shall receive a refund of sales taxes in an amount equal to one-third (1/3) of all City sales taxes collected by the Company and received by the City with respect to transactions in or from the Store during the thirty-six (36) month period commencing on the first day of the month following the date upon which the Company opens the Store to the public, up to a maximum refund amount of One Hundred and Fifty Thousand Dollars (\$150,000.00). Said refund shall be paid monthly, in arrears, by the City to the Company.

2. **Multi-Year Fiscal Obligation**

The City's obligations to reimburse the Company as provided in Section 1 above will extend beyond December 31, 2013 and is therefore considered a multi-year fiscal obligation under Article X, Section 20 of the Colorado Constitution and the City's Charter Section 11-6. As such, it is a multi-year fiscal obligation subject to annual appropriation by the Loveland City Council. The City shall have no obligation for the refund of sales taxes as provided in Section 1 above if the refund is being sought or is to be paid on or after December 31, 2013 if the necessary appropriation has not been made by the City Council to authorize such payment. However, the City agrees that the City Manager shall include in the annual budget and appropriation ordinances for 2013 and subsequent years when needed for the City Council's consideration the necessary appropriation to pay up to a total of One Hundred Fifty Thousand Dollars (\$150,000.00) for the refund as provided in Section 1 above.

3. **Applicable Law and Venue**

This Agreement shall be governed by and enforced in accordance with the laws of the State of Colorado. In addition, the hereto acknowledge that there are legal constraints imposed upon the City by the constitutions, statutes, and rules and regulations of the State of Colorado and of the United States, and imposed upon the City by its Charter and Code, and that, subject to such constraints, the parties intend to carry out the terms and conditions of this Agreement. Notwithstanding any other provisions of this Agreement to the contrary, in no event shall any of the parties hereto exercise any power or take any action which shall be prohibited by applicable law. Whenever possible, each provision of this Agreement shall be interpreted in such a manner so as to be effective and valid under applicable law. Venue for any judicial proceeding concerning this Agreement shall be in the District Court for Larimer County, Colorado.

4. **Right of Offset**

The Company agrees that the City shall have the right to withhold and set off any amounts which the Company may owe to the City, whether arising under this Agreement or otherwise, against any amounts which become payable to the Company under this Agreement. For example, but not by way of limitation, if the Company fails to pay any amounts due to the City for services not related to this Agreement, such as utility or other services, the City shall have the right to withhold payment of and set off all amounts owed to the City to reduce any amount to be refunded to the Company for sales taxes under Section 1 above.

5. **Waiver of Confidentiality**

Under C.R.S. § 24-72-204 of the Colorado Open Records Act and under City Code Section 3.16.230, the City is required to maintain as confidential documents that are not subject to public inspection the Company's sales tax information and records that are submitted to and on file with the City. However, notwithstanding these provisions of law or any other applicable provisions of the law, the Company hereby authorizes the City to provide such sales tax information and records to members of the Loveland City Council, provided that such

information and records are provided to City Council members in a confidential communication from the City Attorney.

6. Time is of the Essence-Deadlines

Time shall be of the essence for the performance of all obligations under this Agreement. Upon written request by the Company and for good cause shown, the City Manager is authorized to extend the deadline for construction and opening of the Store on the Property as set forth in Paragraph 1 to a date certain, provided that no event shall the deadline be extended beyond that date which is twenty four (24) months from the date of this Agreement.

7. Assignment

The Company shall not assign or transfer any or all of its interests, rights, or obligations under this Agreement without the prior written consent of the City.

8. Construction

This Agreement shall be construed according to its fair meaning and as if it was prepared by both of the parties hereto and shall be deemed to be and contain the entire Agreement between the parties hereto. There shall be deemed to be no other terms, conditions, promises, understandings, statements, or representations, expressed or implied, concerning this Agreement, unless set forth in writing and signed by the City and the Company.

9. Headings

Section headings used in this Agreement are used for convenience of reference only and shall in no way define, control, or affect the meaning or interpretation of any provision of this Agreement.

10. Notices

Any written notice given under this Agreement and all other correspondence between the parties shall be directed to the following and shall be deemed received when hand-delivered or three (3) days after being sent by certified mail, return receipt requested, to the following addresses:

If to the City: William D. Cahill
City Manager
City of Loveland
500 East Third Street, Suite 330
Loveland, CO 80537

With Copy to: John R. Duval
City Attorney
City of Loveland
500 East Third Street, Suite 330
Loveland, CO 80537

If to the Company: Gerry & Sue Torgeson
Bo Palenske
N11067 County Highway F
Phillips, WI 54555

Either party hereto may at any time designate a different address or person receiving notice by so informing the other parties in writing.

11. Binding Effect

This Agreement shall be binding upon and, except as otherwise provided in this Agreement, shall inure to the benefit of the successors and assigns of the respective parties hereto.

12. Severability

If any provision of this Agreement, or the application of such provision to any person, entity, or circumstance, shall be held invalid, the remainder of this Agreement, or the application of such provision to persons, entities, or circumstances other than those in which it was held invalid, shall not be affected.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

ROUGHING IT IN STYLE.
a Wisconsin corporation

By: Susan K. Torgeson
Print Name: SUSAN K. TORGESON
Print Title: OWNER / SECRETARY

CITY OF LOVELAND, COLORADO

By: _____
William D. Cahill, City Manager

ATTEST:

City Clerk

APPROVED AS TO FORM:

City Attorney



CITY OF LOVELAND
PUBLIC WORKS DEPARTMENT

Administration Offices • 410 East Fifth Street • Loveland, Colorado 80537
(970) 962-2555 • FAX (970) 962-2908 • TDD (970) 962-2620

AGENDA ITEM: 6
MEETING DATE: 6/4/2013
TO: City Council
FROM: Kevin Gingery, Public Works Department
PRESENTER: Kevin Gingery, Senior Civil Engineer

TITLE:

A Resolution Granting a Temporary Easement to Public Service Company of Colorado

RECOMMENDED CITY COUNCIL ACTION:

Adopt the resolution.

OPTIONS:

1. Adopt the action as recommended
2. Deny the action
3. Adopt a modified action (specify in the motion)
4. Refer back to staff for further development and consideration
5. Adopt a motion continuing the item to a future Council meeting

DESCRIPTION:

This is an administrative action to grant a temporary easement to Public Service Company of Colorado (PSCo) to facilitate construction of a new 16" high pressure natural gas main along the west side of Wilson Avenue.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

There is no budget impact associated with this item.

SUMMARY:

PSCo provides natural gas service to the residents of Loveland and the surrounding region. An existing high-pressure natural gas main lies in Taft Avenue and needs to be abandoned due to age and deterioration. PSCo is planning to install a new high-pressure natural gas main through Loveland in order to continue natural gas service in this area. The temporary easement is located along the west side of Wilson Avenue south of 43rd Street. The temporary easement

is within real property owned by the City that functions as a regional detention pond. The temporary easement will not impact the operation of the regional detention pond. PSCo will be required to meet all safety and construction standards and will return the property to existing previous condition.

REVIEWED BY CITY MANAGER: 

LIST OF ATTACHMENTS:

Resolution

Temporary Easement (Exhibit A to the Resolution)

RESOLUTION #R-37-2013

A RESOLUTION GRANTING A TEMPORARY EASEMENT TO PUBLIC SERVICE COMPANY OF COLORADO

WHEREAS, Public Service Company of Colorado (“PSCo”) has requested that the City of Loveland grant PSCo a non-exclusive temporary easement for construction, access, and staging purposes associated with PSCo’s installation of gas facilities within the adjacent right-of-way, Wilson Avenue; and

WHEREAS, the Public Works Department reviewed PSCo’s request and found that the proposed temporary use will not affect the City’s operations at that location; and

WHEREAS, the City Council desires to grant the requested temporary easement on the terms and conditions set forth in the “Public Service Company of Colorado Temporary Easement.”

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the “Public Service Company of Colorado Temporary Easement,” attached hereto as Exhibit A and incorporated herein by reference (“Temporary Easement”), is hereby approved.

Section 2. That the City Manager and the City Clerk are hereby authorized and directed to execute the Temporary Easement on behalf of the City of Loveland.

Section 3. That the City Manager is authorized, following consultation with the City Attorney, to approve changes to the form or substance of the Temporary Easement as deemed necessary to effectuate the purposes of this Resolution or to protect the interests of the City.

Section 4. That this Resolution shall be effective as of the date of its adoption.

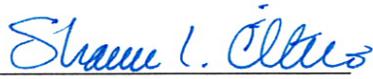
ADOPTED this 4th day of June, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:



Assistant City Attorney

EXHIBIT A (page 1 of 2)



Sheet 1 of 2

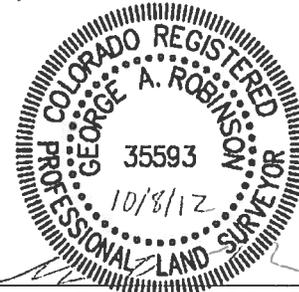
**CITY OF LOVELAND TE PARCEL
(BUCK FOURTH SUBDIVISION)**

A parcel of land lying in the Northeast Quarter of Section 4, Township 5 North, Range 69 West, of the 6th Principal Meridian, County of Larimer, State of Colorado, said parcel also being a part of Tract B as shown on Buck Fourth Subdivision as described under Reception Number 20060084244, Larimer County Records, said parcel being more particularly described as follows:

The east 50.00 feet of said Tract B;

Containing 18,895 square feet (0.434 acres), more or less.

The author of this description is George A. Robinson, PLS 35593, prepared on behalf of SEH Inc., 390 Union Boulevard, Suite 630, Lakewood, CO 80228, on October 8, 2012 under Job No. PSCOC 116546-4.0, for Public Service Company of Colorado, and is not to be construed as representing a monumented land survey.

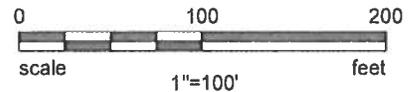
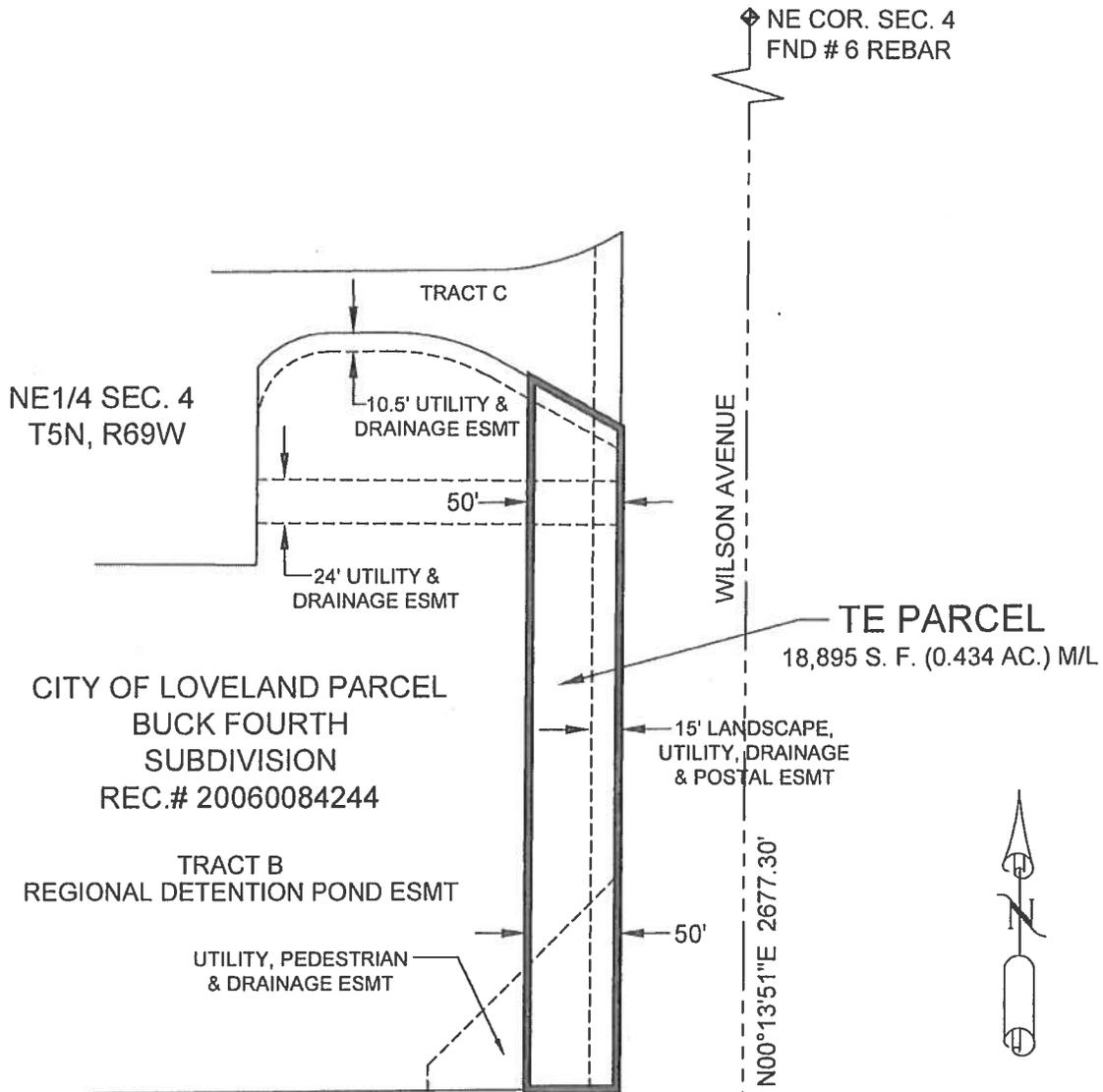


George A. Robinson, PLS 35593

(page 2 of 2)

SHEET 2 OF 2

EXHIBIT A CITY OF LOVELAND TE PARCEL (BUCK FOURTH SUBDIVISION)



E1/4 COR. SEC. 4
3-1/4" ALUM CAP
LS 16415



Suite 630
Lakewood, Colorado 80228
Phone: 303-586-5800



CITY OF LOVELAND
WATER & POWER DEPARTMENT
 200 North Wilson • Loveland, Colorado 80537
 (970) 962-3000 • FAX (970) 962-3400 • TDD (970) 962-2620

AGENDA ITEM: 7
MEETING DATE: 6/4/2013
TO: City Council
FROM: Steve Adams, Water and Power Department
PRESENTER: Greg Dewey, Civil Engineer – Water Resources
 Lindsey Bashline, Water and Power Department

TITLE:

A Resolution Adopting the City of Loveland Water Conservation Plan

RECOMMENDED CITY COUNCIL ACTION:

Adopt the resolution.

OPTIONS:

1. Adopt the action as recommended
2. Deny the action
3. Adopt a modified action (specify in the motion)
4. Refer back to staff for further development and consideration
5. Adopt a motion continuing the item to a future Council meeting

DESCRIPTION:

This is an administrative action to approve a resolution adopting the City of Loveland Water Conservation Plan. Both the Construction Advisory Board (CAB) and the Loveland Utilities Commission (LUC) unanimously recommend the adoption. The City Council also reviewed the Plan at its May 14, 2013 Study Session and indicated conceptual approval.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

SUMMARY:

According to Colorado's Water Conservation Act of 2004 (HB 1365), all covered entities – retail water providers who sell 2,000 acre feet or more of water annually – must have a water efficiency plan on file with the state that has been approved by the Colorado Water Conservation Board (CWCB). Staff has updated the City's May 1996 Water Conservation Plan and prepared the Plan in adherence to the prevailing state statutory requirement.

In 2012, Loveland Water and Power received in kind services from Recharge Colorado and Symbiotic Engineering to help secure assistance from a consultant, Great Western Institute (GWI). GWI was able to perform the modeling necessary to forecast savings from various water conservation measures, make comparison of plans from other Colorado communities and provide assistance in drafting the Water Conservation Plan.

The Water Conservation Plan includes:

- A summary of the existing water system
- Summary of water demands and historical demand
- Integrated planning and Water efficiency benefits and goals
- Selection of water efficiency activities
- Implementation and monitoring plans

The Water Conservation Plan focuses on assisting future water use efficiency within the utility's service area by:

- Managing City water use both indoor and outdoor
- Identifying and implementing measures and programs that are expected to reduce summertime peak day water demand
- Assisting customers that wish to improve their water use efficiency

Overall, the City recognizes that it is a combination of its actions and the actions and behaviors of its customers that will determine whether or not the water conservation measures and programs presented in the Water Conservation Plan are successful. Therefore, the City is committed to implementing those efforts that will support the long-term sustainability and efficacy of the utility to provide affordable, reliable water to its customers in a manner that the City's citizenry justifiably depends upon.

Specific goals that the City anticipates to achieve include:

- Reducing summertime peak daily demands in the future by about 1 mgd (or about 3 acre-feet (AF) per day) during above average demand periods by 2016
- Reducing non-revenue water from current levels to 10-11% of total treated water by 2020 (which is a reduction in real and apparent water loss of about 575 acre-feet)
- Developing water rates that accurately reflect the cost of service for providing reliable, secure and sustainable water supplies, including infrastructure management and maintenance, plus the impact of changing customer water use behavior patterns in the future
- Supporting the City's sustainability efforts in part by reducing City water use (indoor and outdoor) by another 5% by 2020
- Developing technical assistance programs that will support improved water use efficiency by the City's large commercial and irrigation only users

The Draft Water Conservation Plan was available for a 60-day public comment period from February 21, 2013 through April 21, 2013. Staff presented the Draft Water Conservation Plan to the LUC on February 20, 2013, to the City Management Team on April 9, 2013, to the LUC on

April 24, 2013, and to the CAB on April 24, 2013. Revisions reflecting comments received at those meetings were made, with a Draft Water Conservation Plan presented at the May 14, 2013 City Council Study Session. The Water Conservation Plan may be viewed in its entirety at www.cityofloveland.org/WCP.

Following the adoption of the Water Conservation Plan by Council, staff will submit the Water Conservation Plan to the CWCB. The objective is final adoption by the CWCB of a plan that establishes water conservation in the City's framework.

REVIEWED BY CITY MANAGER:



LIST OF ATTACHMENTS:

Resolution
Water Conservation Plan (Exhibit A to the Resolution)
PowerPoint Presentation

RESOLUTION #R-38-2013

A RESOLUTION ADOPTING THE CITY OF LOVELAND WATER CONSERVATION PLAN

WHEREAS, Colorado Revised Statutes Section 37-60-126 requires any entity with a legal obligation to supply, distribute, or otherwise provide water at retail to domestic commercial, industrial, or public facility customers, and that has a total demand for such customers of 2,000 acre-feet or more of water, to develop, adopt, make publically available, and implement a water conservation plan pursuant to which the entity shall encourage its customers to use water more efficiently; and

WHEREAS, Section 37-60-126 further requires any entity that seeks financial assistance from the Colorado Water Conservation Board (“CWCB”) or the Colorado Water Resources and Power Development Authority to submit to the CWCB a copy of the entity’s water conservation plan for the CWCB’s approval prior to the release of new loan proceeds; and

WHEREAS, on June 4, 1996 by Resolution #R-53-96, the Loveland City Council adopted a water conservation plan; and

WHEREAS, an updated water conservation plan has been prepared by City staff in consultation with Great Western Institute; and

WHEREAS, in accordance with the requirements of Section 37-60-126, the updated water conservation plan was made available for a sixty-day public comment period beginning February 21, 2013 and ending April 21, 2013 and has been revised, where appropriate, to reflect public comments received; and

WHEREAS, the City Council desires to adopt the updated water conservation plan and submit it to the CWCB for approval.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the “City of Loveland Water Conservation Plan” dated June 2013, a copy of which is attached hereto as Exhibit A and incorporated herein by reference (“Water Conservation Plan”), is hereby adopted by the Loveland City Council. A copy of the Water Conservation Plan shall be placed on file with the Loveland City Clerk. The Water Conservation Plan shall supersede and replace the City’s previous water conservation plan adopted on June 4, 1996 by Resolution #R-53-1996.

Section 2. That the City Manager is hereby directed to submit the Water Conservation Plan to the CWCB for approval.

Section 3. That this Resolution shall take effect as of the date of its adoption.

ADOPTED this 4th day of June, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

Shawn L. Oltus
Assistant City Attorney



City of Loveland

Water Conservation Plan

June 2013



Prepared by: **GREAT WESTERN INSTITUTE**
Littleton, CO

through a generous grant from the Governors Energy Office (GEO) through Symbiotic Engineering, LLC, Boulder, CO

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Foreword

Loveland Water and Power has a long history of promoting the responsible use of water in the community, since water is a precious resource in this semi-arid region of the Western United States. The City has long utilized multiple tools to ensure that its citizens and customers are provided with safe and sufficient water supplies now and for future generations. To this point, the City and its citizens have long shared an enlightened relationship, whereby the City's customers understand and value the importance of a reliable and sustainable water supply, and together the utility and the local citizenry work to manage this precious resource responsibly and with mindfulness.

The City of Loveland's Water Utility has been delivering drinking water to customers in and near Loveland since 1887. Today, the Water Utility is part of the Department of Water and Power and serves water to a population of over 68,000 with a service territory of an estimated 32 square miles. Since 1990, the City has seen an increase of nearly 35% in the population served by the utility, which is consistent with the population boom experienced by much of the north Front Range. However, the City and its customers have been able to work together to limit water restriction practices that many other Front Range communities needed to implement during the 2002 and 2003 drought when water supplies became short. Since the drought, the City has been able to limit water demand increases through messaging with its engaged citizenry.

As with other Colorado Front Range communities, the City expects to realize growth and increased water demands over the coming decade. Although the City maintains a diversified water rights portfolio that will meet the needs of the growing community, the current infrastructure has limits that will require expansion and improvement to meet the predicted increases in peak day demands and average annual water delivery and wastewater treatment. In addition, the City is responsible to its customers to provide water supplies, both treated water and raw water, reliably and cost effectively. Therefore, the City has a number of reasons to guide and support customer water use efficiency during the coming years.

The City's water conservation planning effort, which is documented in this report, focuses on assisting future water use efficiency within the utility's service area by:

- Managing City water use both indoor and outdoor;
- Identifying and implementing measures and programs that are expected to reduce summertime peak day water demand; and
- Assisting customers that wish to improve their water use efficiency.

Overall, the City recognizes that it is a combination of its actions and the actions and behaviors of its customers that will determine whether or not the water conservation measures and programs presented in this Plan are successful. Therefore, the City is committed to implementing those efforts that will support the long-term sustainability and efficacy of the utility to provide affordable, reliable water to its customers in a manner that the City's citizenry justifiably depends upon. The City has prepared this Water Conservation Plan in adherence to the prevailing state statutory requirements according to Colorado's Water Conservation Act of 2004 (HB 1365).

Section 1

Overview of the City’s Water System

The City of Loveland was incorporated in the 1880s, and has been acquiring and administering water rights ever since. The City began acquiring water rights to use water in the Big Thompson River. Some water rights were purchased outright or filed on the river by the City, while others were dedicated to the City. Early transfers of the No. 1 priority on the Big Thompson River and domestic rights diverted at the Loveland pipeline form the base of the City’s water rights. Early plats of the City’s annexation show dedication of water rights which were appurtenant to the land becoming part of the City. In 1960, the City began formally requiring dedication of water rights prior to development. The City has historically accepted native ditch shares/inches, Colorado-Big Thompson Project water and cash-in-lieu of water rights to satisfy raw water requirements for development. The city owns about 12,000 units of the CBT Project. The City was also one of the original “Six Cities” to invest in the Windy Gap Project. None of Loveland’s water supply comes from groundwater. Its sources are renewed each year with snow melt and rain.

Currently, the City has a firm yield¹ of approximately 24,590 acre feet (AF) per year, with another 2,800 AF expected as part of the Windy Gap Firming project. In current years, the greatest annual demand for a combination of potable and non-potable² water by the community served by the City’s water utility was about 14,300 AF in 2006. Table 1 summarizes the water demand and approximate population served in recent years within the City’s service area (which is shown in Figure 1).

Table 1 – Summary of Population Served and Treated Water Demand - 2005 to 2012

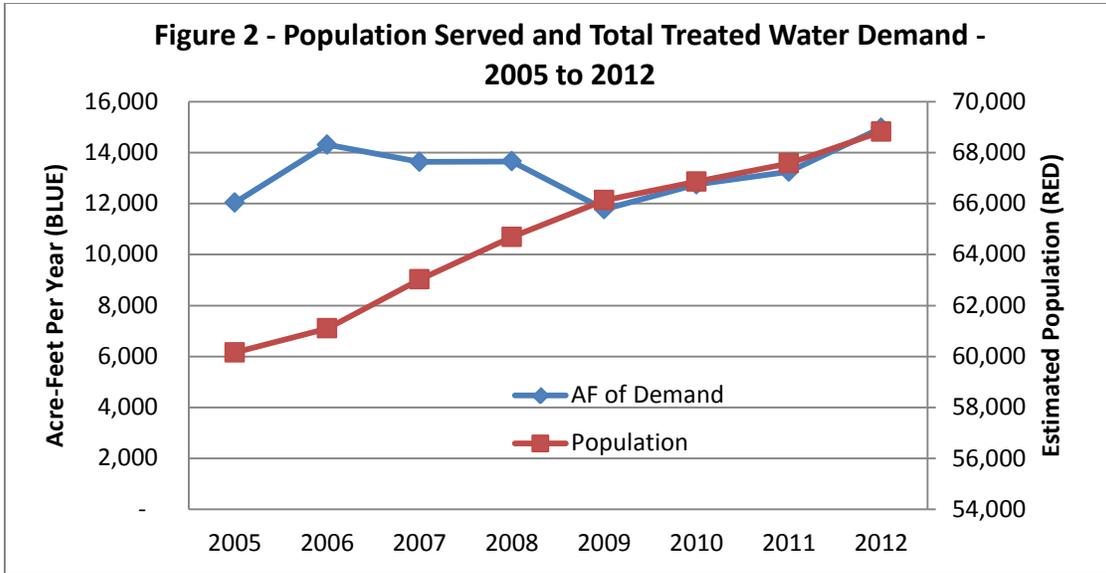
Year	Approximate Population Served ³	Treated Water Demand (AF)
2005	60,157	12,040
2006	61,098	14,309
2007	63,025	13,636
2008	64,690	13,652
2009	66,132	11,773
2010	66,572	12,752
2011	67,455	13,284
2012	68,825	14,970

Note that the City’s population has increased each year since 2005; however water demand peaked in 2006, and has maintained a slight downward trend till 2012. Figure 2 further illustrates this observation.

¹ Firm yield is based on the yield of the City’s water rights portfolio in conditions equivalent to a 100-year drought.

² Currently, the City only has water demand that is for treated water. In the future, raw water use may be used to irrigate municipal facilities and other large areas of turf, as deemed appropriate.

³ From the “Annual Data and Assumptions Report – January 1, 2011 by City of Loveland Community and Strategic Planning.



The City currently provides water to approximately 24,673 connections or accounts for commercial and residential customers, including connections for customers both inside and outside of the City limits. Table 2 presents a summary of the type and number of water customers currently in water service.

Table 2 – Summary of City Water Customers⁴ – March 2013

Customer Type	Number of Connections	% of Total Connections
Residential		
Inside City Limits		89.9%
Single Family	20,176	
Multi-Family	1,245	
Outside City Limits		3.7%
Single Family	860	
Multi-Family	38	
Special Base	4	
Irrigation Only		1.4%
Inside City Limits	148	
Outside City Limits	4	
Commercial		4.7%
Inside City Limits	1,083	
Outside City Limits	89	
City Uses (Inside City Limits)	26	0.3%
Total	24,673	100%

⁴ The City also has water use tracked related to hydrant use (for construction), construction water use, and through an interconnect with the Little Thompson Water District, Fort Collins Loveland Water District and the City of Greeley. These customers are tracked separately from those summarized in Table 2.

Table 3 provides a summary of billed water demand for each of the City’s customer categories for the period from 2005 to 2011. An explanation of the customer categories used in this table is provided below.

Residential – These two categories (Inside and Outside City Limits) include combined single family and multifamily uses, as well as irrigation only demand, since the City did not differentiate these uses until 2008. After 2008, the City maintained different customer categories for single family and multifamily uses, as well as irrigation only taps for residential customers.

Commercial – These two categories (Inside and Outside City Limits) include all commercial uses, including special base customers.

City Uses – This category include all City facilities that are currently metered – both for indoor and outdoor use. Note that a small number of City facilities are currently unmetered, and that this water use is currently tracked as non-revenue water.

Other Uses – This customer category tracks the water use related to industrial water use and water transferred to (and from) the Little Thompson Water District as wholesale water. Note that the City has not had customers tracked within the industrial customer category since 2007 when the water rate structure provided incentives for these customers to change to the commercial customer category. Therefore, post-2007 “Other Water Use” only includes wholesale transfers to (and from) Little Thompson Water District⁵.

Ranch – The City maintains a stand pipe at its Service Center that can be used by any customer via pre-paid credit cards at a rate of \$1.00 per 300 gallons. Water obtained from the stand-pipe has been used for watering livestock, dust suppression, and other local uses. All water delivered through the stand pipe is metered and billed.

Hydrant – The City also maintains a hydrant water use system, which is also a “pay as you go” program typically used to support construction contractors. The permit to use hydrants for construction water includes meter rental and a security deposit on the meter, as well as billed water use at the rate of \$1.00 per 300 gallons. Most water delivered through this program is metered and billed⁶.

Non-Revenue Water – This category of water use tracks the difference between treated water produced by the City and total water sold. The difference between these two

⁵ This is the net amount of water purchased wholesale from Little Thompson Water District. Whichever entity received a net of positive water into their service area has to transfer Colorado Big Thompson shares to these uses, as well as pay the treated water charge.

⁶ The actual amount of hydrant water being delivered by the City could be characterized by a system wide water audit.

Table 3 – Summary of Billed Water By Customer Category

Year	Billed Water (1000s Gallons)								Total Billed	Total Non-Revenue	Total Demand	
	Residential		Commercial		City Use	Other Uses	Ranch	Hydrant			(1000 gallons)	Acre-Feet
	Inside City	Outside City	Inside City	Outside City								
2005	2,623,544	133,597	466,292	21,020	53,628	93,248	4,610	97,001	3,492,940	430,360	3,923,300	12,040
2006	3,186,549	150,123	517,424	22,288	68,868	101,227	5,102	123,473	4,175,054	487,646	4,662,700	14,309
2007	2,989,778	139,242	515,274	20,981	68,262	54,810	3,683	53,921	3,845,950	597,250	4,443,200	13,636
2008	2,967,702	140,831	590,295	18,266	69,194	5	4,033	78,957	3,869,283	579,317	4,448,600	13,652
2009	2,516,008	120,300	510,429	14,786	56,127	0	3,166	41,004	3,261,820	574,580	3,836,400	11,773
2010	2,816,305	133,651	538,454	16,429	68,156	1,295	3,707	32,669	3,610,666	544,734	4,155,400	12,752
2011	2,875,155	134,224	572,683	16,680	71,316	1,221	3,584	27,905	3,702,767	625,956	4,328,723	13,284
2012	2,722,723	148,685	639,077	16,517	76,257	1,488	4,112	19,464	4,213,854	651,396	4,865,250	14,970

accountings of water is considered as non-revenue water based on standards set forth by the American Water Works Association⁷. Non-revenue water includes real and apparent losses. Real losses are water that is lost due to leaks; whereas apparent losses are due to unauthorized uses, metering inaccuracies, and unmetered uses and/or metered and unbilled uses. Non-revenue water is further described below.

Water Supply Limitations

As previously indicated, the City has a robust water rights portfolio that has been developed over the past 130 plus years. The firm yield that exists as a result of the City's diligence is adequate to provide for current demands even within the 100 year drought.

Between 1986 and 1988 the City initiated work on a two-phase drought study using the services of the engineering firm of Camp, Dresser & McKee, Inc. Phase I of the study contained a recommendation that the City prepare to meet its full demands during a drought event with an average recurrence of 1-in-100 years, which translates into a 1% chance that in any year the City could not meet demands without curtailment. Council accepted Phase I the report, including the recommendation, on October 7, 1986, and the 1-in-100 year level of drought protection remains the goal for the City's raw water supply planning.

This planning policy requires developing sufficient supplies to meet the City's full water demand during the 1-in-100 year drought without water use restrictions. The LUC and City Council reaffirmed this policy as part of the approval process for the original Raw Water Master Plan in 2005 and the update in 2012.

However, the City's infrastructure currently limits the amount of treated water that can be delivered for potable use to the City's customers at 30 million gallons a day (mgd). Although the treatment capacity is adequate to meet average daily demands, summer peak day demands have exceeded 27 mgd in the past three years⁸, and are expected to increase as population grows and summertime demands increase.

The City has plans to expand the treatment plant capacity by 8 mgd over the current planning horizon. The timing and cost of the water treatment plant expansion will be discussed in later sections of this Plan.

Noteworthy is that the City maintains an interconnect with the Little Thompson Water District, Fort Collins Loveland Water District and the City of Greeley, which allows treated water to pass between the service area of the two entities on an as-needed basis. This interconnect may provide an emergency source of treated water or support peak daily water demands in excess of the City's current treatment capacity, if needed, until the treatment plant expansion can be constructed.

⁷ AWWA Manual M-36 defines standard practices for water loss control and management for water utilities.

⁸ Water use data for this report covers monthly and daily use from 2005 to 2011.

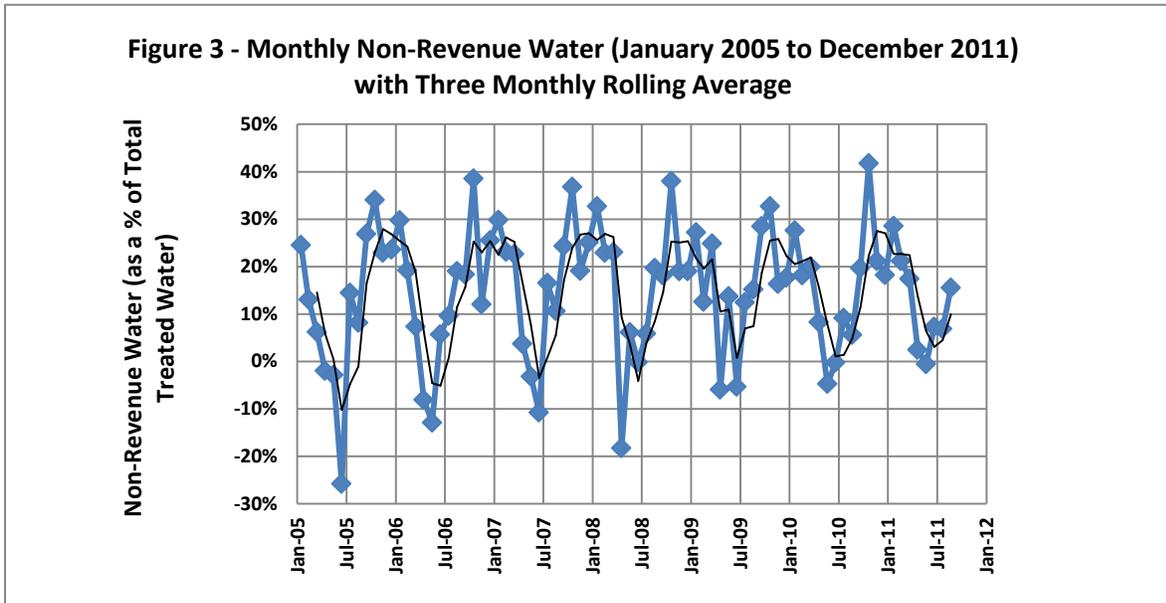
The City’s wastewater treatment plant capacity may also limit current treated water deliveries, since indoor water use requires wastewater treatment to capture grey and black water for cleansing before it is returned to local receiving waters.

Water Reuse in the City

The City has limited opportunities for reusing treated wastewater since a substantial portion of the City’s water portfolio is direct diversions from east slope supplies or Colorado Big Thompson water, which cannot be reused. A portion of the City’s water portfolio does include some reusable supply from its reservoirs and some Windy Gap allocations. However, reusing these water sources reduces overall firm yield, so the City does not practice reuse in its normal operations.

Non-Revenue Water

Based on those data presented in Table 3, the City has an average non-revenue water of about 14%⁹, dating back to 2008 when it recategorized its customers into those categories that it currently uses. Non-revenue water changes monthly and appears to vary seasonally, as depicted in Figure 3. The reason for this seasonality is unclear; however, it appears that in late-spring/early-summer each year non-revenue water is calculated to be negative. This trend has been reduced each year since 2005, as evidenced by the 3-month rolling average which is positive in 2009, 2010 and 2011.



Note: The definition of non-revenue water is as defined by the American Water Works Association Water Audits and Loss Control Programs (M-36)

Non-revenue water, which can be segregated into several different “accounts” as depicted in Figure 4, is expected to consist of the following components for the City.

⁹ Non-revenue water has ranged from 13 to 14.9% annually since 2008.

Unbilled Authorized Consumption – associated with unmetered, authorized water uses such as may be occurring in a small number of City parks; and metered, but unbilled water uses such as may be occurring at the water and/or wastewater treatment plants, or with some unactive water accounts that may be using water (not as water theft but through billing program and/or accounting glitches, for example).

Apparent water loss – associated with inaccurate and malfunctioning meters and with unauthorized water uses (i.e., water theft).

Real water loss – associated with detected and repaired and undetected transmission line, distribution system, and service line leaks on the supply side of customer meters. Leaks on the demand side of customer meters are not included in the accounting of non-revenue water.

Figure 4 – Overview of Treated Water Accounts As Defined by AWWA M-36

System Input Volume	Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption	Non Revenue Water (NRW)
			Billed Un-metered Consumption	
		Unbilled Authorized Consumption	Unbilled Metered Consumption	
			Unbilled Un-metered Consumption	
	Water Losses	Apparent Losses (Commercial Losses)	Unauthorized Consumption	
			Customer Meter Inaccuracies and Data Handling Errors	
		Real Losses (Physical Losses)	Leakage in Transmission and Distribution Mains	
			Storage Leaks and Overflows from Water Storage Tanks	
Service Connections Leaks up to the Meter				

It is likely that a portion of the City’s current 14% non-revenue water includes untracked authorized uses within City facilities and at City parks such as the fire training grounds - albeit a small amount, this may be a significant (i.e., measurable) use. The City may also have a small number of inaccurate water meters installed on customer taps, or minor billing and/or accounting glitches that are included in the 14% of non-revenue water. Future water conservation programs that the City will be considering will include a formal audit of the City’s meter testing, and accounting systems, and a review of all water use at City facilities. The City has already begun this audit process.

Meter Testing and Replacement Policies and Procedures

In July 1979, the Loveland City Council approved an ordinance requiring water meters for all new construction and for existing homes when ownership changed hands. Before that time, the City only required meters for commercial accounts within the City and for all accounts served outside the City limits. Less than a year later, June 1980, the council passed another ordinance requiring meters for all water customers.

By 1981, the City was the first municipality in the state to be completely metered, at a cost of over \$3 million. The average annual water usage declined by 20 percent. Before metering, the water treatment plant’s maximum day demand was 22 million gallons per day. After metering, the maximum day demand was 16.7 million gallons per day (City of Loveland, 1989). On a per capita basis, these reductions remain reflective in today’s uses.

Since being fully metered in 1981, the City has maintained an aggressive meter testing and replacement program. This program involves annual testing of most meters that are 1 ½ inch or greater in service in the City (see Table 4 for an inventory of meter types and sizes currently maintained by the City). The City tested 420 meters last year, 400 meters in 2011 and 516 in 2010. Meters that are subjected to testing are evaluated for accuracy and either replaced or repaired to restore meter accuracy and maintain the accuracy of City water billings.

Table 4 – Current Inventory of Meters Maintained by the City (February 2013)

Meter Size (inches)	Count
0.75	23,616
1	729
1.25	1
1.5	375
2	274
3	56
4	27
6	7
8	1
TOTAL	25,086

Meters that are less than 1 ½ inch are tested and/or replaced on an as needed basis based on bringing into service new customers, observed meter damage, or observed losses in meter accuracy detected by meter readers and/or utility billing services.

A limited number of new meters installed for large water use customers have included automated meter reading (AMR) technology to allow for remote data collection (e.g., drive by) of water use. Expansion of the AMR program may be considered by the City as part of the Water Conservation Plan implementation.

Water Rates and Billings

The City maintains a comprehensive water use billing program that provides for different rates for each of its different customer categories. The rates include a base fee and a water use fee. Overall, the City maintains a water rate structure that is designed to create revenue to cover both its fixed and variable expenses – with the base fee covering the fixed expenses and the use fee covering the variable expenses. In this way, the City has more predictable revenue generation based on actual operating costs (see Appendix A for details).

In 1887, the Water Utility established a flat annual billing rate, based on the type of dwelling and the number of fixtures. Customers paid the yearly fee in advance. Until 1968, water rates were based on a flat fee determined by fixture counts. Keeping track of the number of bathrooms and toilet fixtures in homes as the City grew became increasingly difficult, and in July 1968, the City developed a flat rate charge per family based upon average water usage. Since the installation of meters in 1981, the monthly billing has reflected actual water use, and uses a uniform rate for residential customers.

In 1989 City Council approved a series of rate increases that specified water rates from 1990 to 1997. A portion of the revenues from these rate increases allowed Loveland to purchase additional CBT units, cash fund the Green Ridge Glade Reservoir expansion, and set aside money to pay off the City's obligation in the original Windy Gap Project. In 2001, once the specific needs for the rate increases were met, the City lowered rates by 33 percent. Rates are set periodically using a cost of service methodology, meaning that the rates are designed to reflect as closely as possible the real cost of providing water service to customers.

The City bills its customers for water monthly, except for those water users that utilize “ranch” and “hydrant” water sources. These two water services are provided on an as-needed “pay as you go” basis using pre-paid credit cards and use fees.

The City maintains a couple of noteworthy incentive programs within its rate structure to support water use efficiency. The first is the City's excess water use surcharge that it accesses to commercial accounts that exceed a specific individual base amount of annual water use. This fee is accessed to aid in recovering the cost of replacement water for those large water users.

The second is the City's impact fee credit for irrigation only taps that take advantage of native plantings and other outdoor water use efficiency practices to reduce the tap size required to serve the property, as well as the water right dedication or raw water requirement. The City has been piloting the efficacy of native plantings to reduce expected irrigation water requirements in various settings such as at the Medical Center of the Rockies¹⁰.

¹⁰ The pilot program has involved the installation of multiple hydrozones to evaluate Xeric landscape in various settings including boundary landscapes, parking lot islands, heliport landing area, etc.

The City conducts water rate studies to correctly and fairly price its water and services, on a three to five year cycle. A water rate study was just finished in 2012, with another planned for 2015. Additional water rates evaluations, post-2015, will be considered for inclusion in the implementation of this Plan.

Leak Detection and Repair

The City has maintained a proactive leak detection program for many years. Currently, the City has implemented an acoustic emissions program that detects distribution system leaks between adjacent valves. In 2011, the City had a goal of testing 50 miles of pipe; however, the number of leaks that surfaced during this time diverted staff from finding leaks to fixing leaks. Nonetheless, the technology detected 6 leaks in 2011 that had not surfaced, saving an estimated 310,000 gallons per day (gpd) in water losses (and another 2 leaks in 2012 saving an additional 130,000 gpd).

Despite the City efforts, the number of leaks being detected and fixed by the City in recent years (and the related water loss) has been increasing, as illustrated in Table 5. Based on this data, the repairs conducted by the City have reduced water loss by approximately 42 million gallons in the past 4 years. This represents about 1% of the City’s total treated water demand or about 7% of the City’s non-revenue water in 2011 (not including the found leaks listed above).

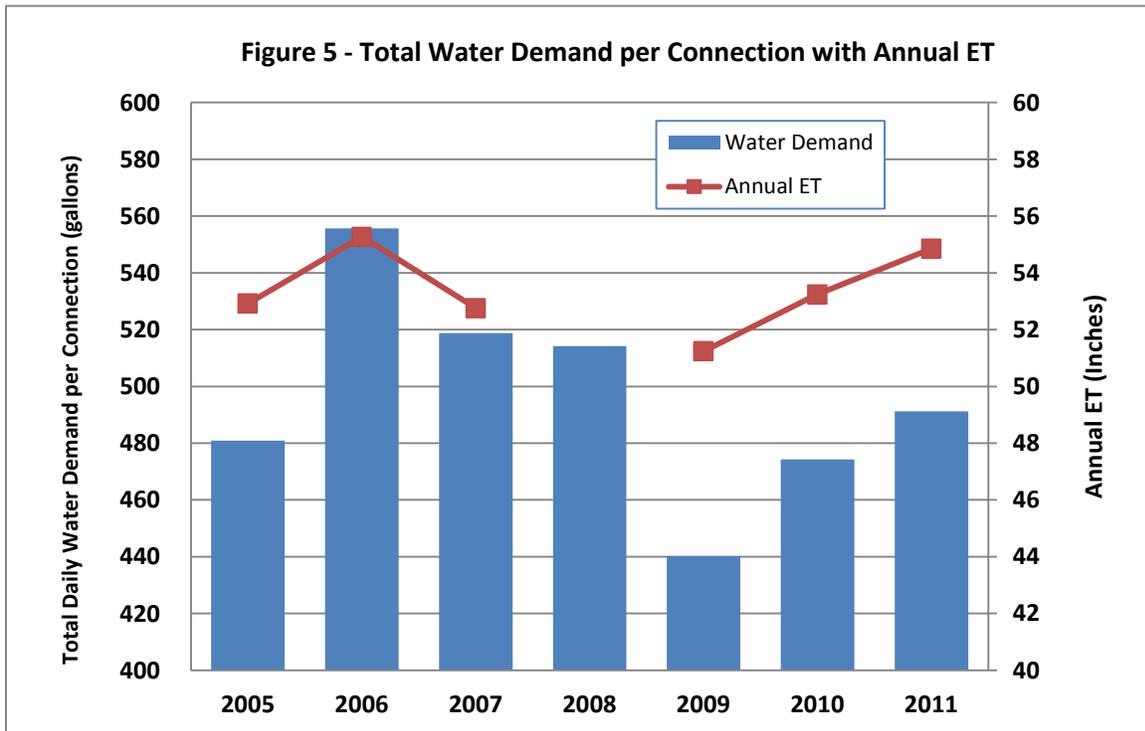
Table 5- Summary of Leaks Detected and Repaired by the City

	2007	2008	2009	2010	2011	2012
Number of Leaks	73	62	61	62	100	76
Estimated Losses (millions of gallons)	n/a	6.2	3.1	8.9	23.9	27.8

Section 2

Past Water Use Trends and Ongoing Conservation Programs

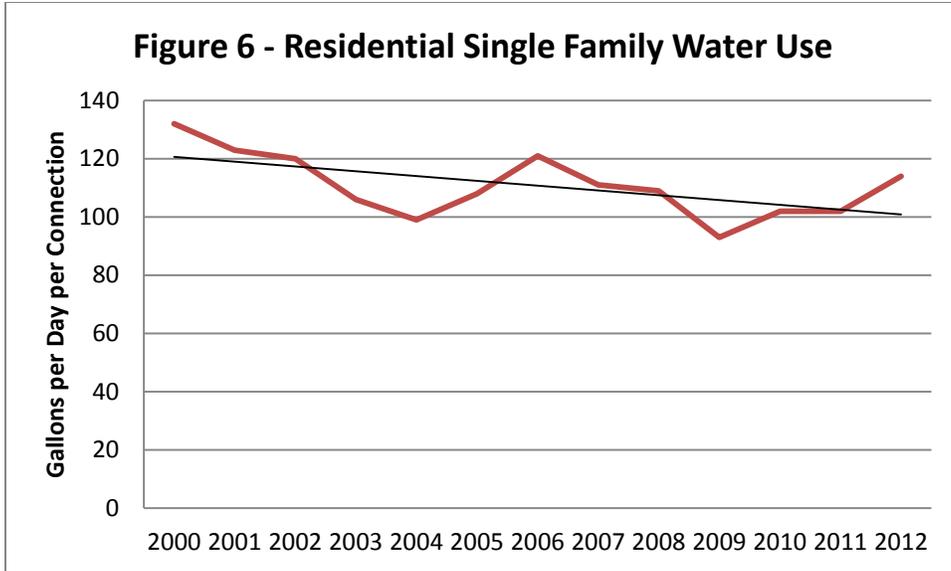
As previously indicated, the City’s total water demand has not increased in relation to the City’s population, as illustrated in Figure 2. Figure 5 presents the change in per connection water use observed over the past 7 years. Figure 5 also presents the observed evapotranspiration for the years 2008 through 2011¹¹. As can be seen in Figure 5, total water demand per connection correlates well to annual ET – meaning that total demand is substantially influenced by outdoor irrigation needs of the community based on prevailing weather conditions (i.e., precipitation, wind and temperature).



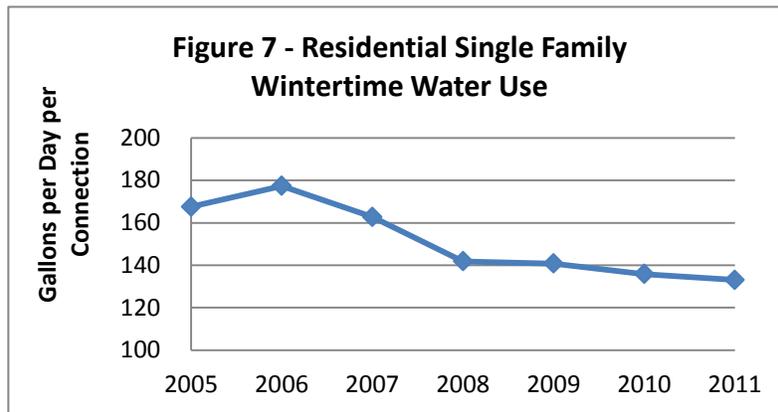
ET- evapotranspiration

Figure 6 demonstrates the observed water use of a residential single family over the last twelve years. While use varies slightly from year to year, overall gallons per capita day demonstrates a downward trend.

¹¹ ET for Alfalfa is based on weather data maintained by Northern Water for the Loveland station at <http://www.northernwater.org/WaterConservation/WeatherandETData.aspx>.



This downward trend can further be demonstrated in indoor water use within the City, which is illustrated in Figure 7. Figure 7 presents the daily water use by single family residential connection for the winter months only. This figure indicates that since 2006, average daily water use in the winter has dropped. Noteworthy is that starting in 2008, the residential water use category was revised, segregating single family from multifamily accounts. For this reason, the observed drop from 2007 to 2008 shown in Figure 7 may not be a result of true indoor water savings. However, since 2008, average daily indoor water use for single family residential customers has dropped by 6%.



The 6% drop in residential wintertime per connection use correlates well to expected passive savings that were reported by the CWCB (2010). Specifically, passive savings are those water demand reductions that have occurred, and will continue to occur, as a result of new technology in appliances and fixtures improving customer water use efficiency independent of local water conservation programs conducted by water providers. Residential customer toilets, dishwashers, and clothes washing machines have become substantially more water efficient, and as customers replace aging and broken appliances and fixtures, passive savings have, and will continue to occur organically within the water utility’s service area. To this

end, the City has and is expected to continue to see average indoor residential demand decrease into the future as more customers replace and upgrade toilets, dishwashers and clothes washing machines.

Ongoing Water Conservation Programs

In light of this trend in indoor water demand reductions, the City supports and promotes local water conservation using the following programs – which are generally focused on reducing outdoor irrigation requirements for its customers.

- **Educational programs** – the City’s educational programs include producing and distributing flyers and informational materials, maintaining an informational website, public events, and maintaining two demonstration Xeriscape gardens: one at the downtown Civic Center and another at the City Service Center.
- **Outdoor residential irrigation audits** (AKA, Slow the Flow) – the City supports the Center for Resource Conservation (CRC) Slow the Flow audits at 70 to 75 individual residents each year.
- **Commercial customer energy audits** (through the Energy-Water Efficiency Express) – the City provides financial support to this program. As a result, Efficiency Express installs low flow faucet aerators and pre-rinse spray nozzles in conjunction with energy audits that it conducts.
- **Garden-in-a-Box** residential Xeriscape program – The City provides 80 discounted Garden-in-a-Box kits to local residential customers through this CRC program.
- **Hydrozoning** (and water credits) – As previously indicated, the City supports an impact fee reduction for new customers (and water rights development credits for existing customers) that utilize water efficient landscaping to reduce long-term water demand for a specific tap within the City’s service area. The reduction in water demand allows for a discount to be provided with respect to the expected cost of replacement water for new construction, and a credit to be provided to existing construction. This is a new program that is currently being piloted in cooperation with the Medical Center of the Rockies.
- **Larimer County Conservation Corps, Energy and Water Program and the Home Energy Audit Program**– The City supports and offers these energy and water programs, which provides home assessments and audits to residents. These assessments and audits include replacing faucet aerators and showerheads, installing toilet dams and providing dye tablets to test for leaking toilets. These programs reach about 400 homes each year.

As another example, the City also has water waste ordinance as follows:

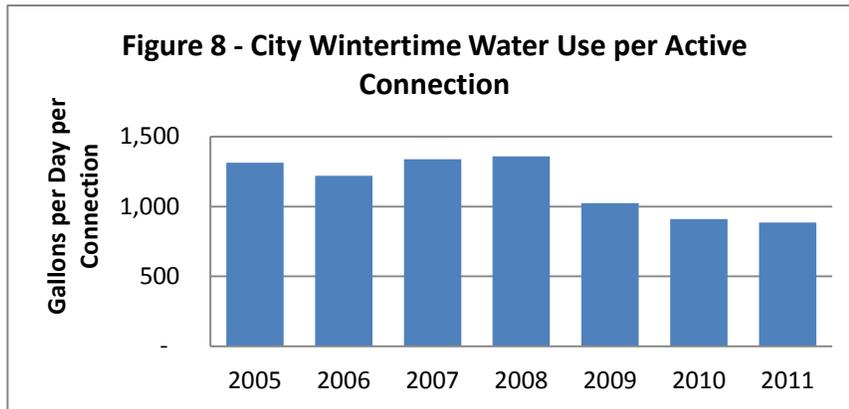
City of Loveland Municipal Code 13.04.170 Wasting water.

Consumers shall prevent unnecessary waste of water and keep all water outlets closed when not in actual use. Hydrants, urinals, water closets, and other fixtures, must be kept in repair so that they will not cause unnecessary waste of water. The supplying of water may be discontinued for any violation of this section. (Ord. 997 § 6, 1968; prior code § 13.13).

In practice, the City utilizes this ordinance to support water waste complaints filed by local customers. The City dispatches staff to investigate the complaint, and most often it is against a home owner who was unaware of their water waste issue. Once the home owner has been made aware, the problem is fixed and no additional complaint is lodged. Typically, about 3 complaints are filed a year with the utility.

City Water Use

The City uses water at about 70 to 80 different parks and facilities during the course of the year; with about 25 of the connections used year round. Indoor water use has been managed effectively by the City. This is evidenced by the consistently lower wintertime water use in City facilities, as illustrated in Figure 8.



Irrigation Plan for the Parks

Irrigation water use in the parks operated by the City includes both raw and treated water applications¹². The majority of the irrigation water is raw water and is applied through a centralized irrigation controller system that monitors real time ET and rainfall updates, to support human judgment in the management of individual hydrozones which can be remotely operated using SCADA. Only a very small number of park facilities are without centralized irrigation controllers¹³.

In 2008, the City of Loveland Parks and Recreation Department developed a detailed Irrigation Conservation Plan for most of the properties that the City irrigates. The plan (see Appendix B) provides details on each park and public space, including size, and average annual irrigation volumes. The plan also presents a four tiered irrigation program that may be implemented in case of drought and water shortages.

Integral to the City’s Irrigation Plan is the understanding that application of irrigation water to the City’s properties is not a one-size-fits-all program. As the Irrigation Plan states:

¹² There are 17 parks and 18 public grounds on treated water. 9 parks, 1 public ground and 3 golf courses on raw water. The large parks (LSP, Fairgrounds/Barnes, North Lake, Centennial, Kroh) are all raw water.

¹³ Everything but 2 detention ponds (total of 2.3 acres) and 2 small planter beds in the Old Town are on central irrigation control.

Several factors need to be applied when calculating actual turf watering requirements: types of grasses being irrigated (Blue Grass, Buffalo Grass, Turf Type Fescue, etc.); site conditions (shady, sunny, hillside, low area, soil type, soil compaction, etc.); site impacts (low use, high use, sports turf, green belts, etc.); safety concerns regarding recreation activities (hard playing surfaces, large cracks in the soil, bare ground, etc.); current weather conditions (evapotranspiration rates, temperatures, soil moisture levels, wind, sunshine, weekly rain totals); aesthetics (public buildings, sculpture parks, planned public events, etc.).

Overall, the irrigation water used by the Parks Department is efficiently managed at all times leveraging the benefits of centralized controllers with human judgment, as conditions warrant, since Parks staff can remotely operate the irrigation systems at 98% of the park and public spaces for which the City is responsible. Noteworthy is that based on the four tiered irrigation program, Park irrigation has been used effectively by the City in the past as a drought buffer.

Data Collection and Assessment of Programs

The City does not currently conduct an assessment of the effectiveness of its water conservation programs per se¹⁴. The City does track total treated water production and water billings on a monthly basis, and uses this information to track non-revenue water. However, no formal data tracking program is in place to support an assessment of individual water conservation programs. The City will identify future data tracking and reporting programs that will be implemented as part of this Plan to support the assessment of individual water conservation programs, as well as maintain compliance with new state regulations (i.e., HB 11-1051).

Given that the City maintains customer categories that differentiate residential single family from multi-family water use, from commercial use, from City use, it will be fairly straightforward for the City to conduct assessments and evaluations of specific water conservation programs – especially those that focus on specific types of customers and water use.

Past Water Savings from Water Conservation

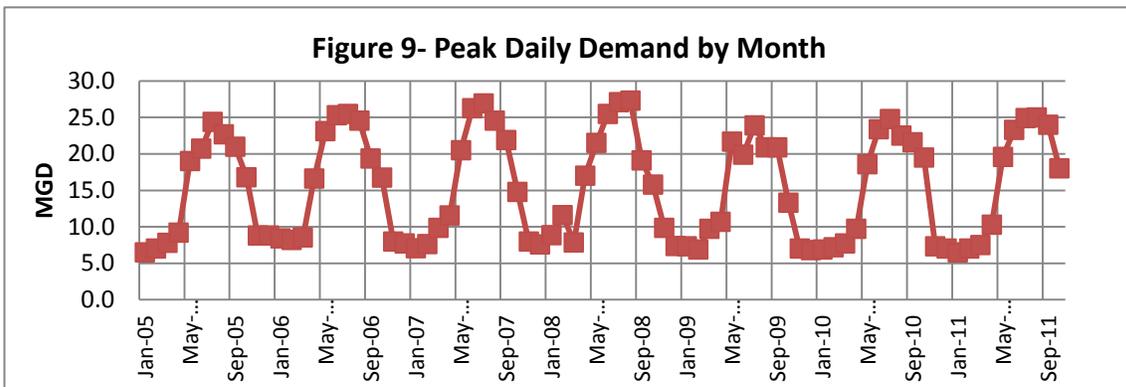
Based on the available data, it is difficult to identify specific water demand reductions that have occurred as a result of the City's programs with the exception of the City's indoor water use reductions observed between 2008 and 2011 (which is an approximate 30% reduction from 2005 and 2006 to 2011, accounting for about 8 AF annually or about 0.06% of total annual treated water demand)¹⁵.

¹⁴ Some tracking of water efficiency improvements is conducted as part of programs that the City supports such as the Efficiency Express, the Home Energy Audit Program and the Larimer County Conservation Corps assessment and audit programs.

¹⁵ Outdoor irrigation conservation efforts conducted by the City were implemented in the early part of the last decade, such that water demand reductions associated with these programs likely occurred prior to the time when data used in this Plan were collected. However, since 2009, the ratio of peak day demand to total demand and to observed ET have both been reduced, perhaps indicating that some improved efficiencies have occurred with regard to summer time peak day usage.

Other City water conservation programs appear to be overshadowed by the effects of “passive savings” that are occurring organically as residential customers repair and upgrade their water using appliances and fixtures.

It does appear, based on current trends in water use, that the City’s customers, including residential and commercial customers, are reducing their average water use on an annual basis. However, peak daily demand, which occurs during the heat of the summer, appears to be on the rise since 2009 (see Figure 9). This trend tracks with observed ET during this period of time (see Figure 5). Given that in the future the City will have a larger service population and the potential for variable weather conditions (which influence peak demand), future water conservation programs that the City implements will likely need to address peak daily summertime uses.



Section 3

Forecast of Future Water Demands

Forecasting water use (or water demand) is a critical part of water conservation planning since water conservation may be used to offset increases in future water demand – identified as increasing water use within specific customer categories – and/or postpone infrastructure improvements that are needed to support growing demands.

Forecasts can range from simple projections based on anticipated growth in the population to complex models using several variables to explain variations in water use. Forecasts can be made for a water system as a whole; however, forecasts are considered more accurate and valuable to water conservation planning when they are based on expected trends for each category of customers, since residential growth may not mirror commercial or institutional growth. For this reason, the demand forecasting developed for Loveland evaluated expected growth of peak daily, monthly and annual water demand for each of the City’s customer types – single family residential, multi-family and commercial groups for both inside and outside of the City Limits plus City uses and pre-paid uses (i.e., Ranch and hydrants), and the annual figures compare reasonably with projections in the City’s Raw Water Master Plan.

The potential effects of future water conservation programs that the City chooses to implement have not been included in the demand forecast prepared during this step. Demand forecasting at this point in the planning process only incorporate trends in future customer water demand based on a continuation of the current and ongoing water conservation efforts and “passive conservation” as older fixtures and appliances wear out and are replaced with models that meet current efficiency standards. A revision to the demand forecast based on implementing the conservation measures selected by the City is made later during the planning process, and is presented in Section 8.

Forecasting Method

To begin with, the forecasting methods that were developed for this planning effort focused on predicting future treated water demand based on the continuation of ongoing trends in water use and expected population growth in the City’s service area.¹⁶ The forecasting methods were used to estimate average conditions water demand, as well as above average water demand in future years¹⁷. A presentation of the forecast model assumptions and results are provided in Appendix E.

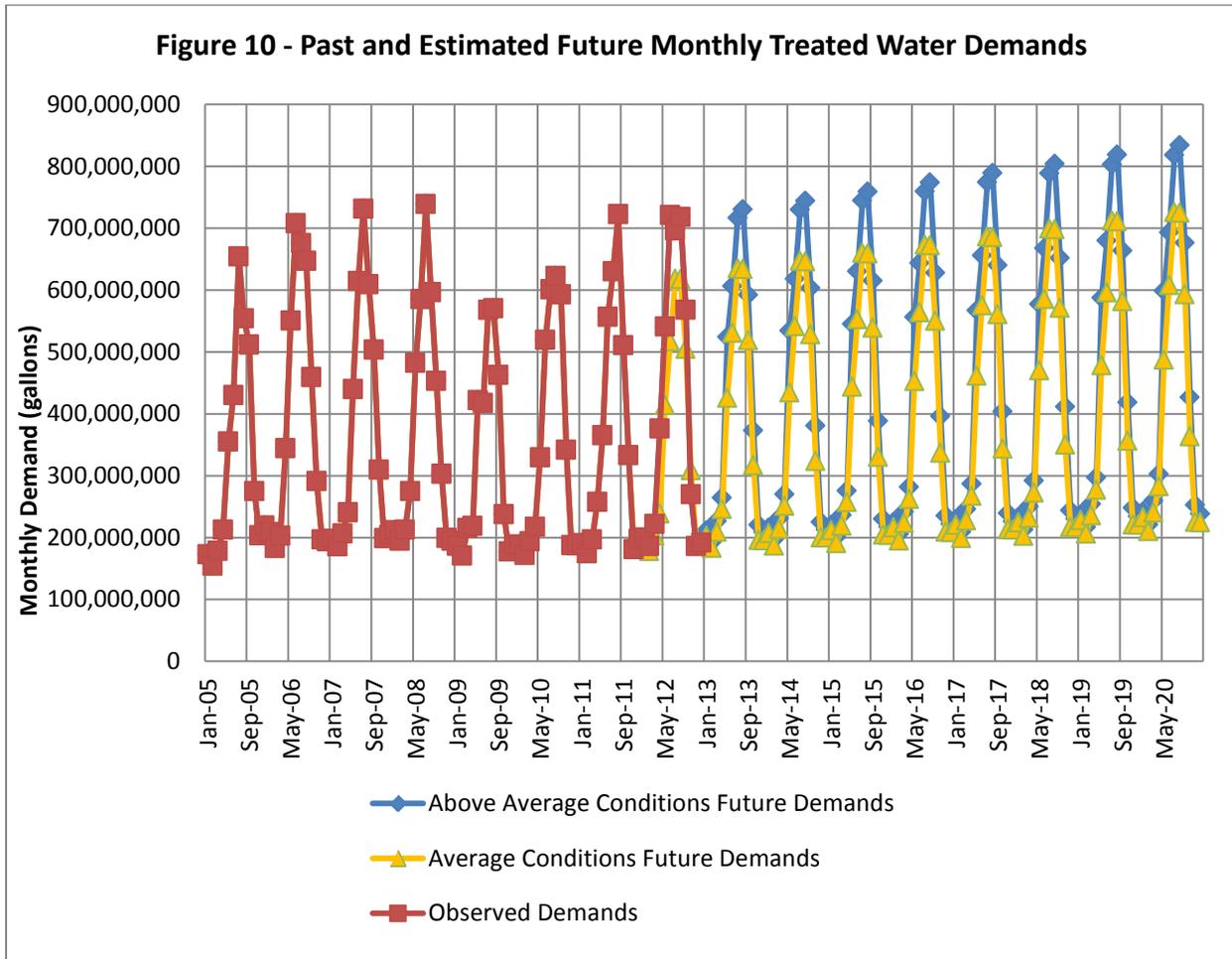
¹⁶ Data for forecasting was based on average monthly per connection water use for the period 2005 through 2011; during which time recent trends in municipal water use were established. Characterizing variability in City water demands was performed using either this entire database, or some subset as is described in the assumptions listed in Appendix E.

¹⁷ Variability of future water demand was developed assuming that the water demand over the past record is normally distributed and that natural variability of weather and customer water use behaviors will continue through the planning period in a manner consistent with those observed since 2005. The available data was determined to be adequate for predicting variability in future demand over the coming 8 years, but not adequate to estimate extreme variations due to drought or wet weather with more than a 8 year return period.

The specific forecast model results of interest to this Plan and related analyses include future annual treated water demands and future peak day demands, both of which are based on estimated future monthly treated water demands. Therefore, the results for each of these three future demands are presented below.

Monthly Treated Water Demand

Monthly water demand is the basis of all other estimated future water demands. Appendix E presents how future monthly water demands were developed and how these demands were used to estimate future annual and peak daily demands. Figure 10 presents the results of the predicted monthly treated water demands throughout the planning period for both average and above average conditions¹⁸.



As this figure illustrates, future monthly demand is not expected to peak as sharply as has been observed in the past four years (from 2007 to 2011), based on average conditions. However, peak monthly treated

¹⁸ The reduction of treated water demands related to expected passive savings are not included in the monthly treated water demands; since they are calculated on an annual basis. Therefore, passive savings are integrated into reported annual treated water demands. Monthly water demands are presented only to illustrate the seasonal nature of monthly demands and the relative differences between average and above average conditions.

water demand for above average conditions (i.e., one standard deviation above average conditions), which are about 12% higher than average conditions¹⁹. The peak treated water demand difference between average and above average conditions is about 110 million gallons in August 2020.

Annual Water Demand

Annual water demand projections were developed by summing the monthly water demands for each calendar year and subtracting the estimated annual impact of passive savings²⁰. Figure 11 presents the annual treated water demands in the past and as estimated through the planning period as a result of those analyses presented in Appendix E.

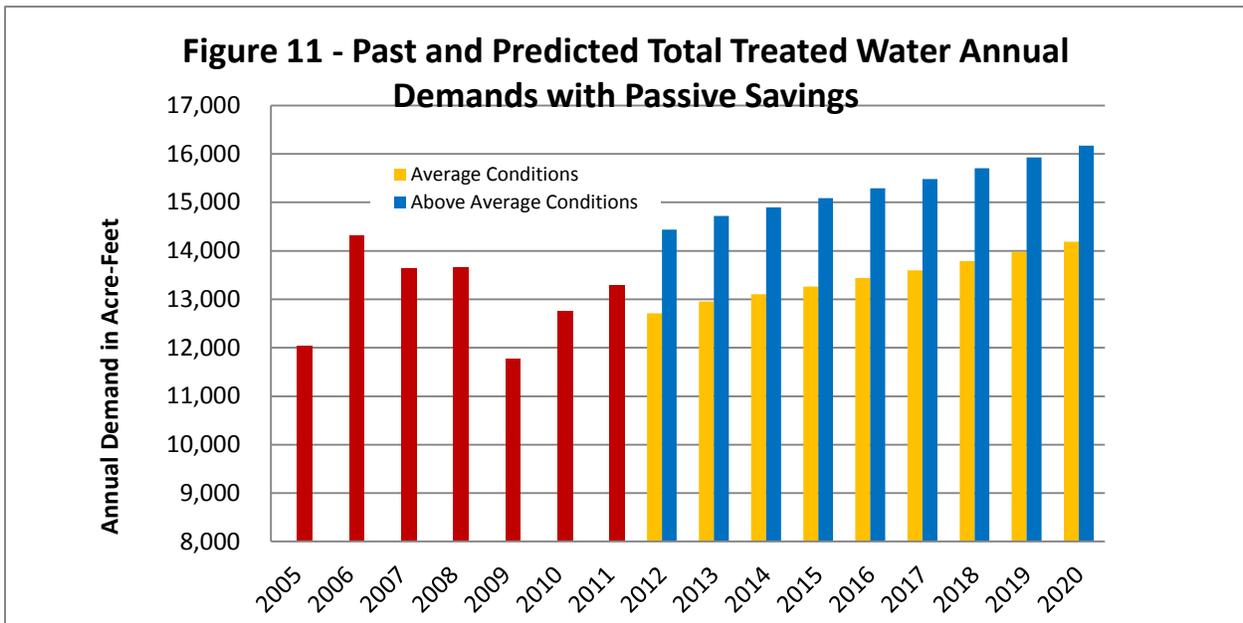


Figure 11 illustrates the relative impact of demand variability on estimated future treated water demands. Above average annual treated water demands vary over the planning period from about 14,440 to 16,170 acre-feet (AF), whereas average annual treated water demands vary from about 12,710 to 14,185 AF. These values compare reasonably with the city’s Raw Water Master Plan when adjusted for the impact of projected passive savings. This difference illustrates the challenge of planning for average conditions (i.e., those that occur only 5 out of 10 years), versus planning for conditions that occur 8 out of 10 years; given that demands may reasonably vary over average conditions by as much as 2,000 AF by the end of the planning horizon (2020).

For the City of Loveland, this variability is not significant given the current water portfolio used to provide the City with potable water supply. It may be that at some time in the future, the estimated demand

¹⁹ Above average treated water demands vary from about 4 (January) to 23% (August) of monthly average treated water demands; averaging about 12% higher over the course of a year.

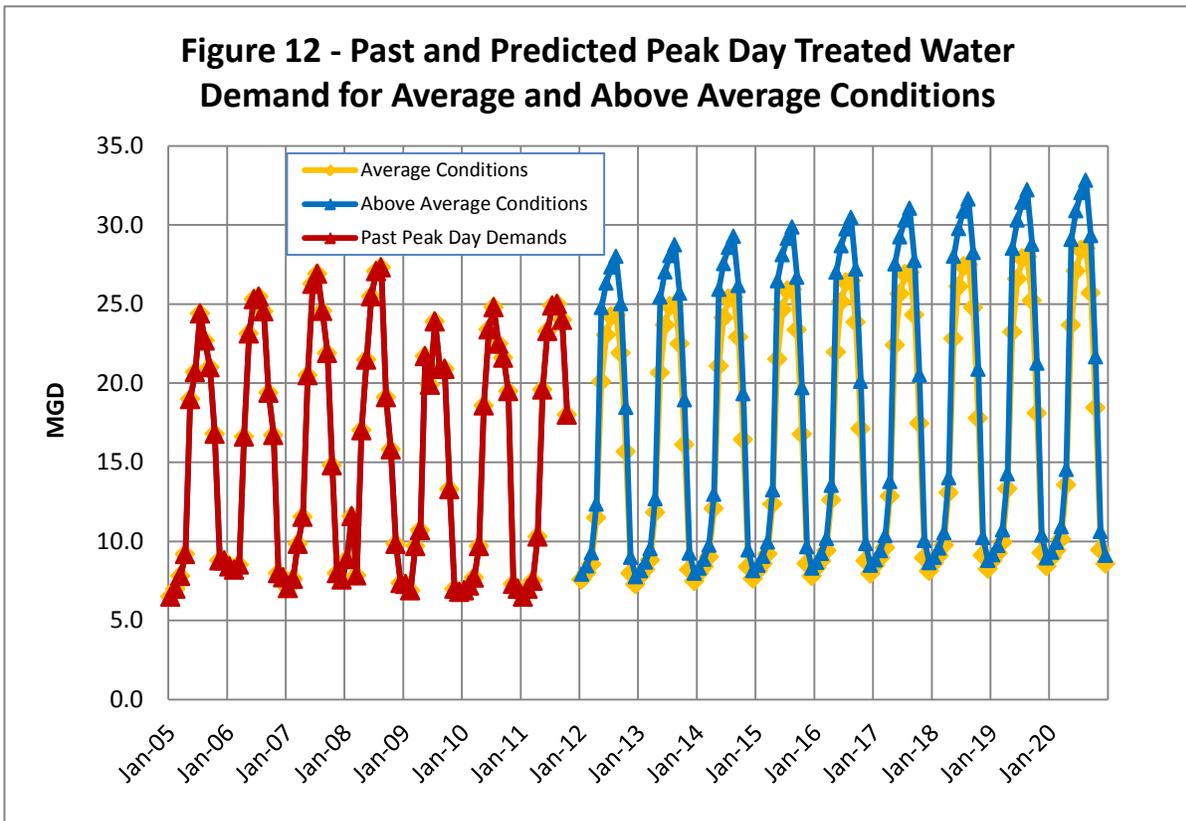
²⁰ Passive saving water demand reductions are estimated to be about one quarter billion gallons of treated water per year in 2020.

variability may impact the City’s ability to provide potable water on an annual basis, but it is not expected to be rate limiting over the current planning horizon.

Peak Daily Forecasts

The City’s current peak day treatment capacity is approximately 30 MGD; whereas peak daily demands in the summer of 2008 topped 27 MGD. Peak day treatment capacity is therefore an issue for the City.

Peak day demands were estimated for each month in the planning period based on the average peaking factors presented in Appendix C. Figure 12 presents the results of the forecast modeling used to estimate peak day treated water demands for the period 2012 through 2020 (compared against past peak day demands).



Based on the analyses presented in Figure 12, average conditions peak day treated water demands are not expected to exceed 30 MGD during the planning period (the highest annual peak day demand in 2020 is estimated to be about 28.5 MGD); whereas for above average conditions, the highest annual peak day demand exceeds 30 MGD in 2016 (30.5 MGD). Although the City has the ability to utilize an interconnect with Little Thompson Water District to meet peak day demands above 30 MGD, future peak day water demands in the summer will require that additional water treatment capacity is developed by the City, unless water conservation programs can be developed and implemented that “shave” peak day demands, effectively postponing (or eliminating) the need for the treatment plant capacity expansion.

Section 4

Capital Improvement Projects

The City maintains a detailed 5-year capital plan that identifies design, consulting and construction costs associated with ongoing and upcoming water related projects, including:

- Transmission and distribution projects (focusing on replacing steel and cast iron pipe with plastic in critical areas)
- Water treatment plant
- Water resources
- Upgrades and extensions (AKA – oversizing and extensions)
- Miscellaneous operations and maintenance (O&M) budgets

The projects that the Water Utility are currently tracking include water line replacements, water storage tank construction, meter upgrades and replacements, treatment plant upgrades and improvements, water resources projects, vehicle purchases, and various O&M projects. A specific breakdown of the City's 5-year detailed capital project list is provided in Table 6.

Table 6 – Summary of City's 5-Year (2013-2017) Detailed Capital Improvement Plan for Water Projects²¹

		5-Year Total
Transmission and Distribution		
	Water Line Replacements	\$7,834,020
	Water Storage Tanks	\$240,140
	Meter Replacements	\$440,930
Water Treatment Plant (general)		\$9,978,360
Water Resources		
SIF Projects		
	Water Lines	\$860,130
	Water Storage	\$240,140
	Water Treatment	\$11,566,810
General Plant		\$971,200
O&M Projects		\$3,907,780
5-Year Total		\$36,039,510

Capital projects that are considered as a part of the City's water conservation programs include water line inspections, replacements and upgrades (which are expected to help reduce water losses); and meter replacements (which are expected to help reduce apparent water losses). The costs of these programs will be included in the overall water conservation program costs provided later in this Plan.

²¹ From the 2013 CIP for the Water Utility

Section 5

Goals for Water Conservation

The City has a number of goals for its water conservation programs. Perhaps the most important relates to the City maintaining a connection with the community that it serves; such that it can promote the importance and value of water use efficiency in maintaining a reliable, secure and sustainable water supply now and into the future. To do this, the City will rely on a number of integrated programs, each of which is described in the following section. The City understands that it is the true integration of water conservation and water resources management, in a conscientious, deliberate and transparent manner that will allow for the City and its customers to work together to reach the overall goals stated below.

Specific goals that the City looks to achieve include:

- Reducing summertime peak daily demands in the future by about 1 mgd (or about 3 acre-feet (AF) per day which is about 10% of peak demand) during above average demand periods by 2016;
- Reducing non-revenue water from current levels to 10-11% of total treated water by 2020 (which is a reduction in real and apparent water loss of about 575 acre-feet²²);
- Developing water rates that accurately reflect the cost of service for providing reliable, secure and sustainable water supplies, including infrastructure management and maintenance, and the impact of changing customer water use behavior patterns in the future;
- Supporting the City's sustainability efforts in part by reducing City water use (indoor and outdoor) by 5% by 2020; and
- Developing technical assistance programs that will support improved water use efficiency by the City's large commercial and irrigation only users.

Through the implementation of the Plan, and beyond, the City will strive to reduce per connection water use by about 11% between 2012 and 2020, for an estimated demand reduction of about 1750 AF^{23,24} within that time frame.

²² For the purposes of actual demand reductions and predicted impacts on future revenue, that real and apparent losses constitute 80% and 20% of the observed non-revenue water loss, respectively.

²³ Passive savings are estimated to be about 780 acre feet (AF) between 2012 and 2020; such that the City conservation goal of 1,750 AF is in addition to the estimated passive savings.

²⁴ The City's goal of 1,750 AF was developed based on an average per connection daily use from 2008 to 2011 of 480 gallons; decreasing to about 426 gallons per day per connection in 2020 (for an estimated 29,000 connections serving a population of about 80,000).

Section 6

Identification and Evaluation of Candidate Measures and Programs

As indicated in the previous section, the City has identified that water conservation efforts can best support the needs of the water utility through:

- Reducing summer time peak demand;
- Reducing current system wide water loss; and
- Supporting improved water use efficiency for the City’s commercial and large irrigation customers

Therefore, the City will identify, evaluate and ultimately select water conservation measures and programs that support these goals.

The State has regulations (CRS 37-60-126 – see Appendix C) which require that covered entities that develop water conservation plans for review and approval by the CWCBC consider a broad range of potential measures and programs for the plan to be complete. Table 7 presents each of the categories of water conservation measures and programs that the City considered, aligned with the regulation, as it developed its “short list” of measures and programs for detailed evaluation.

A few key points related to this analysis are noteworthy.

- Based on the CWCBC SWSI Levels Analysis (June 2010), the City has decide not to actively support the retrofits and related incentives (e.g., rebates) for indoor water using fixtures and appliances, since home and business owners will be naturally replacing and upgrading toilets, faucet aerators, clothes washers and dishwashers naturally, with newer, high efficiency models in the future. This market driven process does not benefit from the City spending additional resources to accelerate the impact of these passive savings.
- The City does not currently provide water to any large commercial or industrial customer that would benefit from improved process water retrofits and upgrades. Hospitals and large laundry services, car washes, and greenhouses may benefit from improved water use efficiency upgrades; however, the City will focus its commercial programs with a higher rate of return on investment (e.g., faucet aerator retrofits, shower head replacement programs). In future years, the City may decide to evaluate process water efficiency improvements, but they are not included in this version of the City’s Water Conservation Plan.
- The City has not agreed philosophically or politically with the use of inclining rate block structures for residential customers that are not based on the cost of service. For this reason, the City maintains a flat residential water rate, which is raised periodically as fixed and variable costs increase. The City does have a surcharge for commercial customers that exceed a specified quantity of water use in a year; which is associated with the cost of replacement water.

Table 7 – Summary of Measures and Programs that Must Be Considered During Plan Development

CRS 37-60-126 Category of Measures and Programs*	Current Efforts	Future Evaluations Proposed by the City
Water-efficient fixtures and appliances, including toilets, urinals, clothes washers, showerheads, and faucet aerators	The City currently provides replacement of showerheads and aerators through energy and water assessments and audit programs. The City does not currently have programs to support customer replacement and/or upgrade of appliances.	These types of programs will only be considered for large commercial customers, since residential customers will be replacing toilets, faucet aerators, clothes washers and dishwashers with more water efficient models organically (based on CWCB, 2010).
Low water use landscapes , drought-resistant vegetation, removal of phreatophytes, and efficient irrigation	The City does not currently have specific programs to support customer replacement of landscape materials; however the City supports Garden-in-a-Box (which provides water efficiency landscape materials to interested homeowners); has been installing water efficiency landscapes in selected City parks and facilities; and maintains a tap fee structure that allows for reduced impact fees for customers that can demonstrate the appropriate use of water efficient landscape materials.	The City will continue its current programs
Water-efficient industrial and commercial water-using processes	The City does not currently have a program for industrial or commercial water customers – associated with process water use.	The City’s customer base does not justify development of a process water focused water conservation program.
Water reuse systems	The City has limited opportunities for reusing treated wastewater since a substantial portion of the City’s water portfolio is direct diversions from east slope supplies or Colorado Big Thompson water, which cannot be reused. A portion of the City’s water portfolio does include some reusable supply from its reservoirs and some Windy Gap allocations. However, reusing these water sources reduces overall firm yield, so the City does not practice reuse in its normal operations.	The City may obtain some water rights that would allow reuse through the Windy Gap firming project; however, until such that that project occurs, reuse opportunities do not exist for the City.

Table 7 – Summary of Measures and Programs that Must Be Considered During Plan Development (continued)

Distribution system leak identification and repair	The City currently has a water loss control program including leak detection and repair projects, meter testing and replacement, and water loss tracking; however these programs can be improved	The City will evaluate measures and programs to improve its current supply-side water loss management efforts. In addition, the City will evaluate strengthen its overall messaging regarding water use efficiency, water management, and the importance of maintaining and upgrading water infrastructure to support customer needs with respect to reliable, secure and sustainable water supply.
Dissemination of information regarding water use efficiency measures, including by public education, customer water use audits, and water-saving demonstrations	The City maintains a strong relationship with the community that it serves through messaging, educational efforts, and its “lead by example” mentality. The City also supports customer water use audits employing outdoor irrigation audits for residential customers (AKA, Slow the Flow); indoor audits and retrofits for low-income residences; and combined energy/water audits for selected commercial customers.	The City will evaluate the efficacy of each of these programs with respect to measurable results and maintain those that can be shown to have positive impacts on managing customer water demand.
Water rate structures and billing systems designed to encourage water use efficiency in a fiscally responsible manner.	The City has a flat residential block rate that is based on the cost of service which in turn is based on fixed and variable costs; including a reserve for infrastructure replacement and management. Commercial water rates are also a flat rate with a water use surcharge included for high annual water use. Irrigation only water rates are inclining block rate based on a water budget for established landscapes.	The City performs a rate study every 3-5 years to keep its rates in balance with costs; which included a 4% rate increase in 2011. The City will maintain a flat block rate which reflects the cost of service to its customers; while utilizing other methods to manage future water demands. Part of the City’s efforts will include utilizing a reduction in tap fees for irrigation only customers that can demonstrate reduced water use via native plant materials and efficient hydrozones.
Regulatory measures designed to encourage water conservation	The City maintains a water waste ordinance.	The City will evaluate methods to broaden its water waste ordinance.
Incentives to implement water conservation techniques, including rebates to customers to encourage the installation of water conservation measures	The City has not used rebates in the past to encourage water use efficiency.	These types of programs for indoor uses will only be considered for large commercial customers, since residential customers will be replacing toilets, faucet aerators, clothes washers and dishwashers with more water efficient models organically (based on CWCB, 2010). Outdoor water use efficiency incentives and rebates will be evaluated by the City.

* In developing a water conservation plan, state regulation requires that each covered entity shall, at a minimum, consider these categories of measures and programs.

- The City has an incentive program to reward landscape irrigation efficiency through either a refund of a new tap impact fee and/or a credit for water rights provided during development. This program is relatively new, and is in the pilot phase, but will continue to be offered as the Water Conservation Plan is implemented.
- The City has seen a consistent reduction in its own water use, both indoors and outdoors. Indoor water demand reduction has been associated with the installation of upgraded fixtures and more efficient water use practices. Outdoor water use efficiency has been improved with the installation and use of centralized irrigation controllers that manage each zone of each park individually. These improvements are examples of how the City “leads by example.”
- In addition, the City Parks Department has developed an in depth Drought Management Plan detailing water use reductions in each park during times of water supply shortage.
- The City has a water waste ordinance that has been used in the past to respond to citizen complaints; however, the City has not allocated resources to conduct more hands-on efforts to identify and correct wasteful watering practices (e.g., driving inspections for over watering, time of day watering violations, etc.). The City may wish to consider allocating resources to conduct “on the street” assessments to help control summer peak demand in the future. In addition, the City may want to consider adding language to its current ordinance that would designate time of day watering restrictions and/or overspray requirements.

Based on the City’s past efforts, current policies, and future infrastructure limitations, it proposed to evaluate the efficacy of implementing the following suite of water conservation measures and programs.

To reduce summer time peak day demands, the City will evaluate the following:

- Continue management of the City’s parks utilizing the central controllers and drought management plan;
- Expand the City’s water waste ordinance to detail actions that the City may take to identify and potentially penalize water waste repeat offenders;
- Continue to support residential outdoor irrigation audits (Slow the Flow) and residential Xeriscape planting (Garden-in-a-Box) programs;
- Develop and broadcast a new community water use messaging to stress the need for summertime use reductions (e.g., initiate voluntary watering restrictions), infrastructure management and maintenance, and general water use efficiency; and
- Initiate large commercial and irrigation only audit programs to improve outdoor irrigation efficiency.

To improve water loss management and water rate structures:

- Conduct a system-wide water audit using the American Water Works Association (AWWA) M-36 methodology;

- Implement recommendations from the system-wide water audit related to metering, data collection and management, and leak detection;
- Perform annual system-wide water audits as a means to track water loss patterns and verify that improvements are in-fact reducing real and apparent water losses; and
- Continue to perform water rate studies to evaluate and set water rates based on the cost of service for water supply to each customer. The water rate studies may also evaluate issues such as excess water use surcharges, commercial and industrial customer billing options, and creating more commercial customer categories.

Other relevant programs:

- Continue K-12 education by supporting the Loveland Water Festival;
- Continue to support the Efficiency Express such that water efficient faucet aerators and showerheads can be installed as energy audits are conducted; and
- Continue to support and offer the Larimer County Conservation Corps, Energy and Water Program and the Home Energy Audit Program for residential customers.

A detailed evaluation of each of these potential measures and programs are provided below.

Summertime Water Demand Management

Parks irrigation watering management – The City will continue its programs to manage the use of irrigation water on its parks, which has been a success story leveraging both human judgment and centralized controllers to efficiently apply irrigation water as conditions, and the City’s irrigation conservation plan dictate. However, the parks will be evaluated for turf replacement with native plant materials, depending on the park use, location and character. In addition, minor improvements will be evaluated to further improve the current efficiency of the park irrigation efforts (MP rotors to replace older spray rotors, improving some hydrozones to support new native plantings, etc.).

Irrigation in the City main parks covers nearly 275 acres with about 26 AF per week during peak summertime use. The MP rotors will not only reduce total irrigation water demand for the City, but it will lower peak day demand by about 0.6 mgd.

Costs - \$70,000 (for materials, no labor) for replacing all existing rotors with MP rotors over the next five years.

Estimated Savings – 70 to 80 AF (based on a 15% improvement in irrigation application efficiency)

Expanded Water Waste Ordinance - The City’s water waste ordinance provides general guidelines for unacceptable water waste by its customers, and allows for the City to shut off service for offenders. The City will consider developing two key amendments to this section of the municipal code:

- i) Time of day watering restrictions that discourage outdoor irrigation between 10 am and 6 pm from May 1st to September 15th.
- ii) The ability of the City to fine observed water wasters for violations (see Appendix D for an example from the Colorado Water Wise Best Practice Manual).

On the heels of these amendments, the City will consider methods to identify and if necessary, penalize repeat water wasters as a means of broadcasting a low tolerance for inappropriate irrigation practices.

Cost - \$1,500 for Ordinance Revision

Estimated savings – savings are included as a part of the messaging campaign describe below.

Slow the Flow and Garden-in-a-Box – The City will determine whether or not to continue its support of two popular programs. Both are provided by the Center for ReSource Conservation (a non-profit operating out of Boulder). Costs carried by the City will include providing for up to 120 residential audits; and up to 80 Garden-in-a-Box native planting kits. Combined, these programs will continue the City’s engagement and support of its residential customers, and in the future be linked to the City’s overall efforts to reduce summertime peak water demand.

Cost - \$17,200 (for 80 Garden-in–a-Box Kits (City pays \$50 per kit); and 120 Slow the Flow residential irrigation audits (City pays about \$110 per audit))

Estimated savings – 2.5 % of outdoor irrigation water use per connection in the program (about 6 AF²⁵)

Wise Water Use Messaging - The City will consider developing water messaging campaign that will include a tag line, logo, and related materials to help announce and publicize the implementation of the new water conservation programs; to educate and engage its customer base about the need to reduce summertime peak demand; and to ask for support of the new water waste ordinance, new water rates, overall infrastructure management and water loss control, and voluntary watering restrictions. The logo and messaging may also be incorporated into the stenciling on the City’s service vehicles; water billings; educational programs; the City website; and printed information provided during customer water audits.

The City will connect the messaging effort to customer surveys that are conducted by the utility on to test messaging, identify customer hot buttons and key water topics, and evaluate public opinion regarding various water conservation strategies and programs.

²⁵ Based on residential summertime usage in 2007 and 875 total customers participating in the programs over 5 years.

Cost - \$20,000 to \$25,000 for message development and initial launch (printing, web update, etc.)

Estimated savings - dependent on the breath of the City's efforts to publicize and engage the community. Expect a reduction of about 0.75 to 1.5% of community water demand reduction due to combination of the messaging campaign with other City water conservation efforts including the water waste ordinance, the improved City facility water use, reduced distribution system water loss, and increased water rates. The messaging campaign will focus on creating synergies linking City actions with customer water use behaviors (e.g., lead by example), (75 to 100 AF²⁶).

Commercial Water Audits and Retrofits – The City will consider initiating a program to provide free water audits to its largest water customers coupled with retrofits for showerheads, faucet aerators and pre rinse spray nozzles, depending on the nature of the business. The largest water users in the City have been identified to include schools, manufacturing facilities, churches, business offices, nursing homes and elderly care, and City facilities. Of these, the City will focus its audits and retrofits on those with large outdoor irrigation uses coupled with indoor uses that may be receptive to the proposed retrofits²⁷.

The proposed audit program that the City would implement would involve obtaining grant funding to support data collection and analysis efforts, water use modeling and retrofits to improve the water use efficiency at each location listed in Table 8. The proposed audit program would be similar to programs conducted in other parts of the State supported by CWCB water efficiency grant funding. To this point, the costs of the first year or two of commercial facility audits and the estimated water savings are in line with those reported by past CWCB grant recipients. Note that although the water savings predicted from the audits includes both indoor and outdoor water use reductions; the audits will be focused on those organizations that may reduce summer time irrigation use, thereby supporting the City's goal to reduce peak summertime demands.

Costs - \$ 36,000 – \$45,000 for audits and retrofit fixtures (depending on how many of each retrofit type is installed - faucet aerators, pre-rinse spray nozzles and showerheads). This estimated cost includes \$12,000 to 15,000 for one nursing home facility customer.

Estimated savings – 8 AF and 20,600 gpd during peak demand (see Table 8).

²⁶ This water demand reduction is based on the positive results of the City's past efforts to reduce customer water use demand solely through messaging and public relationship programs.

²⁷ The retrofits being proposed are low cost and energy efficient, which therefore make them cost effective as compared to upgrades or improvements to kitchen and laundry equipment, air cooling equipment, and/or other commercial wash uses.

Table 8 – Summary of Potential Commercial Facility Audit Locations and Savings

	Average Annual Water Use (gallons)		Potential Savings	
	Indoor	Outdoor	AF (annual ^c)	GPD (during peak)
Manufacturing Facility	2,355,000	1,970,000	1.5	3,500
Nursing Home (one customer)	9,375,000	3,172,000 ^a	4.1	8,600
Publishing Facility	988,000	2,931,000	1.2	3,900
Manufacturing Facility	303,000	584,000	0.3	1,000
Office Building	232,000	369,000 ^b	0.2	600
Office Building	297,000	1,570,000	0.7	2,300
Office Building	135,000	537,000	0.2	700
TOTAL			8.2	20,600

^a uses last 4 years of water use for outdoor estimate

^b high water use in 2010 not included in estimate of potential savings

^c including savings from both indoor retrofits and outdoor efficiency improvements

Water Loss Management

System Wide Water Audit and Recommendations – The City will consider conducting a system wide water audit using the methodology specified in the AWWA M-36 Water Loss Control Manual. Specific tasks that the City should consider paying special attention to relate to tracking and quantifying, where possible, metered, unbilled and unmetered, unbilled water uses; as well as looking at meter reading accuracy for large taps. In addition, the City should evaluate the accuracy of its current billing system to track all billable water accounts including those that are transferred from one customer to another. Seasonal variations in non-revenue water should also be evaluated and characterized. The audit should be provided by a third party working closely with all utility departments that handle and manage water use accounting and billing.

Recommendations from the audit may include, but not be limited to such tasks and actions as:

- Install system pressure controllers to reduce system pressure and thereby reduce supply side leaks.
- Locate and install meters on unmetered uses.
- Calibrate and repair/replace large meters including totalizing meters on water treatment plant effluent, commercial and irrigation only customers, etc.
- Accelerate the installation of AMR and AMI technologies to assist the City in identify and tracking supply side and demand side leaks, improving data handling and billing accuracy, and reducing City loss time injuries.
- Add system metering redundancy for measuring water treatment plant through distribution system subareas or management areas, and other key locations of potential apparent water loss.

Costs – for the audit \$25,000 to \$40,000 (depending chiefly on the extent to which meter testing is incorporated into the scope); with costs to implement audit recommendations variable based on findings during the audit.

Estimated savings – It is possible that the City will be able to reduce its current average water loss by about 3 percent (i.e., from about 13.5% of total demand to about 10.5% by 2020) as a result of the audit – which includes better understanding the City’s real and apparent losses. This reduction corresponds to a reduction of non-revenue water by about 575 AF on average²⁸. Noteworthy is that these savings will result from a combination of the audit and the implementation of key audit recommendations.

Water Rate Study and Implementation – The City has a policy of conducting water rate studies once every three to five years to maintain appropriate customer water rates based on the cost of service. The City has just completed a water rate study in 2012 to assess current and projected future costs, and to fine tune current policies regarding:

- Excess water use surcharge for commercial customers,
- Commercial and industrial customer billing options, and
- Creating more commercial customer categories.

A water rate study can also examine the impacts of alternative tap fee incentives for new and existing customers that install water efficient landscapes and appropriately designed irrigation systems for those landscapes.

The water rate study is important to the water conservation planning effort for three reasons. First, the water rates will need to be developed in a manner consistent with the projected future demands – based on the impacts of both passive and active savings and expected peak day demand reductions. Second, the development of new and/or expanded water rate categories (e.g., for different customer classes, to account for seasonal variability in fixed and/or variable costs, etc.) should support water use tracking as new water conservation measures and programs are implemented. This will help to ensure that water demand reductions can be attributed to active programs conducted and funded by the City.

Third, the water rates should include the costs of the water conservation measures and programs selected for implementation, such that the true cost of services can be included in the base and rate fee structure. In addition, the City should ensure that costs for emergencies, capital projects, leak detection and prevention, improved metering and data management, and overall system wide loss control are included in water rates and fees. Finally, the City will evaluate options and efficacy of including additional tiers of water rates in its pricing for residential and commercial customers.

²⁸ Real and apparent losses constitute non-revenue water. Based on the assumption in footnote 25, the real and apparent losses contribute 460 and 115 AF, respectively. The real loss reduction represents a reduction in demand; whereas the apparent loss reduction represents an increase in water sales revenue.

Currently, the City has identified substantial water rate increases that it will put into practice over the next 10 years. These rate increases, presented in Table 9, will be used to raise revenue for capital projects, as well as to assist in achieving specified water conservation goals. Insomuch as the rate increases will be happening, Plan implementation will include tracking the impacts of the rate increases on customer demand and water use – individually and collectively.

Table 9 - Proposed Water Rate Increases Through 2022

Years	Rate Increase
2014	13%
2015-2019	9%
2020-2022	8%

These proposed rate increases will increase the cost of 1000 gallons of water by about 120% between 2013 and 2022.

Water demand reductions related to the proposed rate increases are expected to be significant²⁹ given the scope of the proposed program; although the actual savings are expected to be on the low end of the literature values given that water is currently priced at less than \$2 per thousand gallons. Nonetheless, overall savings even at 0.1% per 1% increase is expected to total over 1,000 acre-feet by 2020, and perhaps as high as 3,000 acre-feet. Even with these large expected demand reductions, the City should plan to integrate the water rate fee changes with its messaging on wise water use and water conservation to help educate and engage its customer base regarding the justification for increased water rates, and to manage customer expectations regarding further water rate increases.

Cost – \$25,000 for a water rate study in the future assuming the City has the engineering data need to assess meter reading accuracy and effectiveness, and characterize overall system wide water loss (which indicates that the system wide water audit should be completed prior to the next water rate study).

Savings – For a 46% water rate increase (about \$0.84 per thousand, assuming \$1.83 as the current starting point), a water demand reduction of between 500 and 1,700 AF may occur by 2017 (and 1,100 and 3,500 AF in 2020³⁰) could be expected under average conditions, especially if the City introduces the new wise water use messaging along with the increased water rates; however, due to the relatively low cost of water in the

²⁹ Water rate increases at the City may reduce overall water use by between 0.1 to 0.7% per 1% increase in water rate based on Stevens, et.al.(1992), at an average of about 0.33% (Olmstead, et. al., 2006).

³⁰ Increased demand reductions are estimated for 2020 based on increased water demand from a combination of growth and reduced apparent losses, both of which increase water deliveries to customers.

City, it is anticipated that actual water savings related to water rate increases will tend to be at the low end of the literature-based savings estimates³¹.

Other Programs

K-12 Education – The City will continue its efforts to support local K-12 educational efforts including participation in the Loveland water fair, classroom presentations on responsible water use and management, and other adhoc water related events. The City’s presence at these events helps to engage the community and instill a general sense of water awareness in its attendees. There is no specific attempt to quantify potential water savings that are attributed to these expenditures; however the City believes that the support of local K-12 education is a basic responsibility of the utility that will continue to be funded.

Cost – The City has \$5,000 in the water utility budget for educational support, in addition to the other programs outlined in this plan.

Larimer County Conservation Corps, Energy and Water Program and the Home Energy Audit Program – The City has provided funding for these programs in the past to support the audits and retrofits of residential housing with water and energy efficient fixtures including faucet aerators, showerheads, toilet dams and dye tablets (for toilet leak detection). Although this program has not provided explicit reporting back to the City regarding measured water savings, the staff will visit, audit and retrofit 400 homes each year. It is estimated that the showerheads and faucet aerators reduce the typical indoor single-family water use by about 10% (or about 135 gallons per connection per day for each of 400 homes).

Costs - \$8,000 for purchasing and installing 400 faucet aerators, showerheads toilet dams and dye tablets to support residential retrofits.

Savings – 6 AF (for each year the program is conducted)³².

Efficiency Express through Platte River Power Authority – Loveland Water and Power has joined with the Platte River Power Authority to fund energy and water audits for qualifying commercial and industrial buildings to support building energy tune-ups and efficiency upgrade assistance. Although the program components are focused on energy efficiencies, some water use efficiencies are possible (with respect to ice making and other food service equipment). For example, the audit team will provide educational support to facility managers regarding rebate opportunities and technical support. Since the City is not supporting rebates, the potential water savings that could occur as a result of this program relate to City retrofits of faucet

³¹ A 13% rate increase would increase an average water bill for a single family residential customer by about \$1.20/month for wintertime use and by about \$9.60/month for summertime use (assuming 5,000 per month and 40,000 per month, respectively).

³² Based on reduction from 2.5 gpm to 1.5 gpm in the shower for an 8 minute shower per person per day; and from 2.2 gpm to 0.5 gpm for 2.3 minutes of bathroom sink use per person per day; for an average of 2.5 persons per audited household.

aerators and showerheads. The City could potentially link the commercial water audit program to the Efficiency Express Program to support finding interested and qualifying commercial water customers.

Given that the actual water savings related to this program will likely occur as the result of fixtures that are replaced by the City as part of its commercial water audit and retrofit program, the savings for this program are imbedded in that program.

Costs - \$2,500 for 10 facilities in conjunction with the Brendle Group's scheduled facility assessment.

Savings – no savings were estimated for this program since the nature of the water savings can vary substantially from year to year, and the overall expected water savings are expected to be small.

Section 7

Summary of Candidate Measures and Programs

Table 10 presents a summary of the water conservation measures and programs evaluated and selected by the City for implementation during the period 2013 to 2017. Details of the proposed budget are provided in Section 9.

Table 10 - Summary of Selected Water Conservation Programs for Implementation

Measure/Program	Estimated Annual Cost	Estimated One Time Cost Over Planning Period	Estimated 5-Year Cost	Estimated Savings ³³ (AF)	Comment
Summertime Demand Management					
Park Irrigation Improvements		\$70,000	\$70,000	70	Includes both landscape efficiency and conversions from spray rotors to MP rotors
Expanded Water Waste Ordinance		\$1,500	\$1,500	Included in savings estimate for Smart Water Use Messaging	Includes increasing nature of ordinance to allow for penalties to water wasters
Slow the Flow/Garden-in-a-Box	\$17,200		\$86,000	6	Helps to develop good will and support the City's messaging
Wise Water Use Messaging	\$8,000	\$25,000	\$65,000	92	must be performed in close coordination with other measures and programs identified for implementation to achieve savings
Commercial Water Audits		\$30,000	\$30,000	8	partnership for management of City's biggest customers
System Wide Water Audit and Recommendations	\$275,000	\$40,000	\$1,415,000	294	mid-term commitment to future reduction of non-revenue water
Water Rate Study and Implementation		\$25,000	\$25,000	544	part of City's typical management program
K-12 Education	\$5,000		\$25,000	n/a	It is the right thing to do for the City
Water and Energy Assessments and Audits	\$8,000		\$40,000	31	Supports low income families
Efficiency Express	\$2,500		\$12,500	n/a	Included in Commercial Water Audits
	\$ 315,700^b	\$191,500^c	\$ 1,770,000	~1,045	

^a Includes \$260,000 annually from CIP for meter and water line replacement

^b includes \$40,000 for financial software and public relations expenses

^c includes \$70,000 from parks, \$25,000 from public relations; and \$25,000 from finance and administration.

³³ Estimated as average annual water demand reduction after five years of program implementation

Note that one of the City's implementation goals for this Plan is to reduce summertime peak day demand by about 1 mgd by 2016. The projected savings of 1045 AF by 2020 represents about 0.93 mgd, which on first blush appears to be slightly short of the goal. However, the 1 mgd peak demand reduction goal only relates to a water supply condition that occurs during a few weeks in the summer, rather than over the entire year. Therefore, the total annual demand reduction related to summertime peaking is in the range of only 125 to 170 AF (which corresponds to a 6 to 8 week period). The summertime peak demand reductions related to irrigation improvements in the parks and at commercial facilities, as well as for residential customers, are focused on the current June through August peak day demands. These programs, if implemented by the City and its customers, could trim peak day water use by 1.5 to 2 mgd.

Section 8

Integration of Proposed Water Conservation Program with Water Demand and Sales

The impact of the proposed water conservation program will be apparent with regard to both total water demand and water sales in the City. The design of the water conservation program focuses on reducing both real and apparent water loss, summertime peak demand, and overall customer water use efficiency, helping to postpone capital improvement projects and reducing long-term water supply development requirements. However, water conservation and demand reduction cannot be counted on alone to reduce long-term water needs for the City. The City will need to continue its practices related to the integration of storage and efficient water use to meet the needs of its customers – since the nature of a future water supply that is reliable, secure and sustainable will change in response to a growing service population, evolving commercial and business uses, and changing climatic conditions.

It is also vital to note that overall water demand reductions are estimates based on experience, literature assessments and expected trends in the City's municipal and industrial water use. Actual water savings may vary widely dependent on customer behaviors, weather conditions, City messaging efforts, and any number of other external factors. However, with the City's investment in water conservation, individual customer water use will trend downward as more responsible water use is condoned and supported. For the City to manage its practices and understand the impact of its expenditures, it is vital that a robust water use monitoring program be established to track individual and sector water use on a daily, monthly, quarterly and annual basis as plan implementation occurs. Therefore, the City will need to commit staff resources to managing the implementation phase of the water conservation program such that mid-course corrections can be identified and executed, allowing the City to best leverage its resources to achieve meaningful water conservation.

Table 11 presents the estimated decreases in future water demand associated with the proposed water conservation measures and programs presented in the previous section. The table presents demand reductions for both average conditions and above average (i.e., one standard deviation above average demands) conditions. Above average conditions savings are greater due to the impact of improved water loss management, and the associated reduction of real losses associated to delivering future water to the City's customers, since real losses are accounted for as a percentage of water deliveries.

Figure 13 presents the predicted impact of improved water use efficiency on City water sales revenues. The base case of water sales revenues is calculated maintaining water rates at the current rate of \$1.83 per thousand gallons. The scenario with the current plan absent the water rate increases is shown, with a decrease in water sales revenue of about \$400,000 for average conditions based on reduced water sales revenues due to customer water conservation (which translates to about \$500,000 in above average year - one standard deviation above average). With the water rate increase and the related water use reduction, revenue for the City is up by about \$4.45 million in an average year, which translates to about \$5 million in above average years. This increased water sales revenue clearly offset

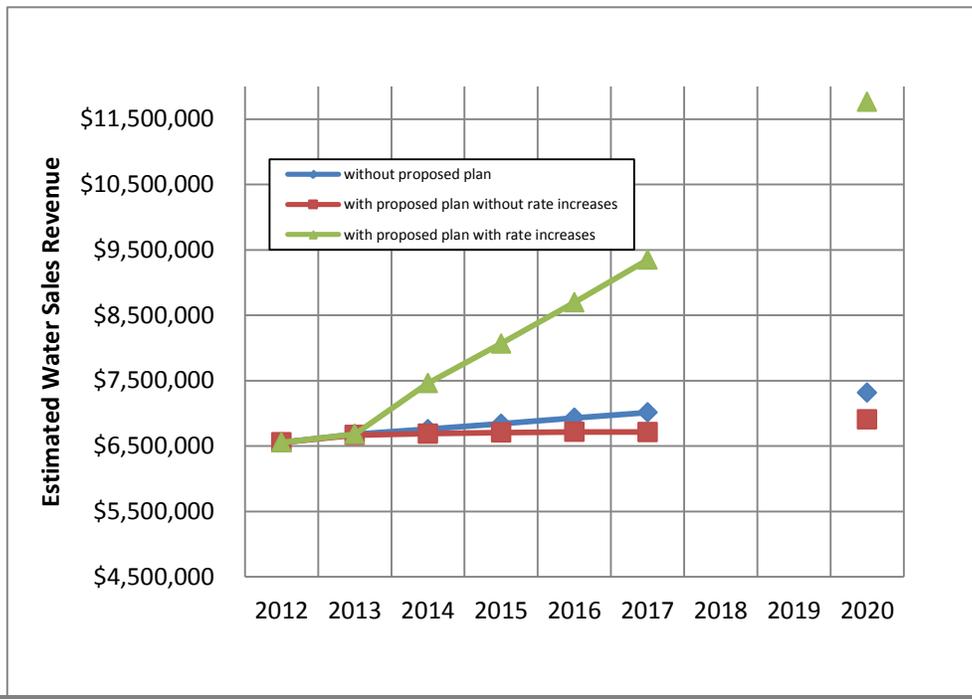
the impact of reduced customer water demand and provides for substantial revenue for treatment plant expansion and other capital improvement project needs.

Table 11 - Impact of Proposed Water Conservation Program on Average and Above Average Future Annual Water Supply Demands

	Average Conditions (AF)			Above Average Conditions ^a (AF)		
	Without Proposed Plan	With Proposed Plan	Demand Reductions	Without Proposed Plan	With Proposed Plan	Demand Reductions
2012	12,712	12,712	0	14,436	14,436	0
2013	12,954	12,933	21	14,717	14,696	21
2014	13,103	12,841	262	14,894	14,599	295
2015	13,324	12,837	487	15,084	14,535	549
2016	13,439	12,681	758	15,292	14,439	853
2017	13,599	12,555	1,044	15,484	14,307	1,177
2020	14,185	12,425	1,760	16,168	14,091	2,077

^a above average conditions are described in Appendix E.

Figure 13 – Water Sales Revenue Impacts Related to Proposed Water Conservation Program and Proposed Water Rate Increases



Note that adjustments to water rates in the future will need to incorporate more factors than simply changes to future water demand associated with water conservation impacts. For example, the predicted impact of passive water conservation savings is in the range of 780 AF by 2020³⁴. Water rates will need to be adjusted in accordance with expected passive water savings to maintain appropriate levels of water sales revenue independent of the impacts of the proposed water conservation program. Other factors such as changes in debt service, the need for cash reserves, costs of labor, energy and materials, and the scope of capital improvements will all affect future water rates as well.

The overall water demand reduction of 1,760 AF projected for the City by 2020 has a replacement value of about \$20.9 million (based on the cost of storage, transmission, treatment and distribution).

³⁴ Lost revenue associated with passive water savings estimated in 2020 are calculated to be about \$465,000 using the current rate of \$1.83 per thousand.

Section 9 Implementation

The City has identified those measures and programs that it chooses to implement to reduce future customer water demand; however the specific staging and order of measure and program implementation is clarified in this implementation plan. Clearly the City will earnestly pursue meaningful water conservation in compliance with the elements of this Plan and the direction of City Council. Future capital funding and annual budgets will be developed in accordance with the funding requirements laid out in the preceding chapters. However, future appropriations of City funding for the various measures and programs contained herein cannot be guaranteed given that the nature of future City priorities may change due to acts of God, public health issues, or other unforeseeable issues.

To this point, the implementation plan for water use efficiency by the City needs to maintain flexibility to adapt to the changing needs and requirements of not only the City's resources, but the water use efficiency program as well. As portions of the water use efficiency program are implemented, new data and information will be acquired which may dictate or influence future water use efficiency program needs not predicted at the time of this planning effort. Therefore, this Plan will be implemented in an adaptive management approach, incorporating changing conditions and influences into the year to year, and month to month, water use efficiency activities planned and executed by the City. This City will also perform surveys on various customer classes to gain a better understanding of the customers' current perception of water, water use and interest in various water measures and programs. Results from these surveys will aid the City in planning and implementation of this Plan.

Given this framework and understanding of how water use efficiency will be best implemented in the City, the Plan is best served through the identification of the staging, or sequencing, of the various selected water use efficiency measures and programs; and a listing of those measures and programs that are of the highest priority to the City as of this writing. In this way, the first set of measures and programs that the City plans to implement can be identified (i.e., those measures and programs that will be implemented in the next 1 to 2 years). As new information becomes available over the next 1 to 2 years, the City will revise and update its water efficiency methods to best address the circumstances at that time (with regard to data collected, current fiscal resources, changing customer needs, etc.).

Sequencing

Although the City understands and supports the implementation of meaningful water conservation, its resources are not unlimited; therefore, it has chosen to sequence the implementation of its selected water use efficiency measures and programs in accordance with its current needs, expectations for future fund allocations, and perhaps most importantly due to the logical connection and interaction between specific measures and programs. For example, a system-wide audit of the City's water treatment, distribution and billing systems will be used to inform decisions to implement new meter testing, repair, and/or installation activities.

Table 12 presents a summary of the estimated annual costs for selected water use efficiency measures and programs as understood at this time. The costs have been developed based on the following assumptions:

- Various departments within the City will be included, and will contribute to the implementation of the water conservation program, including utility finance, public relations, and engineering;
- Individual water customers of the City's will be interested and participate in the various measures and programs, especially the residential and commercial programs;
- The system-wide audit will help to identify areas for City improvement regarding measuring and reducing non-revenue water uses; and
- The City will coordinate the budgeting of its Capital Improvement Projects with the annual water conservation budget.

Table 12 – Proposed Water Conservation Program Implementation Budget 2013- 2017

	2013	2014	2015	2016	2017
Park Irrigation Retrofits	\$ 14,000	\$ 14,000	\$ 14,000	\$ 14,000	\$ 14,000
Water Waste Ordinance	1,500				
Slow the Flow	13,200	13,200	13,200	13,200	13,200
Garden-in-a-Box	4,000	4,000	4,000	4,000	4,000
Wise Water Use Messaging	25,000	8,000	8,000	8,000	8,000
Commercial Water Audits			15,000	15,000	
System Wide Water Audits	40,000	15,000	15,000	15,000	15,000
Meter and Water Line Replacement	260,000	260,000	260,000	260,000	260,000
Water Rate Study			25,000		
K-12 Education	5,000	5,000	5,000	5,000	5,000
Larimer County Conservation Corps, Energy and Water Program and the Home Energy Audit Program	8,000	8,000	8,000	8,000	8,000
Efficiency Express	2,500	2,500	2,500	2,500	2,500
Total	373,200	329,700	379,700	354,700	329,700

Priorities

For the City, the implementation of water conservation to support future demand reduction begins with the management of current non-revenue water (which aligns with one of the State-defined foundational water use efficiency elements) and water rate increases. Non-revenue water management includes characterizing and reducing both apparent losses that effect City billings and revenue, and real losses, which effect City operational costs. The City is focused on reducing the current level of non-revenue water, estimated to be about 13.5% of total treated water to about 10.5% in the next 9 years. To achieve this goal, the City will need to:

- Plan for and conduct a system-wide water audit to better characterize current non-revenue water and identify areas for utility improvements (e.g., revising the customer billing categories, identifying unmetered uses, developing cost estimates for making various proposed improvements to current water accounting practices);
- Improve meter reading accuracy on existing accounts;
- Identify and measure unmetered water uses; and
- Continue testing and repair of water distribution lines to manage leaks and other real losses between the treatment works and customer meters.

The City has budgeted for both the system-wide water audit and meter and water line replacement projects, allowing for substantial investment to occur in improving and upgrading the City's infrastructure. The costs to conduct these projects, along with the costs to upgrade the water treatment plant and other projects presented in Table 6 (see page 24) is one of the motivations behind the proposed water rate increases.

For this reason, the water rate increases is another key component of the water conservation program implementation, for the rate increases not only will provide for the revenue needed to improve water loss management and construct new, required facilities; increased water rates are expected to reduce customer water demand assisting the City in achieving its specified water conservation goals. The linkage of these two programs is vital to the overall success of the City in continuing to maintain a high level of stewardship related to the management of its water resources.

It is also imperative that the City develop and launch a water value messaging campaign to inform and engage its customers regarding the value and importance of a water system that is reliable, secure and sustainable. The messaging effort will focus on developing talking points, themes, and outreach efforts that help water customers to understand the nature of water supply and development in the City; the importance and value of maintained water supply infrastructure; and the need for water use efficiency by all. The City will use the proposed water conservation measures related to water loss control, water rating setting, improved water use efficiency at City facilities, better defined water waste management via ordinance, and various customer support programs (commercial audits, Slow the Flow and Garden-in-a-Box, etc.) to lead by example. The City will also develop and execute a customer survey to initiate the messaging campaign, gathering information regarding customer perceptions and values regarding water and water supply.

These programs and projects are therefore funded in 2013 to initiate the City's water conservation program.

The next highest priority for the City will be to conduct those measures and programs that improve the water use efficiency of the City's facilities including those measures and programs that will improve water use efficiency for both indoor and outdoor uses.

Other water use efficiency measures and programs that will support a better understanding of specific customer uses and improve their water use efficiencies, while considered important to the management

of future water demand are considered less important than those measures and programs controlled entirely by the City. Future implementation of customer water conservation programs will be conducted dependent on available funding and overall customer water use trends.

Public Input

The summary of public input will be provided after the comment period has closed. Public comment is expected to open on February 21, 2013. The public comment period will be announced through the City's webpage and notice in the local newspaper. Copies of the Final Draft plan will be made available at the Water Utility Offices and the City Public Library. Appendix F contains copies of the public notices used by the City to advertise the public comment period.

Public comment will continue for 60 days during which time City Council and the Water Utility Department will collect public comments, which will be used to inform the Final Plan. The Plan will be finalized after the public comment period has been completed and the guidance is provided by City Council. The Final Plan should be prepared and ready for CWCB review in May 2013.

Section 10

Monitoring and Evaluation of Measures and Programs

It is important to identify an approach to monitoring as many of the measures and programs as possible so the value of each program can be evaluated as it is implemented. In this way, adaptive management of the Plan components can be performed, and resources from the City allocated.

Generally, the City has selected water use efficiency measures and programs that can be tracked.³⁵ However, some measures and programs such as customer education and the effect of increasing water rates cannot be measured directly. For these measures and programs, overall customer water use metrics such as per capita residential water use and total per capita water use will be tracked. Other measures and programs, such as the audits conducted on large commercial water users and Slow the Flow can be monitored on an individual basis.

Monitoring efforts and metrics that the City proposes are summarized in Table 13.

Table 13 - Summary of Monitoring Methods for Estimating Water Savings

Use Efficiency Measure/Program	Real Water Losses	Apparent Water Loss Reductions	Quantity of Audits/Packages Used	Individual Water Use	Per Capita Water Use	Peak Monthly Demand
System-Wide Audit	X	X			X	
Messaging Campaign					X	X
Water Rate Increase				x	X	X
Residential Programs			X	X	X	X
Commercial Audits		X	X	X	X	X
Efficiency Express			X	X		
Water and Energy Assessments and Audits			X	X		

Plan Updates and Revisions

On an annual basis the City will monitor the metrics proposed in Table 13. The results will be reported to the Water Commission and City Council on a semi-annual and annual basis. The annual reports will help prepare the City for updating the Water Efficiency Plan every five to seven years, as required by the CWCB. It is the City's intent to update this Plan at the end of 2016.

³⁵ The City may have to implement some changes to its current protocols to track targeted customer water use, such as the City's water use and raw water uses, to complement the City's active water conservation efforts.

Appendix A
City of Loveland Current Water Rates

CITY OF LOVELAND,
COLORADO



Water and Power Department
Schedule of Rates, Charges and Fees

Effective 1/1/13

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City of Loveland, Colorado
Water and Power Department
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SUMMARY

Electric Rates

Annexation Surcharge	5%		
Renewable Energy Premium per 100 kilowatt-hour (kWh)	\$2.70		
		<u>Jan.-June,</u>	
		<u>Oct.-Dec.</u>	<u>July-Sept.</u>
Residential (Schedule R)			
Base Charge per Month	\$8.91		\$8.91
Energy Charge per kWh	\$0.06600		\$0.07220
PILT per kWh	\$0.00593		\$0.00633
Residential Demand (Schedule RD)			
Base Charge per Month	\$18.00		\$18.00
Energy Charge per kWh	\$0.02800		\$0.02800
PILT per kWh	\$0.00466		\$0.00497
Demand Charge per kW	\$8.21		\$8.75
Small General Service (Schedule SG)			
Base Charge per Month	\$14.20		\$14.20
Energy Charge per kWh	\$0.06640		\$0.07100
PILT per kWh	\$0.00554		\$0.00586
Plant Investment Fee per kWh	\$0.00514		\$0.00514
Large General Service (Schedule LG)			
Base Charge per Month	\$65.00		\$65.00
Energy Charge per kWh	\$0.03350		\$0.03490
PILT per kWh	\$0.00466		\$0.00499
Plant Investment Fee per kWh	\$0.00514		\$0.00514
Demand Charge per kW	\$10.49		\$11.51
Primary Service with Customer Owned Transformer (Schedule PT)			
Base Charge per Month	\$81.00		\$81.00
Energy Charge per kWh	\$0.03276		\$0.03413
PILT per kWh	\$0.00384		\$0.00412
Plant Investment Fee per kWh	\$0.00499		\$0.00499
Demand Charge per kW	\$9.49		\$10.51

City of Loveland, Colorado
Water and Power Department
 2013 Schedule of Rates, Charges and Fees
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Electric Rates Cont'd

Transmission Voltage by Contract (Schedule TS)

Area Lighting (Schedule AL)	<u>Jan.-Dec.</u>
Rate per watt of bulb	\$0.04717
PILT per watt of bulb	\$0.00353
Flat Rates (Schedule FR)	<u>Jan.-Dec.</u>
Signal Amplifiers	\$27.80
PILT	\$2.08
Automatic Sprinkler Controls	\$4.13
PILT	\$0.31
Bus Shelters	\$17.09
PILT	\$1.28

City of Loveland, Colorado
Water and Power Department
2013 Schedule of Rates, Charges and Fees
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Wastewater Rates

<u>Monthly Flat Rate</u>	<u>Inside City</u>	<u>Outside City</u>
Single-family residential	\$18.81	\$28.22
Multi-family residential per unit	\$11.22	\$16.83
Non-residential property (Commercial or Industrial)	\$125.87	\$188.81
 <u>Metered Water Service</u>		
Monthly base charge – single-family residential	\$8.22	\$12.33
Monthly base charge – multi-family residential	\$3.43	\$5.15
Monthly base charge – commercial	\$8.00	\$12.00
Volume charge per 1,000 gallons – single-family residential	\$2.59	\$3.89
Volume charge per 1,000 gallons – multi-family residential	\$2.59	\$3.89
Volume charge per 1,000 gallons – commercial	\$3.21	\$4.82
<u>High Strength Surcharge</u>		
BOD charge per pound when discharge is greater than 276 mg/l	\$0.44	\$0.66
TSS charge per pound when discharge is greater than 207 mg/l	\$0.26	\$0.39

City of Loveland, Colorado
Water and Power Department
2013 Schedule of Rates, Charges and Fees
SUMMARY

Water Rates

Metered Rates

The monthly service charge shall be the sum of the base charge and the use fee per 1,000 gallons as set forth below:

Single-Family Residential Base Charge

<u>Tap Size (in inches)</u>	<u>Inside City</u>	<u>Outside City</u>
0.75	\$10.07	\$15.11
1.00	\$12.97	\$19.46
1.50	\$15.86	\$23.79
2.00	\$23.84	\$35.76
3.00	\$82.53	\$123.80
4.00	\$104.27	\$156.41
6.00	\$155.00	\$232.50

Multi-Family Residential Base Charge

<u>Tap size (in inches)</u>	<u>Inside City</u>	<u>Outside City</u>
0.75	\$14.83	\$22.25
1.00	\$17.73	\$26.60
1.25	\$19.18	N/A
1.50	\$20.62	\$30.93
2.00	\$28.59	\$42.89
3.00	\$87.24	\$130.86
4.00	\$108.96	\$163.44
6.00	\$159.64	\$239.46

Commercial Base Charge

<u>Tap size (in inches)</u>	<u>Inside City</u>	<u>Outside City</u>
0.75	\$10.07	\$15.11
1.00	\$12.97	\$19.46
1.50	\$15.86	\$23.79
2.00	\$23.84	\$35.76
3.00	\$82.53	\$123.80
4.00	\$104.27	\$156.41
6.00	\$155.00	\$232.50

City of Loveland, Colorado
Water and Power Department
2013 Schedule of Rates, Charges and Fees
SUMMARY

Water Rates Cont'd

Irrigation Base Charge

<u>Tap size (in inches)</u>	<u>Inside City</u>	<u>Outside City</u>
0.75	\$10.07	\$15.11
1.00	\$12.97	\$19.46
1.50	\$15.86	\$23.79
2.00	\$23.84	\$35.76
3.00	\$82.53	\$123.80
4.00	\$104.27	\$156.41
6.00	\$155.00	\$232.50

Charges for larger taps will be set by City Council.

Use Fee per 1,000 gallons	<u>Inside City</u>	<u>Outside City</u>
Single-Family Residential	\$1.75	\$2.63
Multi-Family Residential	\$1.61	\$2.42
Commercial	\$1.76	\$2.64
Irrigation	\$2.15	\$3.23

Hidden Valley Monthly Base Charge for 0.75 inch tap	\$160.70
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Excess Water Use – Surcharge per 1,000 gallons	\$0.75
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City of Loveland, Colorado
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Water Rates Cont'd

Fire Hydrant Charge per month	
Residential	\$2.50
Commercial	\$6.20
Fire Protection Tap Service Fee per month	\$1.80
Tank and Hydrant Rate per 300 gallons	\$1.00

Plant Investment Fees - Electric

Residential Service	
Residential over 150 amp service	\$1,630.00
Residential 150 amp service or less	\$1,270.00
Non-Residential per kWh	
Small General Service	\$0.00514
Large General Service	\$0.00514
Primary Service w/customer equipment	\$0.00499

System Impact Fees – Wastewater

	<u>Inside City</u>	<u>Outside City</u>
Detached one-family dwelling	\$2,510.00	\$3,770.00
Attached one-family dwelling, per unit	\$2,240.00	\$3,360.00
Two-family dwelling, per unit	\$2,240.00	\$3,360.00
Multifamily dwelling containing 3-8 dwelling units, per unit	\$2,240.00	\$3,360.00
Multifamily dwelling containing 9 or more dwelling units, per unit	\$1,620.00	\$2,430.00

Nonresidential		<u>Inside City</u>	<u>Outside City</u>
<u>Tap size (in inches)</u>			
0.75		\$5,450.00	\$8,180.00
1.00		\$17,820.00	\$26,730.00
1.50		\$31,360.00	\$47,040.00

Nonresidential taps above 1.5-inch pays the capital recovery surcharge

Capital Recovery Surcharge – Wastewater

Inside City per 1,000 gallons of sewer billed	\$0.745
Outside City per 1,000 gallons of sewer billed	\$1.118

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System Impact Fees – Water

	<u>Inside City</u>	<u>Outside City</u>
Detached one-family dwelling	\$4,670.00	\$7,010.00
Attached one-family dwelling, per unit	\$2,810.00	\$4,220.00
Two-family dwelling, per unit	\$2,810.00	\$4,220.00
Multifamily dwelling containing 3-8 dwelling units, per unit	\$2,810.00	\$4,220.00
Multifamily dwelling containing 9 or more dwelling units, per unit	\$2,010.00	\$3,020.00
Nonresidential		
<u>Tap size (in inches)</u>	<u>Inside City</u>	<u>Outside City</u>
0.75	\$5,480.00	\$8,220.00
1.00	\$17,350.00	\$26,030.00
1.50	\$31,890.00	\$47,840.00
Irrigation		
<u>Tap size (in inches)</u>	<u>Inside City</u>	<u>Outside City</u>
0.75	\$11,930.00	\$17,900.00
1.00	\$32,760.00	\$49,140.00
1.50	\$84,120.00	\$126,180.00
2.00	\$105,940.00	\$158,910.00
3.00	\$271,720.00	\$407,580.00

Tap sizes larger than 3-inch shall be established by City Council. The impact fee for taps larger than 1.5 inch applies only to irrigation meters. Nonresidential taps above 1.5 inch pay the capital recovery surcharge.

Hidden Valley Water Tap Activation Fee:

This fee applies to all water taps applied for on or after January 1, 2010 to serve lots authorized pursuant to Resolutions #R-35-2004 and #R-83-2005. Payment of this fee shall be due upon application for the water tap. The fee shall be calculated as follows: $A \times B \times C = \text{fee}$.

A = Number of months from July 1, 2005 to the activation fee due date

B = \$67.00 per month

C = *Engineering News Record* 20 Cities Construction Cost Index (used to inflate the construction costs to current dollars)

Capital Recovery Surcharge - Water

Inside City per 1,000 gallons of water	\$0.721
Outside City per 1,000 gallons of water	\$1.082

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Fire Tap Plant Investment Fee

Fire Tap Plant Investment Fee (outside City only) \$553.00

Raw Water Development Fee

Detached One-Family Dwelling \$1,000.00

Attached One-Family Dwelling, per unit \$1,000.00

Multifamily dwelling containing 2-24 dwelling units, per unit \$626.00

Multifamily dwelling containing 25 or more dwelling units, per unit \$123.00

Nonresidential

Tap size (in inches)

0.75 \$1,000.00

1.00 \$1,700.00

1.50 \$3,300.00

2.00 \$5,300.00

3.00 \$10,000.00

Tap sizes larger than 3-inch shall be established by City Council. The impact fee for taps larger than 1.5 inch applies only to irrigation meters. Commercial taps above 1.5 inch pay the capital recovery surcharge.

Raw Water Capital Recovery Surcharge Per 1,000 Gallons

Raw Water Capital Recovery Surcharge Per 1,000 Gallons \$0.15

Electric Fees

Service Turn-On at the meter \$35.00

Service Turn-On at the meter – After Hours \$65.00

Service Turn-Off at the meter resulting from an unauthorized Service Turn-On \$30.00

Disconnect/Reconnect Services \$155.00

Disconnect/Reconnect Services with Engineering \$255.00

Permanent Service Connect (No Disconnect Needed) \$155.00

Permanent Disconnect of Service \$155.00

City of Loveland, Colorado
Water and Power Department
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Electric FeesCont'd

Charges When Access Denied

Appointment or Special Trip to Read the Meter	\$15.00
Appointment or Special Trip to Read the Meter After Hours	\$25.00
Appointment or Special Trip to Change the Meter	\$55.00
Appointment or Special Trip to Change Meter After Hours or Weekends	\$70.00
Service is disconnected at the junction box or the overhead pole	\$155.00
When access to the pole is denied, actual costs will be billed	

Residential Service Installations

Typical Underground with 1/0 CIC	\$590.00
Typical Underground with 4/0 CIC	\$800.00
Typical Overhead	\$310.00

Multiplex 3-6 Units	\$700.00
Multiplex 7 or More Units (deposit, to be billed on actuals)	\$855.00

Field Engineering Deposits

Residential and duplex single phase installations, 1-2 lots	\$800.00
Single commercial buildings, transformer upgrades, raising, lowering, or removing existing power	\$1,200.00
Residential subdivision of 3-25 lots, commercial subdivision of 2-10 lots, raising, lowering, or removing existing power	\$1,600.00
Residential subdivision of more than 25 lots, commercial subdivision of more than 10 lots, malls, shopping centers, hospitals	\$3,000.00

Other Deposits – See Section Fees – Electric “Other Deposits”

Temporary Residential Connections	\$170.00
Termination and energizing electric services to small devices	\$285.00
Installation of Area Light	\$325.00

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Wastewater Fees

Pretreatment Inspection Fee	\$70.00
Pretreatment Significant Industrial User (SIU) Laboratory Analysis	<u>\$60.00</u>
Pretreatment SIU Public Notification of Violation	\$82.00
Tapping Fees 4 inch or 6 inch Tap	\$215.00
4 inch Saddle and Stainless Strap	\$60.00
6 inch Saddle and Stainless Strap	\$80.00

Water Fees

Construction Water Fee	
<u>Tap size (in inches)</u>	
0.75	\$34.00
1.00	\$56.00
1.50	\$113.00
2.00	\$180.00
3.00	\$336.00
4.00	\$559.00

Above 4.00 inch tap will be negotiated with the Water and Power Department

Water Turn-on Fee – Regular Hours	\$35.00
Water Turn-on Fee – After Regular Hours	\$60.00
Water Turn-off Fee for Unauthorized Service Turn-on	\$30.00
Water Meter Appointment Fee – Regular Hours	\$20.00
Water Meter Appointment Fee – After Regular Hours	\$30.00
Raw Water Cash-in-lieu Fee per Acre-Foot (City Code Sec.19.04.040)	Set by Loveland Utilities Commission
Native Raw Water Storage Fee per Acre-Foot	
Barnes Ditch	\$5,750.00
Big Thompson Ditch & Manufacturing Co.	\$3,530.00
Buckingham Irrigation Co. (Geo. Rist Ditch)	\$7,400.00
Chubbuck Ditch	\$7,400.00
Louden Irrigating Canal and Reservoir Co.	\$6,850.00
South Side Ditch Company	\$6,770.00

City of Loveland, Colorado
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Water Fees Cont'd

Construction Hydrant Meter Deposit	\$1,000.00
Hydrant Meter Rental	
Daily Rental	\$5.00
Install Fee	\$25.00
Remove Fee	\$25.00
Moving Meter Fee	\$25.00
Water Use	\$1.00/300 gallons
Meter Fees	
0.75 inch Meter and Readout	\$180.00
1.00 inch Meter and Readout	\$255.00
Install Meter and Inspection	
Meter inspect	\$45.00
Meter install	\$75.00
Water Tapping Fee	
0.75 inch	\$285.00
1.00 inch	\$285.00
1.50 inch	\$325.00
2.00 inch	\$340.00
Above 2.00 inch	\$355.00

Miscellaneous Fees

Late Payment Penalty	\$12.00
Field Collection Fee	\$18.00
New Account Fee	\$11.00
Reactivation Fee	\$10.00
New Account Meter Reading Fee	\$10.00
Interfering or Tampering with a Meter – electric or water	\$50.00
Return Check (Insufficient Funds) Charge	\$25.00
Filing Fee for Unpaid Bills	\$35.00

City of Loveland, Colorado
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RATES - ELECTRIC

I. Rates - Electric

Resale of Electric Current Prohibited

It is unlawful for any consumer who purchases electric service from the City to sell such service to others.

Surcharge

There is imposed a surcharge in the amount of five percent of base charges plus charges for energy, demand, payment-in-lieu-of-taxes (PILT) for the sale of electric power to services that come into existence in all areas annexed to the City after January 31, 1987, which areas were formerly a part of an exclusive service territory granted to a cooperative electric association by the Public Utilities Commission. Such surcharge shall expire ten years after the effective date of annexation of each such area.

Renewable Energy Premium

Availability

The renewable energy premium is available as an option to all residential, commercial, and industrial customers served under Schedules R, RD, SG, LG, PS, and PT. The renewable energy premium is not available to Transmission Voltage Service, Area Light or Flat Rate customers served under Schedules TS, AL or FE.

Monthly Rate

Premium per each 100 kWh increment of energy\$2.70

This charge is in addition to all other regular charges the customer incurs for electric service.

Monthly Minimum

The minimum bill shall be \$2.70 for each 100 kWh increment requested by the customer in the service agreement, plus the minimum bill as identified in the principal rate schedule for the customer.

Conditions

Service Restrictions – The supply of renewable energy is limited to the resources made available to the department by its power supplier, Platte River Power Authority (PRPA), and is therefore subject to all terms and conditions identified in PRPA’s tariff for Renewable Energy Service.

Service Agreement

The renewable energy premium is an optional charge and requires the customer to sign a service agreement with Loveland Water and Power.

City of Loveland, Colorado
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RATES - ELECTRIC

Service Agreement Period

The renewable energy premium for all eligible rate schedules shall be available for a minimum initial period of 12 consecutive months and then continuing month to month thereafter until terminated. After the minimum period, the obligation to purchase or provide renewable energy may be terminated upon 30 days notice by either party. Termination of the principal service shall also terminate the agreement unless the customer chooses to advance the agreement to the new service address.

Service Agreement Amount

Customer may request renewable energy in 100 kWh increments. The billable monthly renewable energy premium will be the number of 100 kWh increments requested by the customer in the service agreement. The actual kilowatt-hours used by the customer in any given month may be more or less than the average.

City of Loveland, Colorado
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RATES - ELECTRIC

Self-Generation Rate

Availability

The Self-Generation Rate is available as an option to all electric service customers who own, operate and maintain their own generation equipment.

Monthly Rate – System Size 1-50 kW

	Jan. – June, Oct. – Dec.	July – Sept.
Residential		
Base charge	\$8.91	\$8.91
Energy charge per kWh	\$0.06600	\$0.07220
Buyback charge per kWh	\$0.03798	\$0.04071
Monthly minimum bill	\$8.91	\$8.91
System size range limitation	1-50 kW	1-50 kW
PILT per kWh	\$0.00593	\$0.00633
Small General		
Base charge	\$14.20	\$14.20
Energy charge per kWh	\$0.06640	\$0.07100
Buyback charge per kWh	\$0.03798	\$0.04071
Monthly minimum bill	\$14.20	\$14.20
System size range limitation	1-50 kW	1-50 kW
PILT per kWh	\$0.00554	\$0.00586
Plant Investment Fee per kWh	\$0.00514	\$0.00514
Large General		
Base charge	\$65.00	\$65.00
Energy charge per kWh	\$0.03350	\$0.03490
Demand per kW	\$10.49	\$11.51
Buyback charge per kWh	\$0.03798	\$0.04071
Monthly minimum bill	\$65.00	\$65.00
System size range limitation	1-50 kW	1-50 kW
PILT per kWh	\$0.00466	\$0.00500
Plant Investment Fee per kWh	\$0.00514	\$0.00514

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Self-Generation Rate Cont'd
Conditions

The city will net meter all energy consumed by the customer and produced by the customer’s generation system. Net metering shall be, for billing purposes, the net consumption as measured at the service meter on a monthly basis. Consumption will be measured monthly and in the event net metering is negative in a given month, such that the customer’s generation system production is greater than the customer’s consumption, there will not be a monthly cash credit for such production. All such excess energy, expressed in kilowatt-hours, shall be carried forward from month to month and credited against the customer’s energy consumption, expressed in kilowatt-hours, in subsequent months. In the event that a negative net consumption balance remains after twelve consecutive months following the effective date of customer’s commencing on the Self Generation Rate, or any annual anniversary thereafter, the City will pay the customer for such negative balances at the Self Generation Buyback Charge Rate.

Monthly Rate – System Size 51 – 400 kW

Large General Service	Jan. – Jun. Oct. – Dec.	July – Sept.
Base Energy	\$65.00	\$65.00
Energy Charge per kWh	\$0.03350	\$0.03490
PILT per kWh	\$0.00466	\$0.00500
Plant Investment Fee per kWh	\$0.00514	\$0.00514
Demand per kW	\$10.49	\$11.51
Buyback charge per kWh	\$0.05290	\$0.06220
Monthly Minimum Bill	\$65.00	\$65.00
System Size Range Limitation	51-400 kW	51-400 kW

The Self-Generating customer must be in compliance with the technical specifications and requirements contained in the Standard for Interconnecting Distributed Resources with the City of Loveland Electric Power System as found in the City’s Municipal Code, Section 13.12.240 and must enter into a contract with the City.

City of Loveland, Colorado
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RATES - ELECTRIC

**Residential Service
 Schedule R**

Availability

Residential Service is available for single-family dwelling units and individually metered multi-family dwelling units at any location within the area served by Loveland Water and Power. Single-family dwelling units and individually metered multi-family dwelling units shall mean those buildings or units used solely as residences and not used in part for any other purpose. This rate is applicable to existing and new residential customers. Service will be delivered through a single meter per dwelling unit, at one point of delivery.

Monthly Rate

The rate for Residential Service shall consist of the sum of the base charge, energy charge, and PILT in accordance with the following table:

Monthly Rate

The rate for Residential Service shall consist of the sum of the base charge, energy charge, and PILT in accordance with the following table:

	<u>Jan. – June, Oct. – Dec.</u>	<u>July – Sept.</u>
Base charge	\$8.91	\$8.91
Energy charge per kWh	\$0.06600	\$0.07220
PILT charge per kWh	\$0.00593	\$0.00633
Monthly minimum bill	\$8.91	\$8.91

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**Residential Demand Service
 Schedule RD**

Availability

Residential Demand Service is available for single-family dwelling units and individually metered multi-family dwelling units at any location within the area served by Loveland Water and Power. Single-family dwelling units and individually metered multi-family units shall mean those buildings or dwelling units used solely as residences and not used in part for any other purpose. Existing accounts may elect service under this schedule by making application to Loveland Water and Power. Service will be delivered through a single meter per dwelling unit, at one point of delivery.

Monthly Rate

The rate for Residential Demand Service shall consist of the sum of the base charge, energy charge, demand charge and PILT in accordance with the following table:

	<u>Jan. – June, Oct. – Dec.</u>	<u>July – Sept.</u>
Base charge	\$18.00	\$18.00
Energy charge per kWh	\$0.02800	\$0.02800
PILT charge per kWh	\$0.00466	\$0.00497
Demand charge per kW	\$8.21	\$8.75
Monthly minimum bill	\$18.00	\$18.00

Billing Demand

The demand shall be the highest rate of use in kilowatts during any 15 minute interval of the billing period.

Power Factor Charge

Power factor charge of one hundred percent of the power factor charge incurred by the City on account of and attributable to service to the customer may be billed to the customer.

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RATES - ELECTRIC

**Small General Service
 Schedule SG**

Availability

Small General Service is required for all non-residential customers with less than or equal to 50 kW demand per month in ten months of a consecutive 12-month period. This also includes temporary power for non-permanent non-residential customers (for example: firework stands and holiday lights).

Monthly Rate

The rate for Small General Service shall consist of the sum of the base charge, energy charge and PILT in accordance with the following table:

	<u>Jan. – June, Oct. – Dec.</u>	<u>July – Sept.</u>
Base charge	\$14.20	\$14.20
Energy charge per kWh	\$0.06640	\$0.07100
PILT charge per kWh	\$0.00554	\$0.00586
Plant Investment Fee per kWh	\$0.00514	\$0.00514
Monthly minimum bill	\$14.20	\$14.20

Conditions

- A. Whenever metered demand exceeds 50 kW in any three months out of a consecutive 12-month period, Loveland Water and Power will notify the customer and further service provided to such customer shall be furnished at the Large General Service Rate. The department may install such meters as it deems necessary in order to determine the metered demand.
- B. For single-phase, three-wire service, the customer’s equipment shall be connected so that the current carried by the neutral conductor shall be not greater than 15 percent of the maximum current in either of the two conductors. For three-phase wye or delta service, the customer’s equipment shall be connected so that the current carried by any one-phase conductor shall be no greater than 115 percent of the current in either of the two-phase conductors.

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Large General Service
Schedule LG

Availability

Large General Service is required for all non-residential customers exceeding 50 kW demand in any three months out of a consecutive 12-month period.

Continuation for Certain Customers

Customers on the Large General Service rate on January 31, 1999, with less than three months of 50 kW demand in a consecutive 12-month period will be grandfathered into the LG rate.

Monthly Rate

The rate for Large General Service shall consist of the sum of the base charge, energy charge, demand charge and PILT in according with the following table:

	Jan. – June, <u>Oct. – Dec.</u>	<u>July – Sept.</u>
Base charge	\$65.00	\$65.00
Energy charge per kWh	\$0.03350	\$0.03490
PILT charge per kWh	\$0.00466	\$0.00499
Demand charge per kW	\$10.49	\$11.51
Plant Investment Fee per kWh	\$0.00514	\$0.00514
Monthly minimum bill	\$65.00	\$65.00

Billing Demand

The demand shall be the highest rate of use in kilowatts during any 15-minute interval of the billing period.

Power Factor Charge

Power factor charge of one hundred percent of the power factor charge incurred by the City on account of and attributable to service to the customer may be billed to the customer.

City of Loveland, Colorado
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RATES - ELECTRIC

**Primary Service with Transformer
Schedule PT**

Availability

Primary Service is available to all non-residential customers exceeding 50 kW demand in any three months within a 12-month period where service is delivered and metered at the available primary voltage and all serving facilities on the customer's side of the metering point are owned, operated and maintained by the customer.

Monthly Rate

The rate for Primary Service where the customer owns the transformers shall consist of the sum of the base charge, energy charge, demand charge and PILT in accordance with the following table:

	Jan. – June, <u>Oct. – Dec.</u>	<u>July – Sept.</u>
Base charge	\$81.00	\$81.00
Energy charge per kWh	\$0.03276	\$0.03413
PILT charge per kWh	\$0.00384	\$0.00412
Demand charge per kW	\$9.49	\$10.51
Plant Investment Fee per kWh	\$0.00499	\$0.00499
Monthly minimum bill	\$81.00	\$81.00

Billing Demand

The demand shall be the highest rate of use in kilowatts during any 15-minute interval of the billing period.

Power Factor Charge

A power factor charge of one hundred percent of the power factor charge incurred by the City on account of and attributable to service to the customer may be billed to the customer.

Conditions

Transformer ownership and maintenance is the responsibility of the customer receiving service under this rate schedule. The customer requesting this rate schedule is solely responsible for all costs associated with the installation and maintenance of the primary metering equipment and facilities. See the Water and Power Department's *Contractor Construction Standards* for equipment specifications.

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RATES - ELECTRIC

Transmission Voltage Service ***Schedule TS***

Eligibility Requirements

Transmission Voltage Service is available to any customer: (i) whose load is of sufficient magnitude or of an unusual nature such that it cannot be served from the distribution system; and (ii) whose premises are adjacent to transmission lines that are, or by contract can become, lines that supply wholesale power to the city's system; and (iii) who meets the criteria for large user service as set forth in Platte River Power Authority's Tariff 9, or applicable successor tariff.

Character of Service

The power furnished under Schedule TS shall be three phase alternating current and approximately 60 hertz, and delivered at approximately 115kV, or at other voltages subject to conditions as agreed upon, metered at each delivery point.

Charges for Service

The charges for service under Schedule TS shall be determined based on the unique load characteristics and service requirements of the customer. The rate for service delivered under Schedule TS shall at a minimum be sufficient to recover the city's cost of service, including, without limitation, wholesale rates and the city's projected operating and maintenance costs. In addition, the customer shall be responsible for all wholesale charges and fees incurred by the city in providing service under Schedule TS to the customer, including, without limitation, power factor charges.

Conditions of Service

In order to receive service under Schedule TS, the customer must meet the eligibility requirements set forth above and enter into an electric service agreement with the city. All such agreements must meet the requirements of this Schedule TS, protect the integrity of the City's electric system, protect against interference with other city electric customers, and shall address, at a minimum, the following material terms:

- term of the agreement, including initial date of service;
- charges for service, including rate adjustments;
- metering, including configuration, ownership, and maintenance;
- infrastructure, including ownership and maintenance;
- load factor, including any penalties for failure to comply;
- nature and frequency of interruptions (if service is provided on an interruptible basis), including any penalties for failure to comply;
- any other terms and conditions required to be addressed pursuant to Platte River Power Authority's Tariff 9, or applicable successor tariff.

In addition, the agreement must include a waiver of all liability for the city and Platte River Power Authority for actual and consequential damages resulting from interruptions in accordance with the agreement.

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RATES - ELECTRIC

The city manager shall be authorized to negotiate all such agreements, in consultation with Platte River Power Authority, and to execute such agreements on behalf of the city.

City of Loveland, Colorado
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RATES - ELECTRIC

Area Lighting
Schedule AL

Availability

Area lights will be furnished to customers who request this service for the purpose of lighting private property or alleys or other areas where City street lighting would normally not be installed. Decisions for location of the lights shall be in the discretion of the City. Applications for area lights should be made at the City of Loveland Water and Power Department.

Monthly Rate (Jan.-Dec.)

The rate per watt for area lights shall be.....	\$0.04717
The PILT charge per watt for area lights shall be.....	\$0.00353

Conditions

All area lights shall be high pressure sodium vapor units.

City of Loveland, Colorado
Water and Power Department
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RATES - ELECTRIC

Flat Rate Service
Schedule FE

Availability

Small devices attached to the City’s electric distribution system for the purpose of amplifying cable TV and telephone signals or operating automatic sprinkler controls in remote locations after June 1, 1992, will not require metering and will be billed on a flat monthly rate. Accounts existing prior to June 1, 1992, shall continue to be metered and billed at their present rate unless the customer requests conversion to the flat rate set forth in this schedule.

Monthly Rates (Jan.-Dec.)

Signal amplifiers	\$27.80
Signal amplifiers PILT charge	\$2.08
Automatic sprinkler controls.....	\$4.13
Automatic sprinkler controls PILT charge	\$0.31
Bus shelters	\$17.09
Bus shelters PILT charge	\$1.28

Conditions

- A. Signal amplifiers can be no greater than 5 amps per device.
- B. Automatic sprinkler controls can be no greater than 1.0 amp per device.
- C. The department may randomly install meters as it deems necessary in order to monitor the actual consumption.
- D. A customer with multiple device locations existing prior to June 1, 1992, requesting a conversion of said devices to the Flat Rate Schedule, must convert all devices existing prior to June 1, 1992, to the Flat Rate Schedule.

City of Loveland, Colorado
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FEES - ELECTRIC

II. Fees - Electric

Applications for Electric Service

Every person desiring a supply of electric current from the City, or an upgrade or other change in existing service, shall make application therefore to the City upon forms furnished for that purpose.

Plant Investment Fee

Plant Investment Fees provide for the additional electric transmission, substation and distribution facilities made necessary by the extension of electric service to new connections. The Plant Investment Fee provided herein shall be, in addition to, all of the rates and charges made in connection with the furnishing by the City of electric service, and shall be payable as provided for in this section.

- A. Schedule R – Residential Service and Schedule RD – Residential Demand Service.** At the time application is made for any dwelling unit to be built within the corporate boundaries of the City, or at the time of application for electric service for any dwelling unit to be built outside the corporate boundaries of the City, there shall be paid to the City a Plant Investment Fee in the amount of \$1,630.00 for each electric meter to be installed in connection with the dwelling unit with a service size of greater than 150 amps and \$1,270.00 for each electric meter to be installed in connection with the dwelling unit with a service size of 150 amps or less. (Each dwelling unit within a structure containing more than one dwelling unit shall be separately metered). No energization of a permanent connection to any dwelling unit served by the City shall occur unless and until the Plant Investment Fee is paid.

For the purpose of this section, “dwelling unit” means one or more rooms and a kitchen area designed for or occupied as a unit for living and cooking purposes, which is located within a single family, multiple family or mobile home, but excluding congregate care facilities, as those terms are defined in Municipal Code Chapter 18.04. A congregate care facility may receive service under Schedules R, RD, SG, LG, or PT.

Upon application, the Water and Power Department may allow a single meter to serve a multiple family dwelling if such multiple family dwelling is a federally assisted and federally supervised project and the project sponsor is required by the federal agency having jurisdiction thereof to include the provision of electric service within the rent structure for the project. Such project may receive service under Schedules R, RD, SG, LG, or PT. If any such projects should cease to be federally supervised, then the project shall revert to the requirement of individual metering, the Plant Investment Fee for residential service shall be paid and a credit shall be applied against such Plant Investment Fee in the amount of the Plant Investment Fees paid while receiving service under another class.

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Plant Investment Fee (cont'd)

B. Schedule SG – Small General Service. The Plant Investment Fee for accounts receiving small general service shall be collected in each billing period. The amount of the Plant Investment Fee to be billed in each period shall be equal to \$0.00514 per kWh used by the account during the billing period.

In establishing the Plant Investment Fees in 1979, customers served prior to May 1, 1979, are exempt from the Plant Investment Fee at the existing location only. Customers who have paid the five-year Plant Investment Fee for a particular location are exempt from the fee at the location covered.

C. Schedule LG – Large General Service. The amount of Plant Investment Fee to be billed in each billing period shall be equal to \$0.00514 per kWh used by the account during the billing period.

D. Schedule PT– Primary Service with Transformer. The amount of Plant Investment Fee to be billed in each billing period shall be equal to \$0.00499 per kWh used by the account during the billing period.

E. Discontinuance of Service. In addition to all of the remedies available to the City, electric service may be discontinued for failure to pay the Plant Investment Fee provided for in this section, and such discontinuance shall be in accordance with the notice procedures set forth in Municipal Code Section 13.02.070.

Service Turn-On Fee at the Meter

During regularly scheduled work hours, there is imposed a fee in the amount of \$35.00 for each service turn-on where power is energized at the meter.

After regularly scheduled work hours, there is imposed a fee in the amount of \$65.00 for each service turn on where the power is energized at the meter.

After hours fees apply to all requests received after 4 p.m. Monday through Friday, anytime Saturday or Sunday, and all holidays observed by the City of Loveland.

Disconnect and Reconnect Services

Water and Power will perform a typical service disconnect/reconnect where power is energized or de-energized on the line side of the meter, on a flat fee basis.

There is imposed a fee in the amount of \$155.00 for each typical service disconnect/reconnect and \$255.00 for each typical service disconnect/reconnect with engineering.

A typical service disconnect/reconnect is defined as one where there is no increase in wire size or length.

All other service disconnect/reconnects will be billed at Water and Power's actual cost.

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Permanent Disconnect and Removal of Service

Where a request for permanent disconnection and removal of single-phase service has been requested, there is imposed a flat fee of \$155.00.

Where a request for permanent termination of three-phase service has been requested, charges will be billed at Water and Power's actual cost.

Charges When Access Denied

There is imposed a charge as set forth in this section, that shall be due and payable when billed, to cover the additional costs and expenses incurred by the City whenever clear access to the meter location is denied. Clear access shall be deemed to be denied whenever, because of locked gates, animals confined in the same space as the meter location, or for any other reason, and after making a reasonable attempt to locate a person upon the premises to gain access, an authorized representative of the City is unable to read the meter, change the meter, or perform such other function as such representative is lawfully authorized to perform. The amount of such charge shall be as follows:

- A. When clear access is denied for two successive meter readings, and an appointment is made with the consumer or a special trip is made for reading the meter, a charge of \$15.00 is imposed for such appointment or special trip occurring during regular business hours, and \$25.00 for such appointment occurring during off-duty hours and weekends.
- B. When clear access is denied and a special trip is made to change a meter on the department's regular maintenance program, a \$55.00 charge is imposed.
- C. When clear access is denied for the purpose of disconnecting service, and service is disconnected at the junction box or overhead pole, a charge of \$155.00 is imposed.
- D. When clear access is denied for the purpose of disconnecting service at the junction box or overhead pole, the actual costs will be billed.

Residential Service Installations and Upgrades for Single Family and Duplex Dwellings

- A. A typical new residential service installation will be performed by the Water and Power Department on a flat fee basis. A typical new underground service is defined as having a trench length of 100 feet or less; trenching to be performed in normal soil conditions.
 1. For a service using 1/0 triplex CIC with a panel size of 150 amps or less, the fee is \$590.00 and the Plant Investment Fee, as described in the Resolution Schedule of Rates, Charges and Fees as adopted by City Council, shall also be collected.
 2. For a service using 4/0 triplex CIC with a panel size of 200 amps, the fee is \$800.00 and the Plant Investment Fee, as described in the Resolution Schedule of Rates, Charges and Fees as adopted by City Council, shall also be collected.

A typical new overhead service is defined as a service length of 80 feet or less, does not require setting a pole or transformer, is #2 triplex with a panel size of 150 amps or less, or 1/0 triplex with panel size of 200 amps. The fee for such service is \$310.00.

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Residential Service Installations and Upgrades for Single Family and Duplex Dwellings (cont'd)

A service not meeting the above criteria shall be billed at the Water and Power Department's actual cost of installation.

Within the city limits of the City of Loveland, the fees shall be collected by the department issuing the building permit for the residence. If outside the city limits, the fee will be collected by the Water and Power Department before work can proceed.

- B. Residential service upgrades resulting in services larger than 150 amps and no larger than 200 amps shall require a deposit of \$300.00 for overhead, and \$800.00 for underground. This deposit will be applied to the actual costs billed by the Water and Power Department upon completion of work performed.

Residential Service Installations and Upgrades for Multiplex Service Installations

- A. For purposes of this Resolution, a "multiplex" is defined as a structure containing not less than three and not more than six dwellings.
- B. A "typical" multiplex electric service installation will be provided by and installed by the contractor per National Electric Code. It will be energized by the Water and Power Department on a flat fee basis.

A 3-6 unit multiplex service installation will be provided by the contractor in which an electrical secondary source is already in existence. The fee for installation of an electric service in a 3-6 unit multiplex project is \$700.00 for the project and the Plant Investment Fee, as described in the current Schedule of Rates, Charges and Fees as adopted by the City Council, shall also be collected for each unit.

A 7 unit or more multiplex service termination and meter set service installation requires a deposit of \$855.00 to be made at the Water and Power Department. The contractor is to provide and install all materials. This deposit will be applied to the actual costs billed by the Water and Power Department upon completion of work performed.

Multiplexes requiring an underground service in an overhead service area will have an underground service provided by and installed by the contractor per National Electric Code. They will be billed the actual costs incurred by the Water and Power Department.

If there is no existing source for electric service and an extension of secondary power is necessary, the customer shall pay the actual costs incurred by the Water and Power Department to extend the secondary power source.

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Requests for overhead multiplex service installations will be evaluated for feasibility by the Water and Power Department. If overhead service is deemed appropriate, it will be installed and billed at the actual cost incurred by the Water and Power Department.

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Residential Service Installations and Upgrades for Multiplex Service Installations (cont'd)

All services to multiplexes will be installed as described in the National Electric Code pertaining to commercial services. NOTE: Duplexes will be billed as outlined in the “Residential Service Installations and Upgrades for Single and Duplex Dwellings” section in the current Schedule of Rates and Charges – Electric.

C. Buildings with greater than six dwelling units:

Any complex containing more than six dwelling units shall pay the actual costs incurred by the Water and Power Department to have a contractor-installed service energized.

Field Engineering Deposits

A customer requesting a new or modified electric service, relocation of facilities, or other work requiring engineering and construction, must make a deposit with the department. If the project is cancelled, the deposit will be applied to the actual charges incurred, any resulting credit or debit will be refunded or billed to the customer. Upon completion of engineering, the customer will deposit with the department the total deposit required.

ENGINEERING DEPOSITS

- A. Residential and duplex single phase installations, 1-2 lots.....\$800.00
- B. Single commercial buildings, transformer upgrades, raising, lowering, or removing existing power.....\$1,200.00
- C. Residential subdivision of 3-25 lots, commercial subdivision of 2-10 lots, raising, lowering, or removing existing power.....\$1,600.00
- D. Residential subdivision of more than 25 lots, commercial subdivision of more than 10 lots, malls, shopping centers, hospitals\$3,000.00

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Other Deposits

The following jobs are standard in nature, and specific deposits have been established for them. In all cases actual costs will be tracked and any resulting credit or debit will be refunded or billed to the customer.

A. Install and terminate secondary riser up to 100 feet (no transformer required)	
Residential to 200 amps	\$1,155.00
Commercial (cable supplied and installed by customer)	\$805.00
B. Open transformer to pull in secondary and terminate cable up to 130'	\$565.00
C. Single phase padmount transformer upgrade (no other customers)	
Upgrade one transformer size	\$1,965.00
Upgrade two transformer sizes	\$2,510.00
Upgrade three transformer sizes	\$3,055.00
D. Single phase padmount transformer upgrade (other customers)	
Upgrade one transformer size	\$2,525.00
Upgrade two transformer sizes	\$3,070.00
Upgrade three transformer sizes	\$3,335.00
E. Single phase overhead transformer upgrade (no other customers)	
Upgrade one transformer size	\$1,665.00
Upgrade two transformer sizes	\$2,175.00
F. Single phase overhead transformer upgrade (other customers)	
Upgrade one transformer size	\$2,225.00
Upgrade two transformer sizes	\$2,735.00

Note: Work tickets (not work orders) will be opened for these jobs and the actual costs will be billed. The cutoff for work tickets is \$1,000.00 except for transformer upgrades.

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Temporary Extensions

The following requirements apply to all temporary extensions/connections necessary to serve customers such as transient shows, carnivals, fairs, circuses, concessions, residential construction work, or others of a temporary nature, excluding commercial development construction as defined in the *Contractor Construction Standards*.

- A. The customer shall pay a flat rate of \$170.00 for the cost of installation and removal of the temporary extension as defined in the *Contractor Construction Standards*, under “Temporary Construction Service”. Customers with extensions not meeting these standards will be billed for the actual costs.
- B. The customer shall pay for electric consumption monthly under the applicable rate.
- C. No temporary service shall continue beyond the time of building occupancy, or eighteen months from connection of such temporary service, whichever occurs sooner, without the consent of the City.
- D. The City may refuse to connect additional customers to temporary extensions until the temporary extensions have become permanent.

Area Lighting

A 100-watt high pressure sodium vapor fixture will be furnished and installed by the City at a fixed one time charge. Any fixture other than a 100-watt fixture, poles, secondary conductor and other apparatus, if required, will be provided at an additional charge based on actual costs incurred by the Water and Power Department. Decisions for location of the lights shall be at the discretion of the City. Applications for area lights should be made at the City of Loveland Water and Power Department. The fee for the installation of a 100-watt high pressure sodium vapor fixture is \$325.00.

Energizing of Electric Service to Small Devices Qualifying for Flat Rate Service

There will be a flat fee for the energizing of electric service to small devices attached to the City’s electric distribution system for the purpose of amplifying cable TV and telephone signals or operating automatic sprinkler controls in remote locations. A fee of \$285.00 shall be charged to the customer for the actual installation of the service. No outlets will be permitted, nor shall there be lighting of any kind connected to this type of service. If there is no existing source and an extension of secondary power is necessary, the customer will pay for actual costs to energize the device

Pole Attachment Fee

Each attachment by a non-City utility to a City of Loveland power pole will be charged \$21.64 per year.

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III.Fees - Miscellaneous

After Hours

After hours fees apply to all requests received after 4:00 p.m. Monday through Friday, anytime Saturday or Sunday, and all holidays observed by the City of Loveland.

Fire Hydrant and Fire Protection Tap

A charge of \$2.50 per residence and \$6.20 per business per month shall be paid by water users outside the city who are located within one thousand feet of a fire hydrant, measured along roads or streets, and \$6.20 per month per tap for each fire protection tap serving premises outside the city. If fire protection tap service is the only city utility service received by the premises, an administrative fee of \$1.80 per month shall also be paid.

Hydrant Meter Guidelines

General: Fire hydrants are installed for the main purpose of fire protection. Whenever a hydrant meter is placed on a hydrant, that hydrant is, for all practical purposes, out of service and the chances of causing damage to that hydrant are increased. For these reasons and the potential for problems involved with providing hydrant meters on a rental basis, it has become necessary to establish more clearly defined guidelines for the use of hydrant meters.

Intent: The use of fire hydrant meters is intended for only those situations when a large volume of water is needed in a short period of time. These meters shall not be used as a temporary substitute for a permanent water service connection or a permanent irrigation tap. Examples of acceptable and unacceptable uses are as follows:

Acceptable:

- Providing water for increasing moisture during earthmoving.
- Filling swimming pools.
- Filling tanks on water truck (No chemicals allowed in tank).

Unacceptable

- Masonry work
- Car washes
- Irrigation
- Water for concrete saws
- Washing streets or parking lots

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Hydrant Meter Guidelines (cont'd)

Guidelines & Procedures: The following guidelines shall be used for regulating the use of fire hydrant meters:

1. Requests for hydrant meters must be received a minimum of 48 hours prior to the time needed. All requests should be made by contacting the Water and Power Department at 970-962-3701. The applicant must sign the Hydrant Meter Request Form at the Water and Power Department, 200 N. Wilson Avenue, and post a deposit of \$1,000.00 (money order or cashier's check) before the meter will be set. The deposit shall be held until all costs associated with the hydrant rental are paid in full and may be used to offset any such costs not paid within 30 days of issuance of the final invoice.
2. Each request will be reviewed to determine if the proposed use meets the intent of these guidelines. The use of the water from a hydrant meter for other than the stated purposes or misrepresentation of that use will result in the loss of the convenience of obtaining water in this manner.
3. The City will determine on a case-by-case basis whether or not a particular hydrant is acceptable for the installation of a meter. Not all hydrants are available for use with a meter. If the requested hydrant is not available, alternate hydrants will be suggested.
4. Water Utility personnel will install the meter, secure it to the hydrant, and operate the hydrant. Customer shall control flow of water with valve provided on meter assembly. Customer is responsible for securing this valve to prevent the unauthorized use of water by others. Removal of the handle or hand wheel from the control valve is not an acceptable method of securing the valve. ONLY trained City employees will be authorized to operate fire hydrants.
5. During the winter months, hydrant meters will be issued only on a day-to-day basis when outside temperatures are above freezing and are expected to remain above freezing for most of the day. Meters will be installed as soon after 8:00 a.m. as practical, and will be picked up at approximately 3:00 p.m. or earlier if outside temperatures drop below freezing, or if requested.
6. Meters will be issued with a male 2½" National Standard thread connection. No hoses or adapters will be provided.
7. Customer is responsible for all rental fees and other charges. A copy of the current fees is attached. These fees will include charges for all water use.
8. Customer is responsible for any and all damage to the meter and/or fire hydrant while meter is installed. If damage occurs, an invoice will be issued to cover all repair or replacement costs, and customer shall promptly pay the invoiced amount.
9. Number of hydrant meters is limited; therefore the meters are available on a first-come/first-served basis. A separate request form must be submitted for each location and/or time period requested.
10. In accordance with the City Code, it is unlawful to waste water. Every effort should be made to conserve this valuable resource. Wasteful uses will not be allowed.
11. Failure to comply with these guidelines, or illegally obtaining water from, or in any way tampering with a fire hydrant, is in violation of the City Code, and upon conviction is punishable by a fine or imprisonment.

Alternate Source of Water: For building construction projects, water is also available through permanent water taps at a construction billing rate. This source of water is handled by the Building Division, 500 E. 3rd Street, 962-2504, and typically issued along with a building permit.

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Summary of Hydrant Meter Fees and Charges

Installation of meter	\$25.00*
Moving meter	\$25.00*
Removal of meter	\$25.00*
Meter rental	\$5.00/day
Water used	\$1.00/300 gallons

*After hour services (normal hours are Monday through Friday, 7:30 a.m. to 4:00 p.m.) will be charged for overtime labor rates in addition to the \$25.00 charge

New Account or Reactivation Fee and New Account Meter Reading Fee. Connection fees in the following amounts are hereby imposed, to be collected with the first utility bill rendered after utility service has been established or a customer account or utility service is reactivated following voluntary or involuntary termination:

Activation or establishment of a customer account for a service address	\$11.00
Meter reading charge for service address if read by Utility Billing Division.....	\$10.00
Reactivation of a customer account for a service address	\$10.00
Interfering or Tampering with a Meter	\$50.00

Automated Load Profile Metering Program (ALPS). No new ALPS customers will be accepted after 2009. Commercial and industrial customers will be given the option of utilizing specialized metering equipment that will allow them to monitor their utility consumption on a daily basis through a web-based program. The fees to participate in this program are according to the following schedule:

Monthly Fee Per Meter	
First 9 meters	\$67.50
Meters 10 through 19	\$54.00
Meters 20 and up	\$50.00

Customers that will be enrolling to use this service will need to provide their own telephone line, preferably a line dedicated solely for this purpose. The cost of the telephone line will be borne by the customer. If a customer signs up for the program, and then decides to leave the program in less than one year, the customer will be subject to a \$200 exit fee per meter.

Appendix B
2008 City of Loveland Irrigation Conservation Plan

IRRIGATION CONSERVATION PLAN:

The purpose of this plan is for the conservation of irrigation water during a supply shortage. It includes both domestic and raw water irrigation systems stemming from Parks to Public Grounds. A multi-level approach was used to determine the extent of conservation needed based on water availability, budget considerations, local mandates, and emergency situations.

IRRIGATION SYSTEM WATER REQUIREMENTS:

1. Under normal operating conditions the Parks and Public Grounds irrigation systems are capable of applying 1.50" (inches) of water per week on average. This translates into about 40,712 gallons per acre during peak demand periods. Several factors need to be applied when calculating actual turf watering requirements: types of grasses being irrigated (Blue Grass, Buffalo Grass, Turf Type Fescue, etc.); site conditions (shady, sunny, hillside, low area, soil type, soil compaction, etc.); site impacts (low use, high use, sports turf, green belts, etc.); safety concerns regarding recreation activities (hard playing surfaces, large cracks in the soil, bare ground, etc.); current weather conditions (evapotranspiration rates, temperatures, soil moisture levels, wind, sunshine, weekly rain totals); aesthetics (public buildings, sculpture parks, planned public events, etc.).
2. It would be impractical to develop a conservation plan that could take every possible environmental and site use consideration into account. The watering requirements under this plan will take an average for each area of consideration and place the highest priority on recreational safety, long-term turf damage and tree loss followed by aesthetics and special event considerations.
3. System designs and limitations will also play a key role in the ability to adjust programming and watering schedules. Several park sites lack the capacity to water the entire area in just one night. In these situations, half of the irrigation controllers will run one night and the other half of the controllers run the second night. This creates an odd/even watering schedule to accommodate at least several applications of water per week. In the event of a local mandate by the City Council to limit the watering days to specific days of the week rather than odd or even, we could lose 50% or more of our irrigation watering window. Example: a normal four-day schedule reduced to two days with the same watering window would equal a 50% reduction, on the other hand, a odd/even system reduced to two days per week would result in each controller operating only one time per week or a 75% reduction. This would exceed mandated target amounts and result in increased the losses to landscape.

SITE PRIORITIES:

Before a conservation plan can be implemented all sites need to be first ranked according to an individual priority within the entire system. This will allow for other considerations such as budgets, special events, raw water availability, and recreational programming needs. Sites that have high levels of recreational activities and community parks/public grounds are given top priority. Within each of these sites there is often an area of lessor priority that will be given a lower ranking in the site-specific conservation plan.

DETERMINING THE NEED FOR CONSERVATION:

The need to implement a water conservation plan may be driven by either internal or external factors. These factors may include community water shortages caused by a drought, disruption of the supply lines due to mechanical failures, water diversions to other communities experiencing shortages, or budget shortfalls. The severity and duration of such events will be a key factor as to the level of conservation that will be required. For the purposes of this plan, a four-tier approach will be used to conserve water to varying degrees. This will allow for a general systematic approach to conservation based on current conditions and restrictions. The intent of this plan is to provide a sound basis for conservation and to allow for changing variables.

FOUR TIER APPROACH:

A four-tier approach was used to determine a target level of required water savings and an action plan to achieve these targets for each individual site. The action plan for each site is based on the primary areas of use, function, and priority ranking.

Table 1 - Drought Stages and Impacts

Drought Stage	Reduction Goal	Response Options	Anticipated User Impacts	Anticipated Landscape Impacts
Stage I Moderate	10%	Reduce irrigation programs by 10%	N/A	No noticeable loss short term.
Stage II Serious	25%	Cut the equivalent of one watering day from the normal watering schedule.	1 st year -aesthetic impact. Two or more years increased risk of sports injury and poor aesthetics.	1 st year 5% turf loss. 2 nd year 15% turf loss. 3 plus years > 15% turf loss and increased tree mortality in younger trees.
Stage III Severe	50%	Cut the equivalent of two days from the normal watering schedule	1 st year- fields will show a significant increase in wear. 2 nd year plus- fields may become a safety issue and might need to be closed or have restricted use	1 st year-10% turf loss. 2 nd year 30% turf loss. 3 plus years > 50% turf loss and increased tree mortality including established trees
Stage IV Extreme	75%	Cut the equivalent of three days from the normal watering schedule.	1 st year- fields may become a safety issue and might need to be closed or have restricted use. 2 nd year- Fields will be closed to all users.	1 st year-50% turf loss. 2 nd year plus >50% turf loss. And high tree mortality including established trees

TIER I - MODERATE

Use Reduction Target - 10 percent

This tier is intended for a seasonal drought or a possible minor disruption in water distribution system. A 10 percent reduction in the micro managed irrigation watering window will accomplish this goal. No noticeable loss of turf or landscape would be anticipated as a result of this short term reduction

TIER II - SERIOUS

Use Reduction Target - 25 percent

This tier is intended for a multiple year drought with imposed community watering restrictions with a target reduction rate of 25 percent. A 25 percent reduction in the micro managed watering window for sites requiring an odd/even programming schedule or the equivalent elimination of one watering day at all other locations with a normal program of four days per week will accomplish this goal. Some minor turf loss would be anticipated as a result of this reduction in the first two years. Continued reductions for more than two years at this level may result in an overall turf loss in excess of fifteen percent and a twenty percent increase in tree mortality rates. The most noticeable effects will be in high use areas

TIER III - SEVERE

Use Reduction Target - 50 percent

This tier is intended for a multiple year drought with imposed community watering restrictions with a target reduction rate of 50 percent. For sites requiring an odd/even programming schedule a change would be made to switch these sites to specific days of the week. Odd controllers would run Sunday and Wednesday; even controllers would run Monday and Thursday. Both types of controllers would run at 80 percent of normal to achieve a 50 percent reduction. The equivalent elimination of two watering days at all other locations normally programmed for four days per week will achieve a 50 percent reduction at those locations. At community parks and public grounds additional controller modifications may include reducing watering times on low use areas within a site and adding that savings to an extra run on a third day for high use areas at the same location. A ten to thirty percent overall turf loss would be anticipated as a result of this reduction in the first two years. Continued reductions for more than two years at this level may result in an overall turf loss in excess of fifty percent and an increase in tree mortality rates above twenty percent. The most noticeable effects will be in high use areas and recently planted landscape.

TIER IV - EXTREME

Use Reduction Target - 75 percent

This tier is intended for a long term multiple year drought with imposed community watering restrictions with a target reduction rate of 75 percent. For sites requiring an odd/even programming schedule a change would be made to switch these sites to specific days of the week. Odd controllers would run Sunday and Wednesday; even controllers would run Monday and Thursday. Both types of controllers would run at 50 percent of normal and very low use areas would be turned off as needed to achieve a 75 percent reduction. The equivalent elimination of two watering days at all other locations normally programmed for four days per week and reducing these controllers to fifty percent of normal will achieve a 75 percent reduction at these locations. At community parks and public grounds additional controller modifications may include reducing watering times on low use areas within a site and adding that savings to increased percents on high use areas at the same location. A fifty percent or more overall turf loss would be anticipated as a result of this reduction in the first two years. Continued reductions for more than two years at this level may result in a complete turf loss and an increase in tree mortality rates above fifty percent including well established trees. The effects will be noticeable at all locations.

POTABLE WATER CONSERVATION - IRRIGATION:

This plan is broken down to specific sites that have a potable irrigation water source. These sites are listed on a priority basis. The first few sites on the list have the highest priority for irrigation and would be impacted last by any mandatory watering reductions if such mandates allow for selection. The sites listed further down the list are of lower priority for irrigation and would be subject to the initial water conservation. The second part of this plan has each site listed alphabetically. They have been divided into two sections, Parks and Public Grounds. Each site has a four-tier approach to water conservation with recommended irrigation programming schedules, zone deletions, and special considerations. The calculations show the amount of water that could potentially be saved when compared to normal operating practices. Each site is followed by a brief summary that explains the possible impacts, such as the long-term effects and recreational/aesthetic implications.

Site Priority Ranking

Parks:

1. Loch Lon
2. Osborn/Winona
3. Dwayne Webster
4. South Shore Parkway
5. Woodmere
6. Eagleview
7. Seven Lakes
8. Sherri-Mar
9. Edmondson
10. Silver Glen
11. Derby Hill
12. Namaqua
13. Junior Achievement
14. Estrella
15. Westside
16. Kirkview
17. Loch Mount

Public Grounds:

1. McWhinney Hahn Visitor Center
2. Police and Courts
3. Glen Arbor
4. Service Center
5. Fire Station #1
6. Fire Station #2
7. Fire Station #3
8. Fire Station #4
9. Fire Station #5
10. Fire Station #6
11. South West 14th
12. Xeriscape Garden
13. Park Maintenance Shop
14. Iron Shirt
15. Museum
16. Fire Training Center
17. Detention Pond Tyler
18. Detention Pond Dotsero

Note: Sites on the top of this list have the highest priority for continued irrigation and the sites on the bottom of this list have the lowest priority.

RAW WATER CONSERVATION - IRRIGATION:

This plan is broken down to specific sites that have a raw water irrigation source. These sites are listed on a priority basis. The first few sites on the list have the highest priority for irrigation and would be impacted last by any mandatory (political/budgetary) watering reductions if such mandates allow for selection. Most of these sites are independent of each other and rely on separate raw water sources. Conservation methods will normally be based on water availability from specific sources rather than by a site priority. When feasible the sites listed further down the list are of lower priority for irrigation and would be subject to the initial water conservation. The second part of this plan has each site listed alphabetically. They have been divided into two sections, Parks and Public Grounds. Each site has a four-tier approach to water conservation with recommended irrigation programming schedules, zone deletions, and special considerations. The calculations show the amount of water that could potentially be saved when compared to normal operating practices. Each site is followed by a brief summary that explains the possible impacts, such as the long-term effects and recreational/aesthetic implications.

Site Priority Ranking

Parks:

1. Loveland Sports Park
2. Fairgrounds/Barnes
3. North Lake
4. Centennial
5. Kroh
6. Benson
7. Sunnyside
8. McKee
9. Silver Lake

Public Grounds:

1. Civic Center

Note: Sites on the top of this list have the highest priority for continued irrigation if water sources allow and the sites on the bottom of this list have the lowest priority.

Park/Public Ground: Kroh Park

Brief Site Description:

This is a 37.3 acre community park used primarily for soccer. This facility is irrigated with raw water from the Loudon Ditch Company with supplemental domestic water in the off-season. The holding pond that is located in the center of the park and has about a 12-acre foot capacity. During the peak of the irrigation season this site requires about 3.5 to 4.0 acre-feet of water per week. A total loss of irrigation would result in excessive turf damage and unsafe playing conditions on the soccer fields.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan.

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Sunday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact soccer fields. Set the water budget on field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Sunday, Wednesday, and Friday on the athletic field zones.
- ◆ Turn off two days on all non-athletic field area irrigation zones from the normal four day schedule. Athletic areas include soccer/ball fields only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering days will be Tuesday and Thursday

Tier#4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact soccer fields. Set the water budget on athletic field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

- ◆ Turn off three days on all non-athletic field area irrigation zones from the normal four-day schedule. Athletic areas include soccer/ball fields only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering day will be Monday.

- ◆ Turn off all half head zones in non-recreational areas.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of some or all athletic fields after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: North Lake Park

Brief Site Description:

This is a 60.2-acre community park used primarily for recreation, swimming, picnics, community events, stage productions, and high school athletics. This facility is irrigated with raw water from the Loudon Ditch Company. The holding pond that is located near the amphitheater has a 18-acre foot capacity. During the peak of the irrigation season this site requires about 4.5 to 5.0 acre-feet of water per week. A total loss of irrigation would result in excessive turf damage around shelters, the swim beach, recreation areas, event locations and would contribute to unsafe playing conditions on the soccer and baseball fields. Special Note: The School District shares this raw water source with North Lake Park and Benson Park. Any conservation methods would need to be done jointly with the School District in order to achieve the desired results. Please refer to the Benson Park conservation plan for further details relating to that facility.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan.

Tier #2 Conservation:

- ◆ Reduce the watering percent on the odd/even controllers by 25%, based on current weather and site considerations, but no more than 75% of normal. Watering days will continue to be odd/even.
- ◆ Turn off all buffalo grass zones

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days on lower use areas (controllers Ab, B, E, F, G, H, and L) from the normal odd/even cycle and water up to 50% of normal based on current weather and site considerations. Watering days on low use areas will be Sunday, Tuesday, and Friday. On high use areas including athletic fields and shelter areas change the odd/even schedule to four days per week (controllers A, D, I, J, K, and M) and water up to 70% of normal based on current weather and site considerations. Watering days on high use areas will be Saturday, Monday, Wednesday, and Thursday.

- ◆ Turn off all buffalo grass zones
- ◆ Turn off all half-head irrigation zones in non-recreational/low use areas and add savings to high use areas as needed.

Tier#4 Conservation:

- ◆ Reduce the watering schedule to two days on lower use areas (controllers Ab, B, E, F, G, H, and L) from the normal odd/even cycle and water up to 50% of normal based on current weather and site considerations. Watering days on low use areas will be Sunday and Friday. On high use areas including athletic fields and shelter areas change the odd/even schedule to two days per week (controllers A, D, I, J, K, and M) and water up to 60% of normal based on current weather and site considerations. Watering days on high use areas will be Monday and Thursday.
- ◆ Turn off all half-head irrigation zones in non-recreational/ low use areas and add savings to high use areas as needed.
- ◆ Turn off all buffalo grass zones
- ◆ Turn off parking island near the swim beech lot
- ◆ Turn off irrigation on flat area north and east of the tennis courts

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in athletic and shelter areas. Tier three may require the closure of some or all athletic fields after one year and potentially the cancellation of special events or shelter reservations. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in athletic and shelter areas. Tier four would require the immediate closure of all athletic fields, and the cancellation of shelter reservations and special events.

Park/Public Ground: Centennial Park

Brief Site Description:

This is a 35-acre community park used primarily for picnics, and baseball. This facility is irrigated with raw water from the Big Thompson Ditch Company. The holding pond that is located on the south side of First Street has a 30-acre foot capacity. During the peak of the irrigation season this site requires about 1.75 to 2.0 acre feet of water per week. A total loss of irrigation would result in excessive turf damage in the ball fields and around the playground. This would contribute to unsafe playing conditions on the baseball fields.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan.

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact ball fields. Set the water budget on field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the athletic field zones.
- ◆ Turn off two days on all non-athletic field area irrigation zones from the normal four day schedule. Athletic areas include all ball fields. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering days will be Tuesday and Thursday

Tier#4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact ball fields. Set the water budget on athletic field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

- ◆ Turn off all half head zones in non-recreational areas.
- ◆ Turn off three days on all non-athletic field area irrigation zones from the normal four-day schedule. Athletic areas include ball fields only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of some or all athletic fields after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: Barnes Park**Brief Site Description:**

This is a 24-acre community park used primarily for baseball. This facility is irrigated with raw water from the Farmers Ditch Company. The holding pond that is located in the southeast corner of the park has a 1-acre foot capacity. This holding pond also receives some of its water through ground water infiltration in wet years and can lose water due to groundwater outflow in dry years. During the peak of the irrigation season this site requires about 1.5 to 2.0 acre feet of water per week depending on ground water levels at the holding pond. A total loss of irrigation would result in excessive turf damage in the ball fields and around the playground. This would contribute to unsafe playing conditions on the baseball fields.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact ball fields. Set the water budget on field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the athletic field zones.
- ◆ Turn off two days on all non-athletic field area irrigation zones from the normal four day schedule. Athletic areas include all ball fields. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all non-recreational area half head zones. Recreational areas include ball fields only.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact ball fields. Set the water budget on athletic field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in non-recreational areas.
- ◆ Turn off three days on all non-athletic field area irrigation zones from the normal four-day schedule. Athletic areas include ball fields only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of some or all athletic fields after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: Loch Lon Park

Brief Site Description:

This is a 10.7 acre neighborhood park used for general recreation and soccer. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 410,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer fields and around the playground. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact soccer fields. Set the water budget on field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the athletic field zones.
- ◆ Turn off two days on all non-athletic field area irrigation zones from the normal four day schedule. Athletic areas include all soccer fields. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all non-recreational area half head zones. Recreational areas include soccer fields only.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact soccer fields. Set the water budget on athletic field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in non-recreational areas.
- ◆ Turn off three days on all non-athletic field area irrigation zones from the normal four-day schedule. Athletic areas include soccer fields only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of some or all athletic fields after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: Osborn Park/Pool**Brief Site Description:**

This is a 13 acre neighborhood park and community pool complex used for soccer, softball and swimming. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 326,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer fields and around the pool area. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact the soccer field and zones inside the pool area when the pool is open. Set the water budget on field zones at 75% and pool zones to 60% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the athletic field zones.
- ◆ Turn off two days on all non-athletic field area irrigation zones including the pool area during the months the pool is not open from the normal four day schedule. Athletic areas include all soccer fields. Reduce the percent on these zones to 65% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all non-recreational area half head zones unless the zone is sole source for a specific area. Recreational areas include soccer field and zones inside the pool fence only.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact soccer fields. Set the water budget on the soccer field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in non-recreational areas.
- ◆ Turn off three days on all non-athletic field area irrigation zones including the pool area from the normal four-day schedule. Athletic areas include soccer fields only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of some or all athletic fields after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas including the pool.

Park/Public Ground: Seven Lakes Park**Brief Site Description:**

This is a 10.2 acre neighborhood park used for soccer and picnics. This facility is irrigated with raw water from the Seven Lakes Reservoir Company. This water reservoir is used jointly by the Upper and Lower Hoffman Lake property owners, McKee Hospital and McKee/Seven Lakes Parks. Refer to the McKee Park conservation plan for further information. In the case of a raw water shortage McKee hospital will convert to a private domestic watering source. During the peak of the irrigation season this site requires about 1.25 acre-feet of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer fields and around the playground. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact the soccer field. Set the water budget on field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the athletic field zones.
- ◆ Turn off two days on all non-athletic field area irrigation zones from the normal four day schedule. Athletic areas include the soccer field only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all non-recreational area half head zones unless a zone is sole source for a specific area. Recreational areas include soccer fields only.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact the soccer field. Set the water budget on athletic field zones at 75% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in non-recreational areas.
- ◆ Turn off three days on all non-athletic field area irrigation zones from the normal four-day schedule. Athletic areas include the soccer field only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of some or all athletic fields after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: Dwayne Webster Park**Brief Site Description:**

This is a 5.4 acre neighborhood park used for picnics and family recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 430,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in around the playground and shelter areas. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan.

Tier #2 Conservation:

- ◆ Reduce the watering percent on the odd/even controllers by 25%, based on current weather and site considerations, but no more than 75% of normal. Watering days will continue to be odd/even.

Tier#3 Conservation:

- ◆ Reduce the watering schedule from the normal odd/even schedule to a three day schedule. Implement the emergency micro management watering schedule to accommodate all zones watering in a single night. This will automatically cut 25% off the normal run times per zone on average. Set the water budget on this reduced schedule to 100% or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.
- ◆ Turn off all non-recreational area half head zones unless a zone is sole source for a specific area. Recreational areas include shelter areas only.

Tier #4 Conservation:

- ◆ Reduce the watering schedule from the normal odd/even schedule to a two day schedule. Implement the emergency micro management watering schedule to accommodate all zones watering in a single night. This will automatically cut 25% off the normal run times per zone on average. Set the water budget on this reduced schedule to 75% or less based on current weather and site considerations. Watering days will be Monday and Friday.
- ◆ Turn off all non-recreational area half head zones unless a zone is sole source for a specific area. Recreational areas include shelter areas only.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of some or all athletic fields after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: South Shore Scenic Way**Brief Site Description:**

This is a 5.3 acre scenic walkway along Lake Loveland. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 138,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the parking lots and poor aesthetics along highway 34.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on all zones. Set the water budget to 67% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget to 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased wear in high use areas near the parking lots. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would require a consideration to be made regarding the potential impacts of the Fourth of July celebration.

Park/Public Ground: Benson Park**Brief Site Description:**

This is a 13.5 acre sculpture park. This facility is irrigated with raw water from the Loudon Ditch Company. The pumping station is located on the holding pond in North Lake Park. This holding pond is used jointly by the RJ2 School District for Loveland High School and by North Lake/Benson Parks. During the peak of the irrigation season this site requires about 1.25 acre-feet of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics quality of the park and possible turf damage during major events. Please refer to the North Lake Park conservation plan for further details.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan.

Tier #2 Conservation:

- ◆ Reduce the watering percent on the odd/even controllers by 25%, based on current weather and site considerations, but no more than 75% of normal. Watering days will continue to be odd/even.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days on lower use areas (controllers C and D) from the normal odd/even cycle and water up to 50% of normal based on current weather and site considerations. Watering days on low use areas will be Sunday, Tuesday, and Friday. On high use areas including the sculpture show section and the pavilion area change the odd/even schedule to four days per week (controllers A, B, and E) and water up to 60% of normal based on current weather and site considerations. Watering days on high use areas will be Saturday, Monday, Wednesday, and Thursday.
- ◆ Turn off all half-head irrigation zones in low use areas to provide water savings needed for the high use areas.

Tier#4 Conservation:

- ◆ Reduce the watering schedule to two days on lower use areas (controllers C and D) from the normal odd/even cycle and water up to 50% of normal based on current weather and site considerations. Watering days on low use areas will be Tuesday and Friday. On high use areas including the sculpture show area and pavilion change the odd/even schedule to two days per week (controllers A, B, and E) and water up to 60% of normal based on current weather and site considerations. Watering days on high use areas will be Monday and Thursday.

- ◆ Turn off all half-head irrigation zones in low use areas (all areas north of the pavilion and all zones along the ponds) this will provide savings for the high use areas as needed.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased turf loss near high traffic areas. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential turf failures in the sculpture show areas. Tier three may require the potential cancellation of special events such as the sculpture show. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would require the immediate cancellation of the sculpture show and other special events.

Park/Public Ground: Sunnyside Park

Brief Site Description:

This is a 3.6 acre neighborhood park used for general recreation and soccer. This facility is irrigated with well water. During the peak of the irrigation season this site requires about 125,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer fields. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact the soccer field. Set the water budget on field zones at 60% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the soccer field zones.
- ◆ Turn off two days on all non-soccer field area irrigation zones from the normal four day schedule. Reduce the percent on these zones to 50% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all non-recreational area half head zones that are not sole source for a specific area. Recreational areas include soccer fields only.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact soccer fields. Set the water budget on athletic field zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in non-recreational areas.
- ◆ Turn off three days on all non-athletic field area irrigation zones from the normal four-day schedule. Athletic areas include soccer fields only. Reduce the percent on these zones to 75% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of the soccer field area after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: Junior Achievement Park

Brief Site Description:

This is a 1.5 acre neighborhood park used for general recreation and skate boarding. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 60,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer/ball fields. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact the athletic field area. Set the water budget on field zones at 60% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the field zones.
- ◆ Turn off two days on all non-athletic field area irrigation zones from the normal four day schedule. Reduce the percent on these zones to 50% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all non-recreational area half head zones that are not sole source for a specific area. Recreational areas include flat open area on the south side only.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones that impact athletic field. Set the water budget on athletic field zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in non-recreational areas.
- ◆ Turn off three days on all non-athletic field area irrigation zones from the normal four-day schedule. Athletic areas include soccer fields only. Reduce the percent on these zones to 65% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier three may require the closure of the athletic field area after one year. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in low use areas and field failures in high use areas. Tier four would require the immediate closure of all athletic fields/high use areas.

Park/Public Ground: Woodmere Park

Brief Site Description:

This is a 4.0 acre neighborhood park used for family and general recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 140,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer/ball field. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact the ball field and playground area. Set the water budget on field zones at 70% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the field zones.
- ◆ Turn off two days on all low use area irrigation zones from the normal four day schedule. Reduce the percent on these zones to 50% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all half head zones not affecting the playground or ball field and are not sole source for a specific area.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in areas that impact the athletic field and playground area. Set the water budget on athletic field zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in low use areas.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the west end between the fence and the sidewalk and the entrance to the park from the south. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Eagleview Park

Brief Site Description:

This is a 12.0 acre neighborhood park (8.0 irrigated) used for family and general recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 280,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer/ball field. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact the ball field and playground area. Set the water budget on field zones at 70% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the field zones.
- ◆ Turn off two days on all low use area irrigation zones from the normal four day schedule. Reduce the percent on these zones to 50% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all half head zones not affecting the playground or ball field and are not sole source for a specific area.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in areas that impact the athletic field and playground area. Set the water budget on athletic field zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in low use areas.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the west end between the soccer field and Lincoln Ave, the area adjacent to the west fence line just north of the church parking and the sledding hill. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Sherri-Mar Park**Brief Site Description:**

This is a 2.7 acre neighborhood park used for family and general recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 110,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer/playing areas. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on zones that impact the playing field and playground area. Set the water budget on field zones at 60% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday on the field zones.
- ◆ Turn off two days on all low use area irrigation zones from the normal four day schedule. Reduce the percent on these zones to 50% or less based on current weather and site considerations. Watering days will be Monday and Thursday
- ◆ Turn off all half head zones not affecting the playground or playing field and are not sole source for a specific area.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in areas that impact the playing field and playground area. Set the water budget on athletic field zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones that are not sole source for a specific area.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the north third of the park. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in low use areas and potential field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Edmondson Park**Brief Site Description:**

This is a 2.61 acre neighborhood park used for family and general recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 106,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in areas that impact the playing field and playground area. Set the water budget on the field and playground zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones that are not sole source for a specific area.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the area east of the tennis court. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Silver Glen Park**Brief Site Description:**

This is a 3.88 acre neighborhood park used for family and general recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 157,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in areas that impact the playing field and playground area. Set the water budget on the field and playground zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones that are not sole source for a specific area.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the area east of the area between the playground sidewalk and the west fence. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Derby Hill Park

Brief Site Description:

This is a 3.45 acre neighborhood park used for family and general recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 120,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to no more than 75% of the normal odd/even based on current weather and site considerations. Watering days will continue to be odd/even.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to two days by implementing the revised conservation micro schedule to replace the normal odd/even day cycle on all zones. Set the water budget on all zones on this revised micro schedule to 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days by implementing the revised conservation micro schedule to replace the normal odd/even day cycle on all zones. Set the water budget on all zones on this revised micro schedule to 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones that are not sole source for a specific area.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the area south east of the playground and the entrance area off Eugene. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Namaqua Park

Brief Site Description:

This is a 4.0 acre neighborhood park used for picnics and general family recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 125,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in areas that impact the playing field, shelter, and playground area. Set the water budget on the field, shelter and playground zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones that are not sole source for a specific area.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the eastern third of the park. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: McKee Park**Brief Site Description:**

This is a 3.8 acre neighborhood park used for general family recreation and picnics. This facility is irrigated with raw water from the Seven Lakes Reservoir Company. This is a shared reservoir with the Upper and Lower Hoffman Lake property owners and McKee Hospital. Refer to the Seven Lakes Park conservation plan for further details. During the peak of the irrigation season this site requires about 0.50 acre-feet of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage in the soccer/ ball fields and around the playground. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to no more than 75% of the normal odd/even based on current weather and site considerations. Watering days will continue to be odd/even.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to two days by implementing the revised conservation micro schedule to replace the normal odd/even day cycle on all zones. Set the water budget on all zones on this revised micro schedule to 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days by implementing the revised conservation micro schedule to replace the normal odd/even day cycle on all zones. Set the water budget on all zones on this revised micro schedule to 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones that are not sole source for a specific area or around the playground.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Estrella Park

Brief Site Description:

This is a 1.3 acre neighborhood park used for picnics and general family recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 53,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in areas that impact the playing field, shelter, and playground area. Set the water budget on the field, shelter and playground zones at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones that are not sole source for a specific area or the playground.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Westside Park

Brief Site Description:

This is a 1.4 acre neighborhood park used for picnics and general family recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 57,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Kirkview Park

Brief Site Description:

This is a 1.6 acre neighborhood park used for picnics and general family recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 66,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:

Tier #1 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Silver Lake Park**Brief Site Description:**

This is a 5.0 acre neighborhood park used for picnics and general family recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 204,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in excessive turf damage around the playground and general recreational areas. This would contribute to unsafe playing conditions.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Loch Mount Park**Brief Site Description:**

This is a 0.9 acre neighborhood park used for general family recreation. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 37,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Civic Center**Brief Site Description:**

This is a 7.66 acre public ground facility that is the site of the City of Loveland municipal building, library and recreation/senior center. This facility is irrigated with well water. During the peak of the irrigation season this site requires about 275,000 gallons of water per week plus varying amounts of water to refill the Foote Lagoon depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle on all zones. Set the water budget at 67% of normal or less based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier #4 Conservation:

- ◆ Reduce the watering schedule to two days from the normal four-day cycle on zones in all areas. Set the water budget at 55% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.
- ◆ Turn off all half head zones in low use areas that are not sole source for a specific site.
- ◆ Turn off three days on all low use area irrigation zones from the normal four-day schedule. Low use areas include the area between the Senior Housing and the Chilson Center, the area west of the Library, and the areas south of the south parking lot. Reduce the percent on these zones to 60% or less based on current weather and site considerations. Watering day will be Monday

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf and could impact special events.

Park/Public Ground: McWhinney Hahn Visitor Center**Brief Site Description:**

This is a 4.2 acre public ground facility that is the site of the City of Loveland Chamber of Commerce and Visitor Center. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 175,000 gallons of water per week plus varying amounts of water to refill the sculpture pond depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Police and Courts Center**Brief Site Description:**

This is a 2.1 acre (irrigated) public ground facility that is the site of the City of Loveland Justice Center and Police Department. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 72,500 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Glen Arbor Parkway**Brief Site Description:**

This is a 1.85 acre public ground facility that is primarily a green belt along highway 287. This facility is irrigated with domestic water. During the peak of the irrigation season this site requires about 70,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose potential safety concerns due to compaction and loss of turf.

Park/Public Ground: Service Center**Brief Site Description:**

This is a 4.52 acre public ground maintenance facility for public works, water and power, traffic, vehicle maintenance and school district busses. This facility is irrigated with domestic water from two separate taps. One of these water taps also supplies potable water to the warehouse. During the peak of the irrigation season this site requires about 185,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 55% of normal or less based on current weather and site considerations. Turn off all zones south of the administration building in the flat area (golf course). Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Fire Station #1**Brief Site Description:**

This is a 0.2 acre fire station. This facility is irrigated with domestic water from the service tap for the entire building including potable water for the station. During the peak of the irrigation season this site requires about 6,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Fire Station #2**Brief Site Description:**

This is a 0.60 acre fire station. This facility is irrigated with domestic water from the service tap for the entire building including potable water for the station. During the peak of the irrigation season this site requires about 24,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Fire Station #3**Brief Site Description:**

This is a 0.67 acre fire station. This facility is irrigated with domestic water from the service tap for the entire building including potable water for the station. During the peak of the irrigation season this site requires about 25,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Fire Station #4**Brief Site Description:**

This is a 0.65 acre fire station. This facility is irrigated with domestic water from the service tap for the entire building including potable water for the station. During the peak of the irrigation season this site requires about 25,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Fire Station #5**Brief Site Description:**

This is a 0.75 acre fire station. This facility is irrigated with domestic water from the service tap for the entire building including potable water for the station. During the peak of the irrigation season this site requires about 30,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Fire Station #6**Brief Site Description:**

This is a 1.0 acre (irrigated) fire station. This facility is irrigated with domestic water from the service tap for the entire building including potable water for the station. During the peak of the irrigation season this site requires about 35,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: S.W. 14th**Brief Site Description:**

This is a 1.06 acre highway median with buffalo grass and junipers. This site is irrigated with domestic water. During the peak of the irrigation season this site requires about 30,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Xeriscape Garden**Brief Site Description:**

This is a 0.75 acre xeriscape demonstration garden with turf and shrub plots. This site is irrigated with domestic water. During the peak of the irrigation season this site requires about 18,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones by 10% of normal based on current weather and site considerations, but not to exceed 90% of the maximum settings as determined by the micro management plan

Tier #2 Conservation:

- ◆ Reduce the watering schedule to three days from the normal four day cycle and continue to water up to 100% of normal based on current weather and site considerations. Watering days will be Monday, Wednesday, and Friday.
- ◆ Reduce the watering schedule on normal three day zones to 75% or less based on current weather and site conditions. Watering days will be set as normal

Tier#3 Conservation:

Reduce the watering schedule to two days from the normal four day cycle on all zones. Set the water budget on all zones at 100% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

- ◆ Reduce the watering schedule to two days on normal three day zones and reduce the run time to 75% of normal or less based on current weather and site conditions. Watering days will be Monday and Thursday

Tier #4 Conservation:

Reduce the watering schedule to two days from the normal four-day cycle on all zones. Set the water budget at 50% of normal or less based on current weather and site considerations. Watering days will be Monday and Thursday.

- ◆ Reduce the watering schedule to one day on normal three day zones and set the run time to 100% of normal or less based on current weather and site conditions. Watering days will be Monday and Thursday

Summary:

Conservation methods in tier one would reduce the watering requirements by about 10% and would have no short term landscape impacts. Water conservation methods in tier two would reduce the watering requirements by about 25% and would result in turf loss in low use areas and increased field wear. Tier three would reduce the watering requirements by about 50% and would result in turf and tree loss in all areas and potential complete field failures in high use areas. Tier four would reduce the watering requirements by about 75% and would result in large scale turf and tree loss in all areas. Tier four would pose erosion concerns due to compaction and loss of turf.

Park/Public Ground: Park Maintenance Shop**Brief Site Description:**

This is a 0.5 acre (landscaped area only) maintenance facility. This site is irrigated with domestic water. During the peak of the irrigation season this site requires about 20,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 80% of the maximum settings as determined by the micro management plan and weather conditions.

Tier #2 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 60% of the maximum settings as determined by the micro management plan and weather conditions.
- ◆ Turn off all drip irrigation.

Tier#3 Conservation:

- ◆ Turn off all drip irrigation zones.
- ◆ Reduce the water budget/ times on all remaining irrigation zones to a range between zero and 45% of the maximum settings as determined by the micro management plan and weather conditions.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 20%. Water conservation methods in tier two would reduce the watering requirements by about 40%. Tier three would reduce the watering requirements by about 60%.

Park/Public Ground: Iron Shirt**Brief Site Description:**

This is a 0.2 acre highway median. This site is irrigated with domestic water. During the peak of the irrigation season this site requires about 4,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 75% of the maximum settings as determined by the micro management plan and weather conditions.

Tier #2 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 60% of the maximum settings as determined by the micro management plan and weather conditions.
- ◆ Turn off all drip irrigation.

Tier#3 Conservation:

- ◆ Turn off all drip irrigation zones.
- ◆ Reduce the water budget/ times on all remaining irrigation zones to a range between zero and 40% of the maximum settings as determined by the micro management plan and weather conditions.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 25%. Water conservation methods in tier two would reduce the watering requirements by about 40%. Tier three would reduce the watering requirements by about 60%.

Park/Public Ground: Museum**Brief Site Description:**

This is a 0.03 acre facility with shrub beds only. This site is irrigated with domestic water from the museum building water supply. During the peak of the irrigation season this site requires about 750 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 75% of the maximum settings as determined by the micro management plan and weather conditions.

Tier #2 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 50% of the maximum settings as determined by the micro management plan and weather conditions.

Tier#3 Conservation:

- ◆ Reduce the water budget/ times on all remaining irrigation zones to a range between zero and 40% of the maximum settings as determined by the micro management plan and weather conditions.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 25%. Water conservation methods in tier two would reduce the watering requirements by about 50%. Tier three would reduce the watering requirements by about 60%.

Park/Public Ground: Fire Training Center**Brief Site Description:**

This is a 0.3 acre facility with one turf area. This site is irrigated with domestic water. During the peak of the irrigation season this site requires about 12,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 75% of the maximum settings as determined by the micro management plan and weather conditions.

Tier #2 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 50% of the maximum settings as determined by the micro management plan and weather conditions.

Tier#3 Conservation:

- ◆ Reduce the water budget/ times on all remaining irrigation zones to a range between zero and 40% of the maximum settings as determined by the micro management plan and weather conditions.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 25%. Water conservation methods in tier two would reduce the watering requirements by about 50%. Tier three would reduce the watering requirements by about 60%.

Park/Public Ground: Detention Pond at 1st and Tyler**Brief Site Description:**

This is a 1.28 acre storm water detention facility. This site is irrigated with domestic water. During the peak of the irrigation season this site requires about 46,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 75% of the maximum settings as determined by the micro management plan and weather conditions.

Tier #2 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 50% of the maximum settings as determined by the micro management plan and weather conditions.

Tier#3 Conservation:

- ◆ Reduce the water budget/ times on all remaining irrigation zones to a range between zero and 40% of the maximum settings as determined by the micro management plan and weather conditions.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 25%. Water conservation methods in tier two would reduce the watering requirements by about 50%. Tier three would reduce the watering requirements by about 60%.

Park/Public Ground: Detention Pond at 1st and Dotsero**Brief Site Description:**

This is a 1.04 acre storm water detention facility. This site is irrigated with domestic water. During the peak of the irrigation season this site requires about 32,000 gallons of water per week depending on evapotranspiration rates. A total loss of irrigation would result in poor aesthetics.

Conservation Methods:**Tier #1 Conservation:**

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 75% of the maximum settings as determined by the micro management plan and weather conditions.

Tier #2 Conservation:

- ◆ Reduce the water budget/ times on all irrigation zones to a range between zero and 50% of the maximum settings as determined by the micro management plan and weather conditions.

Tier#3 Conservation:

- ◆ Reduce the water budget/ times on all remaining irrigation zones to a range between zero and 40% of the maximum settings as determined by the micro management plan and weather conditions.

Summary:

Conservation methods in tier one would reduce the watering requirements by about 25%. Water conservation methods in tier two would reduce the watering requirements by about 50%. Tier three would reduce the watering requirements by about 60%.

Appendix C
Colorado Revised Statute 37-60-126

37-60-126. Water conservation and drought mitigation planning - programs - relationship to state assistance for water facilities - guidelines - water efficiency grant program - repeal.

(1) As used in this section and section [37-60-126.5](#), unless the context otherwise requires:

(a) "Agency" means a public or private entity whose primary purpose includes the promotion of water resource conservation.

(b) "Covered entity" means each municipality, agency, utility, including any privately owned utility, or other publicly owned entity with a legal obligation to supply, distribute, or otherwise provide water at retail to domestic, commercial, industrial, or public facility customers, and that has a total demand for such customers of two thousand acre-feet or more.

(c) "Grant program" means the water efficiency grant program established pursuant to subsection (12) of this section.

(d) "Office" means the office of water conservation and drought planning created in section [37-60-124](#).

(e) "Plan elements" means those components of water conservation plans that address water-saving measures and programs, implementation review, water-saving goals, and the actions a covered entity shall take to develop, implement, monitor, review, and revise its water conservation plan.

(f) "Public facility" means any facility operated by an instrument of government for the benefit of the public, including, but not limited to, a government building; park or other recreational facility; school, college, university, or other educational institution; highway; hospital; or stadium.

(g) "Water conservation" means water use efficiency, wise water use, water transmission and distribution system efficiency, and supply substitution. The objective of water conservation is a long-term increase in the productive use of water supply in order to satisfy water supply needs without compromising desired water services.

(h) "Water conservation plan", "water use efficiency plan", or "plan" means a plan adopted in accordance with this section.

(i) "Water-saving measures and programs" includes a device, a practice, hardware, or equipment that reduces water demands and a program that uses a combination of measures and incentives that allow for an increase in the productive use of a local water supply.

(2) (a) Each covered entity shall, subject to section [37-60-127](#), develop, adopt, make publicly available, and implement a plan pursuant to which such covered entity shall encourage its domestic, commercial, industrial, and public facility customers to use water more efficiently. Any state or local governmental entity that is not a covered entity may develop, adopt, make publicly available, and implement such a plan.

(b) The office shall review previously submitted conservation plans to evaluate their consistency with the provisions of this section and the guidelines established pursuant to paragraph (a) of

subsection (7) of this section.

(c) On and after July 1, 2006, a covered entity that seeks financial assistance from either the board or the Colorado water resources and power development authority shall submit to the board a new or revised plan to meet water conservation goals adopted by the covered entity, in accordance with this section, for the board's approval prior to the release of new loan proceeds.

(3) The manner in which the covered entity develops, adopts, makes publicly available, and implements a plan established pursuant to subsection (2) of this section shall be determined by the covered entity in accordance with this section. The plan shall be accompanied by a schedule for its implementation. The plans and schedules shall be provided to the office within ninety days after their adoption. For those entities seeking financial assistance, the office shall then notify the covered entity and the appropriate financing authority that the plan has been reviewed and whether the plan has been approved in accordance with this section.

(4) A plan developed by a covered entity pursuant to subsection (2) of this section shall, at a minimum, include a full evaluation of the following plan elements:

(a) The water-saving measures and programs to be used by the covered entity for water conservation. In developing these measures and programs, each covered entity shall, at a minimum, consider the following:

(I) Water-efficient fixtures and appliances, including toilets, urinals, clothes washers, showerheads, and faucet aerators;

(II) Low water use landscapes, drought-resistant vegetation, removal of phreatophytes, and efficient irrigation;

(III) Water-efficient industrial and commercial water-using processes;

(IV) Water reuse systems;

(V) Distribution system leak identification and repair;

(VI) Dissemination of information regarding water use efficiency measures, including by public education, customer water use audits, and water-saving demonstrations;

(VII) (A) Water rate structures and billing systems designed to encourage water use efficiency in a fiscally responsible manner.

(B) The department of local affairs may provide technical assistance to covered entities that are local governments to implement water billing systems that show customer water usage and that implement tiered billing systems.

(VIII) Regulatory measures designed to encourage water conservation;

(IX) Incentives to implement water conservation techniques, including rebates to customers to encourage the installation of water conservation measures;

(b) A section stating the covered entity's best judgment of the role of water conservation plans in the covered entity's water supply planning;

(c) The steps the covered entity used to develop, and will use to implement, monitor, review, and revise, its water conservation plan;

(d) The time period, not to exceed seven years, after which the covered entity will review and update its adopted plan; and

(e) Either as a percentage or in acre-foot increments, an estimate of the amount of water that has been saved through a previously implemented conservation plan and an estimate of the amount of water that will be saved through conservation when the plan is implemented.

(4.5) (a) On an annual basis starting no later than June 30, 2014, covered entities shall report water use and conservation data, to be used for statewide water supply planning, following board guidelines pursuant to paragraph (b) of this subsection (4.5), to the board by the end of the second quarter of each year for the previous calendar year.

(b) No later than February 1, 2012, the board shall adopt guidelines regarding the reporting of water use and conservation data by covered entities and shall provide a report to the senate agriculture and natural resources committee and the house of representatives agriculture, livestock, and natural resources committee, or their successor committees, regarding the guidelines. These guidelines shall:

(I) Be adopted pursuant to the board's public participation process and shall include outreach to stakeholders from water providers with geographic and demographic diversity, nongovernmental organizations, and water conservation professionals; and

(II) Include clear descriptions of: Categories of customers, uses, and measurements; how guidelines will be implemented; and how data will be reported to the board.

(c) (I) No later than February 1, 2019, the board shall report to the senate agriculture and natural resources committee and the house of representatives agriculture, livestock, and natural resources committee, or their successor committees, on the guidelines and data collected by the board under the guidelines.

(II) This paragraph (c) is repealed, effective July 1, 2020.

(5) Each covered entity and other state or local governmental entity that adopts a plan shall follow the entity's rules, codes, or ordinances to make the draft plan available for public review and comment. If there are no rules, codes, or ordinances governing the entity's public planning process, then each entity shall publish a draft plan, give public notice of the plan, make such plan publicly available, and solicit comments from the public for a period of not less than sixty days after the date on which the draft plan is made publicly available. Reference shall be made in the public notice to the elements of a plan that have already been implemented.

(6) The board is hereby authorized to recommend the appropriation and expenditure of such revenues as are necessary from the unobligated balance of the five percent share of the operational account of the severance tax trust fund designated for use by the board for the purpose of the office providing assistance to covered entities to develop water conservation plans that meet the provisions of this section.

(7) (a) The board shall adopt guidelines for the office to review water conservation plans submitted by covered entities and other state or local governmental entities. The guidelines shall define the method for submitting plans to the office, the methods for office review and approval of the plans, and the interest rate surcharge provided for in paragraph (a) of subsection (9) of this section.

(b) If no other applicable guidelines exist as of June 1, 2007, the board shall adopt guidelines by July 31, 2007, for the office to use in reviewing applications submitted by covered entities, other state or local governmental entities, and agencies for grants from the grant program and from the grant program established in section [37-60-126.5](#) (3). The guidelines shall establish deadlines and procedures for covered entities, other state or local governmental entities, and agencies to follow in applying for grants and the criteria to be used by the office and the board in prioritizing and awarding grants.

(8) A covered entity may at any time adopt changes to an approved plan in accordance with this section after notifying and receiving concurrence from the office. If the proposed changes are major, the covered entity shall give public notice of the changes, make the changes available in draft form, and provide the public an opportunity to comment on such changes before adopting them in accordance with subsection (5) of this section.

(9) (a) Neither the board nor the Colorado water resources and power development authority shall release grant or loan proceeds to a covered entity unless the covered entity provides a copy of the water conservation plan adopted pursuant to this section; except that the board or the authority may release the grant or loan proceeds notwithstanding a covered entity's failure to comply with the reporting requirements of subsection (4.5) of this section or if the board or the authority, as applicable, determines that an unforeseen emergency exists in relation to the covered entity's loan application, in which case the board or the authority, as applicable, may impose a grant or loan surcharge upon the covered entity that may be rebated or reduced if the covered entity submits and adopts a plan in compliance with this section in a timely manner as determined by the board or the authority, as applicable.

(b) The board and the Colorado water resources and power development authority, to which any covered entity has applied for financial assistance for the construction of a water diversion, storage, conveyance, water treatment, or wastewater treatment facility, shall consider any water conservation plan filed pursuant to this section in determining whether to render financial assistance to such entity. Such consideration shall be carried out within the discretion accorded the board and the Colorado water resources and power development authority pursuant to which such board and authority render such financial assistance to such covered entity.

(c) The board and the Colorado water resources and power development authority may enter into a memorandum of understanding with each other for the purposes of avoiding delay in the processing of applications for financial assistance covered by this section and avoiding duplication in the consideration required by this subsection (9).

(10) Repealed.

(11) (a) Any section of a restrictive covenant that prohibits or limits xeriscape, prohibits or limits the installation or use of drought-tolerant vegetative landscapes, or requires cultivated vegetation to consist exclusively or primarily of turf grass is hereby declared contrary to public policy and,

on that basis, that section of the covenant shall be unenforceable.

(b) As used in this subsection (11):

(I) "Executive board policy or practice" includes any additional procedural step or burden, financial or otherwise, placed on a unit owner who seeks approval for a landscaping change by the executive board of a unit owners' association, as defined in section [38-33.3-103](#), C.R.S., and not included in the existing declaration or bylaws of the association. An "executive board policy or practice" includes, without limitation, the requirement of:

(A) An architect's stamp;

(B) Preapproval by an architect or landscape architect retained by the executive board;

(C) An analysis of water usage under the proposed new landscape plan or a history of water usage under the unit owner's existing landscape plan; and

(D) The adoption of a landscaping change fee.

(II) "Restrictive covenant" means any covenant, restriction, bylaw, executive board policy or practice, or condition applicable to real property for the purpose of controlling land use, but does not include any covenant, restriction, or condition imposed on such real property by any governmental entity.

(III) "Turf grass" means continuous plant coverage consisting of hybridized grasses that, when regularly mowed, form a dense growth of leaf blades and roots.

(IV) "Xeriscape" means the application of the principles of landscape planning and design, soil analysis and improvement, appropriate plant selection, limitation of turf area, use of mulches, irrigation efficiency, and appropriate maintenance that results in water use efficiency and water-saving practices.

(c) Nothing in this subsection (11) shall preclude the executive board of a common interest community from taking enforcement action against a unit owner who allows his or her existing landscaping to die; except that:

(I) Such enforcement action shall be suspended during a period of water use restrictions declared by the jurisdiction in which the common interest community is located, in which case the unit owner shall comply with any watering restrictions imposed by the water provider for the common interest community;

(II) Enforcement shall be consistent within the community and not arbitrary or capricious; and

(III) Once the drought emergency is lifted, the unit owner shall be allowed a reasonable and practical opportunity, as defined by the association's executive board, with consideration of applicable local growing seasons or practical limitations, to reseed and revive turf grass before being required to replace it with new sod.

(12) (a) (I) There is hereby created the water efficiency grant program for purposes of providing state funding to aid in the planning and implementation of water conservation plans developed in accordance with the requirements of this section and to promote the benefits of water efficiency.

The board is authorized to distribute grants to covered entities, other state or local governmental entities, and agencies in accordance with its guidelines from the moneys transferred to and appropriated from the water efficiency grant program cash fund, which is hereby created in the state treasury.

(II) Moneys in the water efficiency grant program cash fund are hereby continuously appropriated to the board for the purposes of this subsection (12) and shall be available for use until the programs and projects financed using the grants have been completed.

(III) For each fiscal year beginning on or after July 1, 2010, the general assembly shall appropriate from the fund to the board up to five hundred thousand dollars annually for the purpose of providing grants to covered entities, other state and local governmental entities, and agencies in accordance with this subsection (12). Commencing July 1, 2008, the general assembly shall also appropriate from the fund to the board fifty thousand dollars each fiscal year to cover the costs associated with the administration of the grant program and the requirements of section [37-60-124](#). Moneys appropriated pursuant to this subparagraph (III) shall remain available until expended or until June 30, 2020, whichever occurs first.

(IV) Any moneys remaining in the fund on June 30, 2020, shall be transferred to the operational account of the severance tax trust fund described in section [39-29-109](#) (2) (b), C.R.S.

(b) Any covered entity or state or local governmental entity that has adopted a water conservation plan and that supplies, distributes, or otherwise provides water at retail to customers may apply for a grant to aid in the implementation of the water efficiency goals of the plan. Any agency may apply for a grant to fund outreach or education programs aimed at demonstrating the benefits of water efficiency. The office shall review the applications and make recommendations to the board regarding the awarding and distribution of grants to applicants who satisfy the criteria outlined in this subsection (12) and the guidelines developed pursuant to subsection (7) of this section.

(c) This subsection (12) is repealed, effective July 1, 2020.

Source: **L. 91:** Entire section added, p. 2023, § 4, effective June 4. **L. 99:** (10) repealed, p. 25, § 3, effective March 5. **L. 2003:** (4)(g) amended and (11) added, p. 1368, § 4, effective April 25. **L. 2004:** Entire section amended, p. 1779, § 3, effective August 4. **L. 2005:** (11) amended, p. 1372, § 1, effective June 6; (1), (2)(b), and (7) amended and (12) added, p. 1481, § 1, effective June 7. **L. 2007:** (1)(a), (2)(a), (5), (7), and (12) amended, p. 1890, § 1, effective June 1. **L. 2008:** IP(4) amended, p. 1575, § 30, effective May 29; (12)(a) amended, p. 1873, § 14, effective June 2. **L. 2009:** (12)(a) amended, ([HB 09-1017](#)), ch. 297, p. 1593, § 1, effective May 21; (9)(a) amended, ([SB 09-106](#)), ch. 386, p. 2091, § 3, effective July 1. **L. 2010:** (4)(a)(I) and (9)(a) amended and (4.5) added, ([HB 10-1051](#)), ch. 378, p. 1772, § 1, effective June 7; (12)(a)(III), (12)(a)(IV), and (12)(c) amended, ([SB 10-025](#)), ch. 379, p. 1774, § 1, effective June 7.

Editor's note: (1) Subsection (12) was originally enacted as subsection (13) in House Bill 05-1254 but was renumbered on revision for ease of location.

(2) Section 2 of chapter 378, Session Laws of Colorado 2010, provides that the act amending subsections (4)(a)(I) and (9)(a) and adding subsection (4.5) applies to conduct occurring on or after June 7, 2010.

Appendix D
Colorado Water Wise Best Practice: Water Waste Ordinance

BEST PRACTICE 5: Water Waste Ordinance

- Foundational and Operations best practice
- Utility operations - implemented by water utilities on their own customers
- Customer participation – avoiding waste is the responsibility of customers

Overview

A water waste ordinance is a local regulation that explicitly prohibits the waste of water from a variety of sources including (but not limited to) excess irrigation runoff or from irrigation that occurs at a prohibited day and/or time, excessive pavement washing, failure to repair leaks, utilizing single-pass water cooling, or even improper maintenance of cooling towers at an unnecessarily low conductivity level.

Conservation through ordinance can have limitations. Enforcement is a key piece of making an ordinance effective and enforcement requires staff resources. Additionally, some entities such as special districts may lack proper jurisdiction to enact a water waste prohibition ordinance.

Why a Best Practice?

A water waste ordinance is an important regulatory tool for water utilities that serves several useful purposes.

- A water waste ordinance establishes the importance of wise water stewardship in a community and establishes a utility's intent to put its water resources to maximum beneficial use.
- A water waste ordinance establishes penalties for the blatant waste of water. Such an ordinance empowers local officials to target hands-on assistance and education as well as issue warnings and fines.
- A water waste ordinance provides an important regulatory "stick" during a drought when agency-wide restrictions are put in place and enforcement is required to ensure water supplies are adequate.
- Without a water waste ordinance, a utility may be powerless to act against egregious and profligate waste of water.

State Planning Requirements

Colorado statute requires that all covered entities (water providers that deliver more than 2,000 acre-feet per year) file a water conservation plan with the Colorado Water Conservation Board (CWCB). Entities that do not have an approved plan on file are not eligible to receive grant funding from the State. Under this statute, one of the water saving measures and programs that must be considered in a conservation plan is, "Regulatory measures designed to encourage water conservation." [CRS 37-60-126 (4)(a)(IX)].

Applicability

This best practice applies to all water agencies and all water customers. Water waste usually targets excessive irrigation and drought restriction violations, but other sources of waste could also be the subject of a water waste ordinance. For example, water waste violations could be levied for excessive pavement washing, failure to repair leaks, utilizing single-pass water

cooling, or even improper maintenance of cooling towers at an unnecessarily low conductivity level. Utilities with individualized water budgets could utilize a water waste ordinance to enforce mandatory drought limitations requiring all customers not to exceed their water budget.

Implementation

A water waste ordinance is usually enacted by the municipality or local government, not the water utility itself. Typically water waste ordinances are passed by the city council and entered into municipal code, often at the request of the water utility. Several examples of code language for water waste ordinances are provided in this section.

Water Savings and Other Benefits

Range of Likely Water Savings: Varies

A waste-prohibition ordinance cannot just be a rule that exists only on the books – it must be actively enforced. The water savings achieved through a water waste ordinance depend largely upon the level of publicity and enforcement given to the rules. A water waste ordinance is similar to a new traffic law – without some measure of enforcement the public is unlikely to pay much attention. With a water waste ordinance, savings are only likely to be achieved if there is some level of active enforcement to keep people “on their toes”.

How to Determine Savings

Initially, water savings from a water waste ordinance can be estimated from the number of warnings and tickets issued. Utilities with advanced data tracking capabilities can identify customers who received a citation for water waste and examine billed consumption records before and after the citation was issued.

Once a water waste ordinance has been in place and actively enforced for a year or more it may be possible to measure the impacts on a community-wide level, but much depends upon the implementation effort.

Savings Assumptions and Caveats

Water savings from a water waste ordinance cannot be assumed since it is possible that no savings will be achieved, because it relies heavily on behavior change.

Goals and Benchmarks

The goal of a water waste ordinance should be to eliminate all obvious water waste in a community. Of course this goal is much like the goal of eliminating all speeding from local roads. The water waste ordinance represents an effort to move a community toward a goal, but it does not ensure success and in fact complete success is a virtual impossibility.

Other Benefits

A water waste ordinance on the books, even if it is not actively enforced in normal water years, can be extremely important during a drought. When demand reductions are required to ensure minimum supply levels during a drought, a water waste ordinance is an essential tool for water providers and gives the necessary enforcement power to cite, and if necessary fine, those who do

not obey drought restrictions. As an additional possible benefit, a waste prohibition ordinance can help create a culture change where wasting water is unacceptable.

Costs

Utility Costs

Implementing a water waste ordinance is inexpensive and usually only requires that an ordinance be prepared by staff and then approved by the City Council or other leadership body.

Enforcing a water waste ordinance requires staff time from the water utility and possibly from other city service workers. To enforce their water waste ordinance, Denver Water hires temporary workers, provides them with vehicles (and bikes) and uniforms, and literature. They also incur expenses related to tracking violations and integrating them into their computerized customer information system. During a drought, some municipalities empower all city workers, including law enforcement, meter readers, and road crews, to watch for watering violations and to issue citations.

Depending upon how the ordinance is constructed, citizens who receive a citation may have the option to appear in court to contest the violation and fine. This can increase implementation costs.

Customer Costs

A water waste ordinance does not place costs on the customer *unless* they are caught in violation of the rules at which point they may be subject to a penalty, much like a traffic ticket.

Resources and Examples

Resources

The published literature on water waste ordinances is virtually non-existent. The best resources for water waste ordinances are rules on the books in communities in Colorado and across the US and the experience of water providers in implementing their water waste ordinance.

Examples

Several examples of water waste ordinances with varying levels of detail and specificity are presented below.

Denver Water

Denver Water prohibits water waste, carefully defines what waste is, and enforces the ordinance with seasonal staff.

From *Chapter 14 Water Conservation*

14.01 Water Waste Prohibited. Water shall be used only for beneficial purposes and shall not be wasted.

14.01.1 Water Waste Defined. Prohibited water waste includes, but is not limited to:

- a. Applying more water than is reasonably necessary to establish and maintain a healthy landscape. Routine watering of turf shall be limited to three days per week, except for watering for up to 21 days to establish new turf from sod or seed; and except for syringing golf course greens when necessitated by weather conditions.
- b. Watering with spray irrigation between the hours of 10.00 a.m. and 6.00 p.m. during the period from May 1 to October 1, except for the following uses:
 - (1) Watering for up to 21 days to establish turf from seed or sod.
 - (2) Watering new plant material such as flowers, trees and shrubs on the day of planting.
 - (3) Watering essential to preserve turf subject to heavy public use.
 - (4) Operating an irrigation system for installation, repair or reasonable maintenance, so long as the system is attended throughout the period of operation.
- c. Watering landscaped areas during rain or high wind.
- d. Applying water intended for irrigation to an impervious surface, such as a street, parking lot, alley, sidewalk or driveway.
- e. Using water instead of a broom or mop to clean outdoor impervious surfaces such as sidewalks, driveways and patios, except when cleaning with water is necessary for public health or safety reasons or when other cleaning methods are impractical.
- f. Allowing water to pool or flow across the ground or into any drainage way, such as gutters, streets, alleys or storm drains.
- g. Failing to repair, for a period of more than ten business days after notice, leaking or damaged irrigation components, service lines or other plumbing fixtures.
- h. Washing vehicles with a hose that lacks an automatic shut-off valve.

14.01.2 “Water Use Restriction” Distinguished. These prohibitions on water waste are not related to drought response, insufficient water supply or system emergency and therefore do not constitute water use restrictions within the meaning of Denver Water’s various water supply agreements and environmental permits.

City of Aurora

The City of Aurora Waste of Water ordinance prohibits water from pooling on or running across impervious surfaces and into the street gutter. This ordinance can also be applied during times of drought restrictions to enforce wrong day watering or watering between 10 a.m. and 6 p.m.

Sec. 138-190. Waste of water.

(a) *Waste of water prohibited.* Waste of water shall be defined as noncompliance with the city's water management plan as defined in section 138-223(b). Notwithstanding the enforcement provisions set forth in subsection (b) of this section, the director may order the installation of a flow restrictor or the shut off of water service to a property if the director reasonably finds that an extreme waste of water is occurring on the premises.

(b) *Enforcement.* The director is hereby authorized to enforce this section. The person billed for water service to a property, whether owner or occupant, shall be responsible for compliance with subsection (a) of this section and shall be subject to the following actions and penalties:

- (1) Upon a first violation, the person billed will be issued a warning.
- (2) Upon any further violations at the same property within a 12-month period, from the date of the warning notice, the person billed will be issued a written violation and the following penalty (see Table 4-12) will be added to the water bill for the property as a civil penalty.
- (3) Any penalty imposed pursuant to this section may be appealed to the director of water pursuant to the appeal procedure set forth in section 138-226.
- (4) Upon any notice(s) of violation of this section, a copy of such notice(s) shall also be mailed to the owner(s) of the real property served, if the owner(s) address differs from the subject property address.

(Code 1979, § 39-78; Ord. No. 2000-132, § 3, 12-11-2000; Ord. No. 2002-29, § 1, 6-3-2002; Ord. No. 2003-08, § 1, 3-24-2003; Ord. No. 2005-74, § 1, 10-10-2005)

Table 4-12: Aurora water waste violation penalties

Customer Category and Meter Size	2nd Violation	All Additional Violations
Single-Family		
All (5/8" - 1")	\$250.00	\$500.00
Non Single-Family		
5/8"	250.00	500.00
3/4"	300.00	600.00
1"	400.00	800.00
1 1/2"	600.00	1,200.00
Large Commercial		
2"	800.00	1,600.00
3"	1,200.00	2,400.00
4"	1,600.00	3,200.00
6"	2,400.00	4,800.00
8"	3,200.00	6,400.00
Irrigation Only		
2"	1,000.00	2,000.00
3"	1,500.00	3,000.00
4"	2,000.00	4,000.00
6"	3,000.00	6,000.00
8"	4,000.00	8,000.00

City of Durango

Water waste. The intentional or unintentional use of water for a non-beneficial use. Non-beneficial uses include, but are not restricted to:

- (1) Landscape water applied in such a manner, rate and/or quantity that it overflows the landscaped area being watered and runs onto adjacent property, public rights-of-way or into drainage ways, including gutters and storm sewers.
- (2) Landscape water which leaves a sprinkler, sprinkler system, or other application device in such a manner or direction as to spray onto adjacent property or public rights-of-way.

- (3) Failing to repair any irrigation system that is broken or leaking.
- (4) Applying water to hard surfaces such as parking lots, aprons, pads, driveways, or other surfaced areas, such as wood or gravel, when water is supplied in sufficient quantity to flow from that surface onto adjacent property or public rights-of-way.
(Ord. No. O-2007-30, § 1, 9-4-07)

City of Longmont

Waste of water prohibited. Customers shall not cause or permit water furnished by the city to run to waste in any gutter or other impervious surface, or other application. Waste, for purposes of this section, shall constitute the use of water serving no beneficial use, and not constituting an unavoidable consequence of the beneficial usage of water. Waste of water does not include incidental and occasional over spraying. For the purposes of this section, the term customer shall include homeowners associations or other entities obligated to maintain irrigation systems along city streets.

Appendix E

Forecasting Future Water Demands

This appendix presents the water demand forecasting used to estimate future water demand in the City assuming current trends in water use continued over the coming 8 years – including the effects on past and ongoing water conservation programs, and excluding the effects of new water conservation efforts that will be identified and implemented as a result of this Plan. The forecasting presented herein also characterized the impact of passive savings which are expected to occur over the planning period (i.e., from 2012 to 2020) as a result of customers replacing toilets, dishwashers and clothes washers with more water efficient models independent of any programs that the City implements.

Forecasting was initiated by segregating past monthly water demands for each major customer category:

- Residential – both for inside and outside the City limits – with separate categories for
 - single family,
 - multi-family, and
 - irrigation only accounts.
- Commercial – both for inside and outside the City Limits
- City facility water use including indoor and outdoor uses
- Wholesale water sales
- Other water sales (which relate specifically to pre-paid water sales at City hydrants and the City’s stand pipe (AKA – Ranch water))

Forecasting was developed for each customer category individually to develop predictions of monthly and annual water demand for the planning period. The results of the individual predictions by customer category were summed to estimate total water delivery (i.e., billed water). Total treated water demand was calculated by estimating average monthly non-revenue water (based on the period 2005 to 2011) as a percentage of total treated water. Total treated water was finally estimated by dividing total billed water by one less the percentage of non-revenue for each month.

Three separate estimates of monthly total treated water demands were developed to support water conservation planning. The three separate estimates include:

- Estimates for average conditions based on current trends.
- Estimates for above average conditions (i.e., one standard deviation above average) based on current trends.
- Adjusted estimates for average and above average conditions including the impacts of passive water savings.

Average conditions (i.e., demands which will occur no more than 5 out of every 10 years) and above average conditions (i.e., demand which will occur no more than 8 out of 10 years) were forecasted to provide insight into the variability of future demands and the relative impact of proposed water conservation programs on variable future water use.

Assumptions

Specific assumptions used to estimate average future water demands without passive savings (passive savings were added into the forecasted demands under a separate step) are as follows:

- Residential water use inside the City limits will increase at a rate equivalent to the City’s predicted growth of housing units (see Table C-1). The housing unit growth rate was used to adjust single family, multi-family and irrigation only water use based on average monthly water use observed over the last 4 years (i.e., 2008 through 2011¹) for each year from 2012 to 2020, compounded annually.

- Residential water use outside the City limits will not increase over the planning period, since the City does not currently plan to increase its service area. Therefore, future monthly water demand for each residential customer category outside the City limits (including single family, multi-family and special based use) was maintained at a demand equal to the average monthly water use observed over the last 4 years (i.e., 2008 through 2011²).

Year	Population	Housing Units
2010	66,572	27,773
2011	67,455	28,120
2012	68,495	28,300
2013	69,690	29,037
2014	70,991	29,579
2015	72,403	30,167
2016	73,926	30,803
2017	75,449	31,437
2018	76,975	32,073
2019	78,502	32,709
2020	80,086	33,369

- Commercial water use, both inside and outside the City limits will increase at a rate equivalent to the City’s predicted growth of housing units. The housing unit growth rate was used to adjust commercial water use for customers inside and outside the City limits, as well as commercial special base accounts, based on average monthly water use observed over the last 4 years (i.e., 2008 through 2011³) for each year from 2012 to 2020, compounded annually.

- City water use, at its various facilities and parks, will be maintained at current demands, based on average monthly demand for the period 2009 through 2011, since City indoor

¹ 2008 through 2011 were included in the analysis since it was only during this period that these customer categories were tracked by the City. Prior to 2008, the City lumped these accounts into one customer category.

² 2008 through 2011 were included in the analysis since it was only during this period that these customer categories were tracked by the City. Prior to 2008, the City lumped these accounts into one customer category.

³ 2008 through 2011 were included in the analysis since it was only during this period that these customer categories were tracked by the City. Prior to 2008, the City lumped these accounts into one customer category.

water use dropped substantially during this period of time, and the City is not currently planning on expanding its facilities over the planning period.

- Wholesale water use, which represents that interconnection between Little Thompson Water District and the City, is not expected to change over the planning period. Monthly averages for the years 2010 and 2011 were used to estimate future water demand for this account given that prior to 2010 water use tracked by this account was negligible.
- Pre-paid water sold through fire hydrants across the City is not expected to change over the planning period. Monthly averages for the years 2010 and 2011 were used to estimate future water demand for this account given that prior to 2010 water use tracked by this account was negligible.
- Per-paid water sold through the City's stand pipe (i.e., Ranch water), will increase in accordance with future population growth. Analyses presented in Appendix C indicate that both a linear and logarithmic relationship exists between Ranch water use and a three-year rolling average⁴ of population growth (which accounts for construction of infrastructure and residences/businesses over time). The logarithmic relationship between population growth and expected water use presented in Figure C-1 was used to estimate future monthly water demands for the planning period based on average monthly demands for the period 2005 to 2011.

Total water billings were estimated by summing the predicted monthly water use for each of these categories of customer water use. Non-revenue was added to total billed water to calculate total treated water demand throughout the planning period.

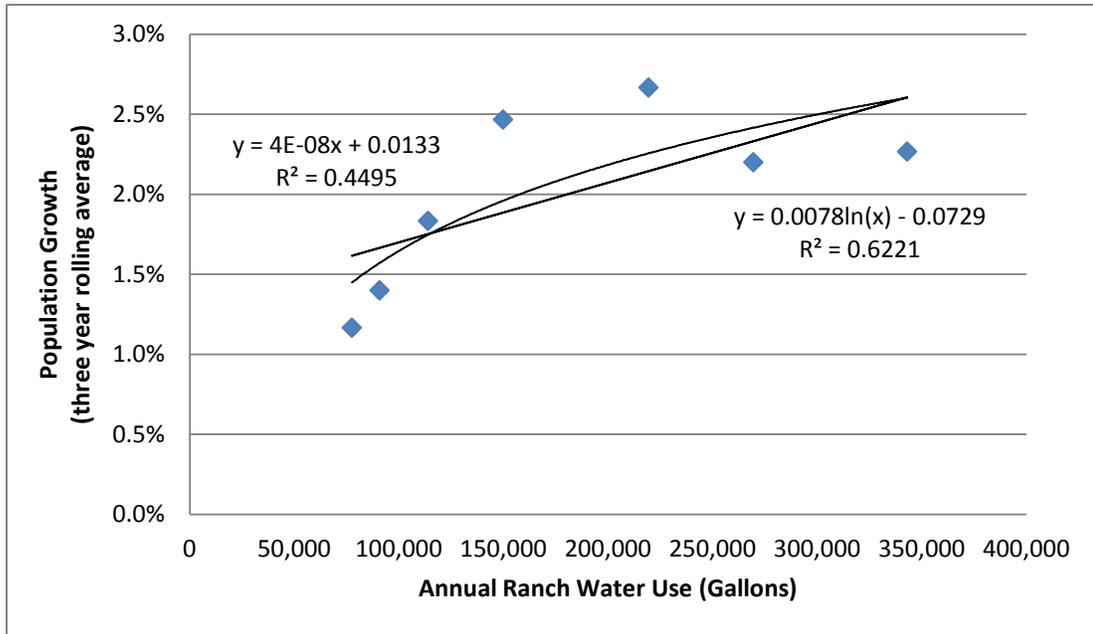
Note that past average monthly water use was not normalized to "per connection use" for the purposes of this analysis, given the expected combined influence of population growth and passive savings over the period 2008 to 2011. Growth in the City was estimated to be about 7% during this period; and passive saving reductions estimated from observed indoor residential water use over this same period of time were also about 7%. Therefore, these two factors were assumed to offset one another. The total treated water delivery in the City is presented in Figure C-2 to illustrate this point since there has not been a demand increase since 2008.

Above Average Conditions

To understand the potential variability on the City's future water demands, a statistical analysis was performed using the last four years of monthly water use data. For purposes of this analysis, it is assumed that the variability in water use relates to the natural variability of weather and behavioral impacts on water use in the City.

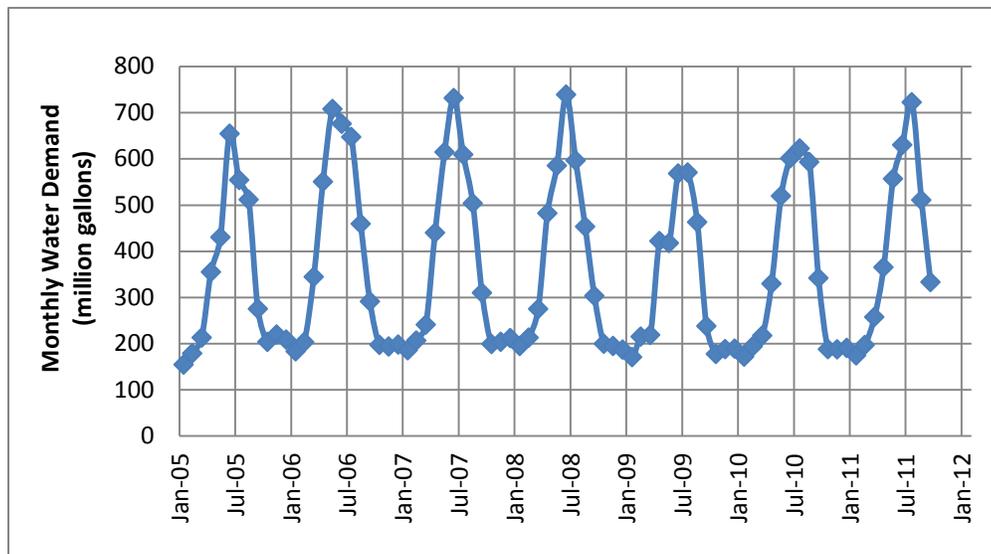
⁴ A three-year rolling average was used to smooth the natural variation in the data, and allow for incorporating the multi-year impact of growth on the community (given that building a subdivision typically requires more than one year of construction to allow for building water, sewer and storm sewer systems, as well as individual residences).

Figure C-1 - Correlation of Ranch Water Use to Percent Growth⁵



The importance of developing an above average water demand is as follows: there is a 16% probability that total water demand will be greater than above average conditions (based on estimating water demands one standard deviation greater than average conditions); whereas there is a 50% probability that total water demand will be greater than average conditions. Therefore, above average conditions allows for planning to meet estimated water demands for 8 out of 10 years, as opposed to 5 out of ten years (which is what average conditions represent).

Figure C-2 Total Treated Water Delivery



⁵ This figure illustrates a better correlation of Ranch Water use to percent growth using a logarithmic function ($R \sim 0.62$) versus a linear approximation ($R \sim 0.45$).

Passive Savings

To incorporate impacts of “passive savings,” per capita residential water use (for treated water only) was estimated to decrease over the planning period by between 7.3 to 10.1 gallons per person per day (gpcd) in conjunction with those water demand reductions that are expected to occur as residential customers replace outmoded and broken toilets, dishwashers and clothes washers with new, high efficiency models without the influence of the City’s water conservation efforts. Passive conservation only impacted future demands for single family and multi-family residential demands. Passive savings were developed based on recent analyses conducted by the CWCB (Great Western Institute, 2010).⁶ For purposes of this plan, the total passive savings demand reductions of 8.7 gpcd (the average of the high and the low estimates) were applied to the annual residential uses for both inside and outside of the City limits, resulting in a reduced annual demand of about 254 million gallons in 2020, or about 700,000 gallons of treated water a day.

Peak Day Water Demands

Peak daily water demands are of concern to any City that operates a water treatment plant. Loveland is no different. Past peak daily demands in the summer have approached the capacity of the treatment facility. To evaluate future peak daily demands, peaking factors were developed for each month of the year based on the ratio of highest peak daily demand in the month to total monthly demand – as an average over the period from January 2000 through October 2011.

Table C-2 Peaking Factors	
(MGD/Million Gals)	
Jan	3.85%
Feb	4.50%
Mar	4.22%
Apr	4.81%
May	4.86%
Jun	4.46%
Jul	3.92%
Aug	3.94%
Sep	4.34%
Oct	5.08%
Nov	4.20%
Dec	3.82%

The resulting peaking factors are provided in Table C-2. These peaking factors were multiplied by the average and above average monthly total treated water demands developed through the forecasting effort, to estimate future peak day demands for each month between January 2012 and December 2020.

List of Other Assumptions

In addition to those assumptions presented above, the following assumptions were used to develop the forecasted water demands.

- No substantial changes to current residential water use practices have been included to represent existing or future single and multi-family water use such as:

⁶ Passive savings calculations were developed by estimating the reduction to per capita water use for those populations that existed or will exist at key dates during the development of high-efficiency products for consumer use (i.e., 1996 for low-flow toilets (1.6 gallons per flush (gpf)); 2005 for high-efficiency clothes washers and dishwashers; and 2015 for high-efficiency toilets (0.9 to 1.28 gpf)).

- Residential outdoor watering will not occur using grey-water or non-potable water systems; and
 - Indoor water use will occur for the same basic configuration of bathroom, laundry and kitchen uses as exist today (noting that passive savings account for the use of new, more efficiency appliances and fixtures without changing the way that the appliance and fixtures are used).
- The City will maintain the current level of non-revenue water and water treatment plant efficiencies into the future.
 - No large industrial, commercial and/or manufacturing facilities will be constructed within the City's service area over the next eight years requiring substantial new water supply.
 - No substantial change from past measured conditions in current weather and precipitation patterns will occur over the planning period.

Results

The tables that are contained in this appendix provide the results of the forecasting, as described above. These tables are as follows:

- **Table C-3** - Presentation of monthly water use data including past water use and forecasted monthly water use for average conditions.
- **Table C-4** - Presentation of monthly water use data including past water use and forecasted monthly water use for above average conditions.
- **Table C-5** - Presentation of Passive Savings estimates in the form of per capita water use adjusts to future estimated water demands
- **Table C-6** - Summary of past and predicted annual water use for average and above average conditions without passive savings
- **Table C-7** - Summary of past and predicted annual water use for average and above average conditions with passive savings

A graphic presentation of the results of the forecasting is provided in the main body of the text.

Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Residential Total SF, MF	Outside Res. - Special Base	Outside Residential Total SF, MF
Jan-05	109,547,839	-	-	109,547,839	8,390,000	-	-	8,390,000	-	8,390,000
Feb-05	91,946,900	-	-	91,946,900	6,731,000	-	-	6,731,000	-	6,731,000
Mar-05	95,470,039	-	-	95,470,039	7,029,100	-	-	7,029,100	-	7,029,100
Apr-05	121,536,723	-	-	121,536,723	7,677,600	-	-	7,677,600	-	7,677,600
May-05	160,891,579	-	-	160,891,579	9,462,300	-	-	9,462,300	-	9,462,300
Jun-05	279,120,014	-	-	279,120,014	13,130,000	-	-	13,130,000	-	13,130,000
Jul-05	424,146,200	-	-	424,146,200	18,902,000	-	-	18,902,000	-	18,902,000
Aug-05	425,802,200	-	-	425,802,200	18,743,000	-	-	18,743,000	-	18,743,000
Sep-05	394,132,748	-	-	394,132,748	17,333,000	-	-	17,333,000	-	17,333,000
Oct-05	279,788,600	-	-	279,788,600	11,851,800	-	-	11,851,800	-	11,851,800
Nov-05	128,564,600	-	-	128,564,600	6,710,200	-	-	6,710,200	-	6,710,200
Dec-05	112,596,900	-	-	112,596,900	7,637,100	-	-	7,637,100	-	7,637,100
Jan-06	117,025,547	-	-	117,025,547	8,404,900	-	-	8,404,900	-	8,404,900
Feb-06	103,678,953	-	-	103,678,953	7,021,000	-	-	7,021,000	-	7,021,000
Mar-06	102,035,487	-	-	102,035,487	7,009,000	-	-	7,009,000	-	7,009,000
Apr-06	138,511,159	-	-	138,511,159	8,567,000	-	-	8,567,000	-	8,567,000
May-06	293,578,622	-	-	293,578,622	13,179,800	-	-	13,179,800	-	13,179,800
Jun-06	496,795,889	-	-	496,795,889	21,564,200	-	-	21,564,200	-	21,564,200
Jul-06	525,171,479	-	-	525,171,479	23,378,000	-	-	23,378,000	-	23,378,000
Aug-06	477,540,475	-	-	477,540,475	19,200,600	-	-	19,200,600	-	19,200,600
Sep-06	404,186,500	-	-	404,186,500	16,057,400	-	-	16,057,400	-	16,057,400
Oct-06	279,511,911	-	-	279,511,911	11,850,000	-	-	11,850,000	-	11,850,000
Nov-06	123,457,000	-	-	123,457,000	6,932,914	-	-	6,932,914	-	6,932,914
Dec-06	125,055,758	-	-	125,055,758	6,958,428	-	-	6,958,428	-	6,958,428
Jan-07	103,665,559	-	-	103,665,559	7,801,189	-	-	7,817,189	16,000	7,817,189
Feb-07	100,225,253	-	-	100,225,253	6,533,383	-	-	6,543,383	10,000	6,543,383
Mar-07	99,508,230	-	-	99,508,230	6,596,000	-	-	6,639,000	43,000	6,639,000
Apr-07	115,275,789	-	-	115,275,789	7,256,000	-	-	7,272,000	16,000	7,272,000
May-07	178,867,000	-	-	178,867,000	9,201,800	-	-	9,259,800	58,000	9,259,800
Jun-07	363,240,631	-	-	363,240,631	15,694,200	-	-	15,683,200	59,000	15,683,200
Jul-07	550,764,689	-	-	550,764,689	22,827,000	-	-	22,998,000	171,000	22,998,000
Aug-07	493,982,153	-	-	493,982,153	18,844,000	-	-	19,067,000	223,000	19,067,000
Sep-07	432,263,247	-	-	432,263,247	16,830,000	-	-	17,273,000	443,000	17,273,000
Oct-07	293,196,700	-	-	293,196,700	11,589,000	-	-	11,850,000	261,000	11,850,000
Nov-07	142,514,904	-	-	142,514,904	7,512,000	-	-	7,630,000	118,000	7,630,000
Dec-07	116,274,289	-	-	116,274,289	7,198,000	-	-	7,209,000	11,000	7,209,000
Jan-08	90,773,689	22,654,400	93,000	113,521,089	6,884,000	244,000	-	7,128,000	19,000	7,128,000
Feb-08	80,380,636	21,288,000	35,000	101,703,636	6,330,000	230,000	1,000	6,573,000	12,000	6,573,000
Mar-08	83,119,897	21,065,000	49,000	104,233,897	6,354,000	231,000	58,000	6,664,000	21,000	6,664,000
Apr-08	91,141,367	21,638,200	1,363,000	114,142,567	7,106,700	244,000	118,000	7,501,700	33,000	7,501,700
May-08	194,438,100	28,272,300	31,814,000	254,524,400	10,956,300	355,000	588,000	11,993,300	94,000	11,993,300
Jun-08	245,541,100	34,400,000	74,413,000	354,354,100	13,763,000	444,000	1,157,000	15,459,000	95,000	15,459,000
Jul-08	335,981,000	39,914,000	96,411,500	472,306,500	18,422,000	530,000	1,686,000	20,847,000	227,000	20,847,000
Aug-08	373,924,800	49,564,000	131,737,000	555,225,800	20,187,000	662,000	1,470,000	22,500,000	181,000	22,500,000
Sep-08	242,903,000	38,169,000	89,143,485	370,215,485	14,868,000	400,700	860,000	16,196,700	78,000	16,196,700
Oct-08	186,940,500	32,226,000	61,023,827	280,190,327	10,003,000	311,000	934,000	11,428,000	180,000	11,428,000
Nov-08	100,178,000	22,921,000	11,371,809	134,470,809	6,895,000	220,000	51,000	7,214,000	48,000	7,214,000
Dec-08	90,803,000	21,571,000	439,343	112,813,343	7,074,000	239,000	1,000	7,325,000	12,000	7,325,000
Jan-09	91,414,696	22,682,000	(38,000)	114,058,696	7,097,000	234,000	2,000	7,552,000	19,000	7,552,000
Feb-09	79,107,256	20,625,000	1,000	99,733,256	6,145,000	198,000	7,000	6,564,000	14,000	6,564,000
Mar-09	87,262,000	20,671,000	77,505	108,010,505	7,074,000	206,000	103,000	7,400,000	17,000	7,400,000
Apr-09	96,029,000	22,648,440	1,148,554	121,826,994	7,138,000	246,000	26,000	7,425,000	16,000	7,425,000
May-09	134,681,000	25,045,000	20,549,518	180,255,518	9,038,000	231,000	138,000	9,494,000	87,000	9,494,000
Jun-09	196,335,000	31,328,000	57,576,486	285,239,486	11,347,000	281,000	556,000	12,408,000	224,000	12,408,000
Jul-09	241,904,000	34,540,000	73,796,899	350,240,899	13,380,026	290,000	820,000	14,587,026	117,000	14,587,026
Aug-09	256,740,000	40,609,000	96,740,000	391,729,799	14,110,000	389,000	975,000	15,561,000	87,000	15,561,000
Sep-09	257,340,000	38,203,000	88,816,521	384,359,521	13,858,000	443,000	998,000	15,385,000	86,000	15,385,000

Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Residential Total SF, MF	Outside Res. - Special Base	Outside Residential Total SF, MF
Oct-09	165,580,000	32,517,000	57,633,397	255,730,397	9,452,000	327,000	486,000	36,000	10,304,000	
Nov-09	84,864,000	21,628,000	8,109,374	114,599,374	6,412,000	181,000	4,000	9,000	6,605,000	
Dec-09	87,938,000	22,192,000	93,420	110,223,420	7,190,000	203,000	3,000	18,000	7,105,000	
Jan-10	89,909,000	24,246,207	1,000	114,156,207	6,886,000	197,000	3,000	58,000	6,657,000	
Feb-10	79,070,000	20,040,415	1,000	99,111,415	5,748,000	848,000	3,000	20,000	6,615,000	
Mar-10	79,753,000	20,994,000	1,000	100,748,000	5,812,000	981,000	3,000	27,000	7,443,000	
Apr-10	91,306,741	21,891,000	1,972,756	115,170,497	6,476,000	931,000	9,000	61,000	8,034,000	
May-10	111,989,000	23,348,066	14,585,688	149,922,734	6,948,000	1,018,000	7,000	110,000	12,978,500	
Jun-10	197,113,000	30,122,000	46,640,249	273,875,249	10,789,000	1,486,500	583,000	603,000	16,651,500	
Jul-10	291,034,000	40,181,000	91,094,682	422,309,682	14,434,000	1,496,500	730,000	135,000	18,224,708	
Aug-10	290,154,456	42,380,000	102,858,870	435,393,326	15,188,708	2,171,000	817,000	87,000	19,064,000	
Sep-10	322,030,059	44,587,606	109,023,407	475,641,072	15,991,000	2,259,000	1,076,000	252,000	15,512,000	
Oct-10	242,319,538	40,218,092	92,436,758	374,974,388	12,435,000	1,749,000	1,243,000	3,000	7,552,000	
Nov-10	106,406,559	23,847,000	15,873,137	146,126,696	6,543,000	976,000	30,000	92,000	7,614,000	
Dec-10	86,848,200	21,987,500	4,123	108,875,823	6,565,000	951,000	3,000	40,000	7,454,000	
Jan-11	88,431,400	23,179,806	2,000	111,613,206	6,290,000	1,121,000	3,000	81,000	7,145,000	
Feb-11	76,327,935	21,297,182	-	97,625,117	5,915,000	1,147,000	2,000	3,000	6,739,851	
Mar-11	77,550,044	21,559,143	3,700	99,112,887	4,387,851	2,315,000	7,000	7,000	7,883,123	
Apr-11	98,181,392	22,716,268	3,415,776	124,313,436	5,373,123	2,458,000	81,000	46,000	9,568,553	
May-11	143,207,486	27,613,882	29,770,595	200,591,953	6,672,553	2,517,000	405,000	131,000	12,930,000	
Jun-11	199,577,996	34,673,193	54,373,825	288,625,014	8,976,000	3,418,000	577,000	154,000	16,969,255	
Jul-11	284,351,642	43,333,408	84,674,368	412,359,408	12,417,265	3,821,000	781,000	173,000	19,147,000	
Aug-11	310,674,227	47,265,797	105,645,898	463,485,922	13,653,000	4,540,000	778,000	171,000	18,603,221	
Sep-11	324,823,276	48,787,417	112,669,890	486,280,583	12,825,221	4,829,000	564,000	115,000	13,292,270	
Oct-11	217,096,857	39,565,686	78,098,138	334,760,681	9,033,270	3,580,000	17,000	21,000	7,069,588	
Nov-11	101,741,384	24,849,245	16,782,581	143,373,210	4,887,688	2,144,000	11,000	28,000	7,622,121	
Dec-11	88,035,135	24,819,794	158,510	113,013,379	4,822,685	2,760,496	11,000	2,250	7,259,750	
Jan-12	90,672,989	23,329,747	14,587	114,017,323	6,784,250	449,000	3,250	41,250	6,684,750	
Feb-12	79,193,785	20,937,525	9,306	100,140,616	6,034,500	605,750	41,500	23,000	6,904,713	
Mar-12	82,412,763	21,198,719	32,998	103,644,480	5,906,963	933,250	40,000	30,250	7,563,456	
Apr-12	95,232,613	22,356,818	1,987,123	119,576,554	6,523,456	969,750	203,500	85,000	9,722,463	
May-12	146,950,335	26,226,233	24,325,025	197,501,593	8,403,713	1,030,250	675,250	140,000	13,443,875	
Jun-12	210,899,625	32,826,583	58,600,395	302,326,603	11,218,750	1,218,750	880,250	20,250	17,110,397	
Jul-12	290,047,566	39,729,055	87,013,326	416,789,947	14,658,320	1,534,375	917,000	154,000	17,263,695	
Aug-12	309,720,611	45,224,427	109,282,426	464,227,464	15,784,677	1,940,500	969,000	140,000	18,858,177	
Sep-12	288,494,728	42,691,376	100,512,806	431,698,910	14,360,555	1,982,925	863,250	105,500	17,312,230	
Oct-12	204,202,129	36,348,485	72,751,818	313,282,432	10,231,568	1,491,750	765,000	145,750	12,634,068	
Nov-12	98,887,271	23,450,676	13,112,431	135,450,377	6,184,397	880,250	25,500	37,000	7,493,780	
Dec-12	88,936,520	22,778,414	183,946	111,898,880	6,412,921	1,038,359	5,500	24,250	7,259,750	
Jan-13	93,121,160	23,959,650	14,981	117,095,791	6,784,250	449,000	2,250	3,250	6,684,750	
Feb-13	81,332,018	21,502,838	9,557	102,844,413	6,034,500	605,750	3,250	41,250	6,904,713	
Mar-13	84,637,907	21,771,085	33,889	106,442,881	5,906,963	933,250	41,500	23,000	6,904,713	
Apr-13	97,803,893	22,960,452	2,040,775	122,805,121	6,523,456	969,750	40,000	30,250	7,563,456	
May-13	150,917,994	26,934,342	24,981,801	202,834,136	8,403,713	1,030,250	203,500	85,000	9,722,463	
Jun-13	216,595,915	33,712,901	60,182,606	310,489,421	11,218,750	1,409,875	675,250	140,000	13,443,875	
Jul-13	297,878,851	40,801,739	89,362,686	428,043,276	14,658,320	1,534,375	917,000	154,000	17,263,695	
Aug-13	318,083,067	46,445,487	112,233,051	476,761,606	15,784,677	1,940,500	989,000	144,000	18,858,177	
Sep-13	296,284,086	43,844,043	103,226,651	443,354,781	14,360,555	1,982,925	863,250	105,500	17,312,230	
Oct-13	209,715,587	37,329,894	74,695,577	321,741,058	10,231,568	1,491,750	765,000	145,750	12,634,068	
Nov-13	101,557,227	24,083,844	13,466,466	139,107,538	6,184,397	880,250	25,500	37,000	7,110,397	
Dec-13	91,337,806	23,393,431	188,913	114,920,150	6,412,921	1,038,359	5,500	20,250	7,493,780	
Jan-14	94,890,462	24,414,883	15,265	119,320,611	6,784,250	449,000	2,250	24,250	7,259,750	
Feb-14	82,877,326	21,911,392	9,738	104,798,457	6,034,500	605,750	3,250	41,250	6,684,750	
Mar-14	86,246,027	22,184,736	34,533	108,465,296	5,906,963	933,250	41,500	23,000	6,904,713	
Apr-14	99,662,167	23,396,701	2,079,550	125,138,418	6,523,456	969,750	40,000	30,250	7,563,456	
May-14	153,785,436	27,446,094	25,456,456	206,687,985	8,403,713	1,030,250	203,500	85,000	9,722,463	
Jun-14	220,709,199	34,353,446	61,326,076	316,388,720	11,218,750	1,409,875	675,250	140,000	13,443,875	

Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Res. - Special Base	Outside Residential Total SF, MF
Jul-14	303,538,249	41,576,972	91,060,577	436,176,098	14,658,320	1,534,375	917,000	154,000	17,263,695
Aug-14	324,126,646	47,327,951	114,365,479	485,820,076	15,784,677	1,940,500	989,000	144,000	18,858,177
Sep-14	301,913,484	44,677,080	105,187,958	451,778,522	14,360,555	1,982,925	863,250	105,500	17,312,230
Oct-14	213,700,183	38,039,162	76,114,793	327,854,138	10,231,568	1,491,750	765,000	145,750	12,634,068
Nov-14	103,486,814	24,541,437	13,722,329	141,750,581	6,184,397	880,250	25,500	20,250	7,110,397
Dec-14	93,073,225	23,837,906	19,202	117,103,633	6,412,921	1,038,359	5,500	37,000	7,493,780
Jan-15	96,788,271	24,903,181	15,571	121,707,023	6,784,250	449,000	2,250	24,250	7,259,750
Feb-15	84,534,873	22,349,620	9,933	106,894,426	6,034,500	603,750	3,250	60,750	6,684,750
Mar-15	87,970,948	22,628,430	35,224	110,634,602	5,906,963	933,250	41,500	23,000	6,904,713
Apr-15	101,655,411	23,864,635	2,121,141	127,641,186	6,523,456	969,750	40,000	30,250	7,563,456
May-15	156,861,144	27,995,016	25,965,584	210,821,744	8,403,713	1,030,250	203,500	85,000	9,722,463
Jun-15	225,123,383	35,040,515	62,552,597	322,716,495	11,218,750	1,409,875	675,250	140,000	13,443,875
Jul-15	309,609,320	42,408,512	92,881,788	444,899,620	14,658,320	1,534,375	917,000	150,000	17,263,695
Aug-15	330,609,179	48,274,510	116,652,789	495,536,478	15,784,677	1,940,500	989,000	144,000	18,858,177
Sep-15	307,951,753	45,570,622	107,291,717	460,814,092	14,360,555	1,982,925	863,250	105,500	17,312,230
Oct-15	217,974,186	38,799,945	77,637,089	334,411,220	10,231,568	1,491,750	765,000	145,750	12,634,068
Nov-15	105,556,551	25,032,266	13,996,776	144,585,592	6,184,397	880,250	25,500	20,250	7,110,397
Dec-15	94,934,689	24,314,664	196,352	119,445,705	6,412,921	1,038,359	5,500	37,000	7,493,780
Jan-16	98,820,825	25,426,148	15,898	124,262,871	6,784,250	449,000	2,250	24,250	7,259,750
Feb-16	86,310,105	22,818,962	10,142	109,139,209	6,034,500	603,750	3,250	41,250	6,684,750
Mar-16	89,818,338	23,103,627	35,963	112,957,928	5,906,963	933,250	41,500	23,000	6,904,713
Apr-16	103,790,174	24,365,792	2,165,685	130,321,651	6,523,456	969,750	40,000	30,250	7,563,456
May-16	160,155,229	28,582,911	26,510,861	215,249,001	8,403,713	1,030,250	203,500	85,000	9,722,463
Jun-16	229,850,974	35,776,366	63,866,202	329,493,541	11,218,750	1,409,875	675,250	140,000	13,443,875
Jul-16	316,111,116	43,299,090	94,832,306	454,242,512	14,658,320	1,534,375	917,000	154,000	17,263,695
Aug-16	337,551,971	49,288,275	119,102,497	505,942,744	15,784,677	1,940,500	989,000	144,000	18,858,177
Sep-16	314,418,740	46,527,605	109,544,843	470,491,188	14,360,555	1,982,925	863,250	105,500	17,312,230
Oct-16	222,551,644	39,614,744	79,267,468	341,433,856	10,231,568	1,491,750	765,000	145,750	12,634,068
Nov-16	107,773,238	25,557,944	14,290,708	147,621,890	6,184,397	880,250	25,500	20,250	7,110,397
Dec-16	96,928,318	24,825,272	200,475	121,954,065	6,412,921	1,038,359	5,500	37,000	7,493,780
Jan-17	100,896,062	25,960,097	16,232	126,872,391	6,784,250	449,000	2,250	24,250	7,259,750
Feb-17	88,122,617	23,298,160	10,355	111,431,132	6,034,500	603,750	3,250	41,250	6,684,750
Mar-17	91,704,523	23,588,803	36,718	115,330,045	5,906,963	933,250	41,500	23,000	6,904,713
Apr-17	105,969,768	24,877,473	2,211,165	133,058,406	6,523,456	969,750	40,000	30,250	7,563,456
May-17	163,518,488	29,183,153	27,087,589	219,769,230	8,403,713	1,030,250	203,500	85,000	9,722,463
Jun-17	234,677,844	36,527,669	65,207,392	336,412,905	11,218,750	1,409,875	675,250	140,000	13,443,875
Jul-17	322,749,449	44,208,371	96,823,784	463,781,605	14,658,320	1,534,375	917,000	154,000	17,263,695
Aug-17	344,640,563	50,323,329	121,603,650	516,567,541	15,784,677	1,940,500	989,000	144,000	18,858,177
Sep-17	321,021,534	47,504,685	111,845,285	480,371,503	14,360,555	1,982,925	863,250	105,500	17,312,230
Oct-17	227,225,229	40,446,653	80,932,085	348,603,967	10,231,568	1,491,750	765,000	145,750	12,634,068
Nov-17	110,036,476	26,094,661	14,590,813	150,721,950	6,184,397	880,250	25,500	20,250	7,110,397
Dec-17	98,963,812	25,346,603	204,685	124,515,101	6,412,921	1,038,359	5,500	37,000	7,493,780
Jan-18	102,913,984	26,479,299	16,556	129,409,839	6,784,250	449,000	2,250	24,250	7,259,750
Feb-18	89,885,069	23,764,124	10,562	113,659,755	6,034,500	603,750	3,250	41,250	6,684,750
Mar-18	93,538,614	24,060,579	37,453	117,636,646	5,906,963	933,250	41,500	23,000	6,904,713
Apr-18	108,089,163	25,375,023	2,255,388	135,719,574	6,523,456	969,750	40,000	30,250	7,563,456
May-18	166,788,858	29,766,816	27,608,941	224,164,615	8,403,713	1,030,250	203,500	85,000	9,722,463
Jun-18	239,371,401	37,258,223	66,511,540	343,141,164	11,218,750	1,409,875	675,250	140,000	13,443,875
Jul-18	329,204,438	45,092,539	98,760,260	473,057,237	14,658,320	1,534,375	917,000	154,000	17,263,695
Aug-18	351,533,374	51,329,795	124,035,723	526,898,892	15,784,677	1,940,500	989,000	144,000	18,858,177
Sep-18	327,441,964	48,454,778	114,082,190	489,978,933	14,360,555	1,982,925	863,250	105,500	17,312,230
Oct-18	231,769,733	41,255,587	82,550,726	355,576,046	10,231,568	1,491,750	765,000	145,750	12,634,068
Nov-18	112,237,206	26,616,554	14,882,629	153,736,389	6,184,397	880,250	25,500	20,250	7,110,397
Dec-18	100,943,088	25,853,535	208,779	127,005,403	6,412,921	1,038,359	5,500	37,000	7,493,780
Jan-19	104,972,263	27,008,885	16,887	131,998,036	6,784,250	449,000	2,250	24,250	7,259,750
Feb-19	91,682,771	24,239,406	10,773	115,932,950	6,034,500	603,750	3,250	41,250	6,684,750
Mar-19	95,409,386	24,541,791	38,202	119,989,379	5,906,963	933,250	41,500	23,000	6,904,713

**Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland**

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Residential Total SF, MF	Outside Res. - Special Base	Outside Residential Total SF, MF
Apr-19	110,250,947	25,882,523	2,300,496	138,433,966	6,523,456	969,750	40,000	145,312,330	30,250	175,563,456
May-19	170,124,635	30,362,152	28,161,120	228,647,907	8,403,713	1,030,250	203,500	237,051,657	85,000	322,051,657
Jun-19	244,158,829	38,003,387	67,841,770	350,003,987	11,218,750	1,409,875	675,250	361,693,512	140,000	501,693,512
Jul-19	335,788,527	45,994,389	100,735,465	482,518,381	14,658,320	1,534,375	917,000	498,982,756	154,000	652,982,756
Aug-19	358,564,042	52,356,391	126,516,437	537,436,870	15,784,677	1,940,500	989,000	554,161,474	144,000	698,161,474
Sep-19	333,990,804	49,423,874	116,363,834	499,778,512	14,360,555	1,982,925	863,250	515,121,737	105,500	620,621,737
Oct-19	236,405,128	42,080,698	84,201,741	362,687,567	10,231,568	1,491,750	765,000	373,619,326	145,750	519,369,326
Nov-19	114,481,950	27,148,885	15,180,282	156,811,116	6,184,397	880,250	25,500	163,875,763	20,250	184,125,763
Dec-19	102,961,950	26,370,606	212,955	129,545,511	6,412,921	1,038,359	5,500	135,988,396	37,000	172,988,396
Jan-20	107,071,709	27,549,063	17,225	134,637,996	6,784,250	449,000	2,250	141,421,246	24,250	165,671,246
Feb-20	93,516,426	24,724,194	10,988	118,251,609	6,034,500	605,750	3,250	124,291,112	41,250	165,542,112
Mar-20	97,317,573	25,032,627	38,966	122,389,166	5,906,963	933,250	41,500	128,327,681	23,000	151,327,681
Apr-20	112,455,965	26,400,174	2,346,506	141,202,645	6,523,456	969,750	40,000	147,775,857	30,250	178,025,857
May-20	173,527,128	30,969,395	28,724,342	233,220,865	8,403,713	1,030,250	203,500	241,654,578	85,000	326,654,578
Jun-20	249,042,006	38,763,455	69,198,606	357,004,067	11,218,750	1,409,875	675,250	368,702,942	140,000	508,702,942
Jul-20	342,504,297	46,914,277	102,750,174	492,168,749	14,658,320	1,534,375	917,000	511,851,444	154,000	665,851,444
Aug-20	365,735,322	53,403,519	129,046,766	548,185,607	15,784,677	1,940,500	989,000	564,915,184	144,000	708,915,184
Sep-20	340,670,620	50,412,351	118,691,111	509,774,082	14,360,555	1,982,925	863,250	525,137,563	105,500	630,637,563
Oct-20	241,133,331	42,922,312	85,885,776	369,941,319	10,231,568	1,491,750	765,000	380,464,635	145,750	526,214,635
Nov-20	116,771,589	27,691,863	15,483,887	159,947,339	6,184,397	880,250	25,500	166,113,986	20,250	186,363,986
Dec-20	105,021,189	26,898,018	217,214	132,136,421	6,412,921	1,038,359	5,500	138,587,284	37,000	175,587,284

**Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland**

Date	Inside Commercial	Outside Commercial	Outside Com - Special Base	Outside Com Total	Total Commercial	Inside - City	Outside - City	City Uses	Industrial
Jan-05	23,395,700	1,428,340	-	1,428,340	24,824,040	860,000	-	860,000	3,921,000
Feb-05	20,140,400	1,267,960	-	1,267,960	21,408,360	970,000	-	970,000	3,509,000
Mar-05	20,826,600	1,208,110	-	1,208,110	22,034,710	729,000	-	729,000	3,624,000
Apr-05	22,561,800	1,247,040	-	1,247,040	23,808,840	960,000	-	960,000	4,156,000
May-05	28,669,600	1,367,240	-	1,367,240	30,036,840	1,993,800	-	1,993,800	4,649,000
Jun-05	45,763,111	2,041,240	-	2,041,240	47,804,351	6,301,000	-	6,301,000	4,767,000
Jul-05	62,686,089	2,544,070	-	2,544,070	65,230,159	11,993,000	-	11,993,000	4,983,000
Aug-05	71,919,800	2,607,370	-	2,607,370	74,527,170	13,023,000	-	13,023,000	6,783,000
Sep-05	63,051,800	2,722,200	-	2,722,200	65,774,000	9,609,000	-	9,609,000	5,039,000
Oct-05	54,501,022	2,053,160	-	2,053,160	56,554,182	5,632,000	-	5,632,000	5,458,000
Nov-05	26,677,000	995,579	-	995,579	27,672,579	969,000	-	969,000	3,876,000
Dec-05	26,098,600	1,538,120	-	1,538,120	27,636,720	588,000	-	588,000	3,977,000
Jan-06	22,410,600	1,287,070	-	1,287,070	23,697,670	739,000	-	739,000	4,044,000
Feb-06	21,364,400	1,154,330	-	1,154,330	22,518,730	615,000	-	615,000	2,872,000
Mar-06	22,057,400	1,197,530	-	1,197,530	23,254,930	802,000	-	802,000	3,244,000
Apr-06	24,236,000	1,307,580	-	1,307,580	25,543,580	1,042,000	-	1,042,000	3,558,000
May-06	41,726,310	1,797,860	-	1,797,860	43,524,170	4,705,000	-	4,705,000	4,999,000
Jun-06	62,753,890	2,553,730	-	2,553,730	65,307,620	11,930,000	-	11,930,000	4,636,000
Jul-06	77,074,800	2,720,570	-	2,720,570	79,795,370	15,421,000	-	15,421,000	6,684,000
Aug-06	69,554,800	3,326,800	-	3,326,800	72,881,600	14,329,000	-	14,329,000	6,784,900
Sep-06	66,675,900	2,673,210	-	2,673,210	69,349,110	12,624,000	-	12,624,000	5,296,000
Oct-06	54,335,000	1,967,490	-	1,967,490	56,302,490	5,054,000	-	5,054,000	5,408,000
Nov-06	29,062,700	1,313,140	-	1,313,140	30,375,840	913,000	-	913,000	3,982,000
Dec-06	26,172,152	989,063	-	989,063	27,161,215	694,029	-	694,029	4,320,000
Jan-07	23,625,302	1,128,697	-	1,128,697	24,753,999	702,971	-	702,971	3,564,500
Feb-07	23,183,881	1,451,000	-	1,451,000	24,634,881	936,000	-	936,000	3,123,500
Mar-07	23,530,900	1,724,000	-	1,724,000	25,254,900	814,000	-	814,000	4,046,000
Apr-07	26,258,200	1,129,000	-	1,129,000	27,387,200	1,233,000	-	1,233,000	4,737,000
May-07	32,112,400	1,261,330	-	1,261,330	33,373,730	2,136,000	-	2,136,000	4,487,000
Jun-07	54,923,600	2,012,670	-	2,012,670	56,936,270	10,475,000	-	10,475,000	4,605,000
Jul-07	79,127,000	2,934,720	-	2,934,720	82,061,720	15,282,000	-	15,282,000	5,507,000
Aug-07	71,769,200	2,536,280	-	2,536,280	74,305,480	14,333,000	-	14,333,000	5,951,000
Sep-07	69,579,511	2,215,620	-	2,215,620	71,795,131	11,958,000	-	11,958,000	5,433,000
Oct-07	53,442,909	2,082,380	-	2,082,380	55,525,289	8,122,000	-	8,122,000	4,834,000
Nov-07	31,443,400	1,408,000	-	1,408,000	32,851,400	1,489,000	-	1,489,000	4,233,000
Dec-07	26,277,800	1,097,000	-	1,097,000	27,374,800	781,000	-	781,000	4,285,000
Jan-08	28,092,400	1,168,610	-	1,168,610	29,261,010	673,000	-	673,000	-
Feb-08	28,621,000	1,002,390	-	1,002,390	29,523,390	698,000	-	698,000	-
Mar-08	29,168,800	994,000	-	994,000	30,162,800	870,000	-	870,000	-
Apr-08	30,038,848	1,034,860	-	1,034,860	31,073,708	1,214,000	-	1,214,000	-
May-08	44,420,500	1,443,140	-	1,443,140	45,863,640	4,640,000	-	4,640,000	-
Jun-08	65,379,000	1,849,000	-	1,849,000	67,228,000	9,119,000	-	9,119,000	-
Jul-08	70,981,400	2,214,000	-	2,214,000	73,195,400	13,867,000	-	13,867,000	-
Aug-08	91,172,600	2,521,000	-	2,521,000	93,693,600	17,030,000	-	17,030,000	-
Sep-08	72,669,000	2,367,000	-	2,367,000	75,036,000	10,177,000	-	10,177,000	-
Oct-08	61,045,000	1,502,000	-	1,502,000	62,547,000	7,867,000	-	7,867,000	-
Nov-08	38,410,475	1,137,000	-	1,137,000	39,547,475	2,063,000	-	2,063,000	-
Dec-08	30,395,643	1,033,000	-	1,033,000	31,428,643	976,000	-	976,000	-
Jan-09	29,544,816	1,016,000	-	1,016,000	30,560,816	940,000	-	940,000	-
Feb-09	25,419,725	846,000	-	846,000	26,265,725	873,000	-	873,000	-
Mar-09	26,154,072	1,008,000	-	1,008,000	27,162,072	882,000	-	882,000	-
Apr-09	26,955,000	1,004,000	-	1,004,000	27,962,000	1,079,110	-	1,079,110	-
May-09	34,835,985	1,222,000	-	1,222,000	36,057,985	2,852,000	-	2,852,000	-
Jun-09	55,948,018	1,561,000	-	1,561,000	57,509,018	5,757,000	-	5,757,000	-
Jul-09	57,512,324	1,669,000	-	1,669,000	59,181,324	12,163,000	-	12,163,000	-
Aug-09	73,564,946	1,676,000	-	1,676,000	75,240,946	13,419,000	-	13,419,000	-
Sep-09	68,559,627	1,597,000	-	1,597,000	70,156,627	10,164,000	-	10,164,000	-

Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland

Date	Inside Commercial	Outside Commercial	Outside Com - Special Base	Outside Com Total	Total Commercial	Inside - City	Outside - City	City Uses	Industrial
Oct-09	53,388,518	1,206,000	38,000	1,244,000	54,632,518	6,295,000	-	-	6,295,000
Nov-09	31,353,956	893,000	-	893,000	32,246,956	1,279,000	-	-	1,279,000
Dec-09	27,189,282	1,050,000	-	1,050,000	28,239,282	524,000	-	-	524,000
Jan-10	28,833,065	977,000	-	977,000	29,810,065	837,000	-	-	837,000
Feb-10	25,974,413	952,000	-	952,000	26,926,413	513,000	-	-	513,000
Mar-10	26,591,375	972,000	-	972,000	27,563,375	820,000	-	-	820,000
Apr-10	28,133,184	1,100,000	8,000	1,108,000	29,241,184	765,000	-	-	765,000
May-10	32,743,064	1,268,000	46,000	1,314,000	34,057,064	4,986,000	-	-	4,986,000
Jun-10	45,771,921	1,741,000	95,000	1,836,000	47,607,921	7,579,000	-	-	7,579,000
Jul-10	64,731,690	1,692,000	84,000	1,776,000	66,507,690	12,386,000	-	-	12,386,000
Aug-10	75,019,013	1,598,000	99,000	1,697,000	76,616,013	12,450,143	-	-	12,450,143
Sep-10	73,554,892	1,996,000	96,000	2,092,000	75,646,892	15,011,000	-	-	15,011,000
Oct-10	69,488,929	1,563,260	70,000	1,633,260	71,122,189	10,946,024	-	-	10,946,024
Nov-10	38,957,819	1,098,000	-	1,098,000	40,055,819	1,334,000	-	-	1,334,000
Dec-10	28,654,267	974,000	-	974,000	29,628,267	527,000	-	-	527,000
Jan-11	28,616,074	922,000	-	922,000	29,538,074	676,405	-	-	676,405
Feb-11	26,258,447	943,000	-	943,000	27,201,447	684,202	-	-	684,202
Mar-11	26,337,929	2,591,000	-	2,591,000	28,928,929	706,000	-	-	706,000
Apr-11	27,296,680	905,106	9,000	914,106	28,210,786	789,268	-	-	789,268
May-11	37,715,753	1,185,000	21,000	1,206,000	38,921,753	1,663,300	-	-	1,663,300
Jun-11	53,502,633	1,356,000	62,000	1,418,000	54,920,633	7,482,579	-	-	7,482,579
Jul-11	67,285,653	1,714,000	97,000	1,811,000	69,096,653	13,535,000	-	-	13,535,000
Aug-11	82,418,628	1,823,000	88,000	1,911,000	84,329,628	16,657,000	-	-	16,657,000
Sep-11	83,086,966	1,769,642	93,000	1,862,642	84,949,608	16,346,000	-	-	16,346,000
Oct-11	71,814,787	1,350,000	72,000	1,422,000	73,236,787	10,505,000	1,000	-	10,506,000
Nov-11	38,270,720	870,000	-	870,000	39,140,720	1,610,000	-	-	1,610,000
Dec-11	30,076,664	809,000	-	809,000	30,887,664	660,000	-	-	660,000
Jan-12	28,944,218	1,027,028	-	1,027,028	29,971,246	817,802	-	-	817,802
Feb-12	26,702,657	941,463	-	941,463	27,644,119	723,401	-	-	723,401
Mar-12	27,225,422	1,399,598	-	1,399,598	28,625,020	736,000	-	-	736,000
Apr-12	28,275,318	1,017,057	4,276	1,021,333	29,296,651	961,845	-	-	961,845
May-12	37,653,393	1,287,212	16,851	1,304,063	38,957,456	3,535,325	-	-	3,535,325
Jun-12	55,481,295	1,636,511	39,486	1,675,996	57,157,291	7,484,395	-	-	7,484,395
Jul-12	65,518,533	1,833,184	45,522	1,878,705	67,397,238	12,988,250	-	-	12,988,250
Aug-12	81,027,060	1,915,927	47,031	1,962,958	82,990,017	14,889,036	-	-	14,889,036
Sep-12	74,914,427	1,944,005	47,534	1,991,538	76,905,965	12,924,500	-	-	12,924,500
Oct-12	64,317,914	1,413,747	45,270	1,459,017	65,776,931	8,903,256	-	-	8,903,256
Nov-12	36,968,732	1,005,497	-	1,005,497	37,974,229	1,407,667	-	-	1,407,667
Dec-12	29,253,941	972,299	-	972,299	30,226,240	570,333	-	-	570,333
Jan-13	29,725,712	1,054,758	-	1,054,758	30,780,470	817,802	-	-	817,802
Feb-13	27,423,628	966,882	-	966,882	28,390,510	723,401	-	-	723,401
Mar-13	27,960,509	1,437,387	-	1,437,387	29,397,895	736,000	-	-	736,000
Apr-13	29,038,752	1,044,518	4,391	1,048,909	30,087,661	961,845	-	-	961,845
May-13	38,670,035	1,321,967	17,305	1,339,272	40,009,307	3,535,325	-	-	3,535,325
Jun-13	56,979,290	1,680,696	40,552	1,721,248	58,700,538	7,484,395	-	-	7,484,395
Jul-13	67,287,534	1,882,679	46,751	1,929,430	69,216,964	12,988,250	-	-	12,988,250
Aug-13	83,214,790	1,967,657	48,300	2,015,957	85,230,747	14,889,036	-	-	14,889,036
Sep-13	76,937,117	1,996,493	48,817	2,045,310	78,982,427	12,924,500	-	-	12,924,500
Oct-13	66,054,498	1,451,918	46,492	1,498,410	67,552,908	8,903,256	-	-	8,903,256
Nov-13	37,966,888	1,032,645	-	1,032,645	38,999,533	1,407,667	-	-	1,407,667
Dec-13	30,043,797	998,551	-	998,551	31,042,348	570,333	-	-	570,333
Jan-14	30,290,501	1,074,798	-	1,074,798	31,365,299	817,802	-	-	817,802
Feb-14	27,944,677	985,253	-	985,253	28,929,930	723,401	-	-	723,401
Mar-14	28,491,758	1,464,697	-	1,464,697	29,956,455	736,000	-	-	736,000
Apr-14	29,590,488	1,064,364	4,474	1,068,838	30,659,326	961,845	-	-	961,845
May-14	39,404,766	1,347,084	17,634	1,364,719	40,769,484	3,535,325	-	-	3,535,325
Jun-14	58,061,897	1,712,630	41,322	1,753,952	59,815,848	7,484,395	-	-	7,484,395

**Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland**

Date	Inside Commercial		Outside Commercial		Outside Com - Special Base		Outside Com Total		Total Commercial		Inside - City		Outside - City		City Uses		Industrial
Jul-14	68,565,997	1,918,450	47,639	1,966,089	70,532,086											12,988,250	
Aug-14	84,795,871	2,005,043	49,218	2,054,261	86,850,132											14,889,036	
Sep-14	78,398,922	2,034,426	49,744	2,084,171	80,483,093											12,924,500	
Oct-14	67,309,534	1,479,504	47,376	1,526,880	68,836,414											8,903,256	
Nov-14	38,688,259	1,052,266	-	1,052,266	39,740,524											1,407,667	
Dec-14	30,614,629	1,017,524	-	1,017,524	31,632,153											570,333	
Jan-15	30,896,311	1,096,294	-	1,096,294	31,992,605											817,802	
Feb-15	28,503,571	1,004,958	-	1,004,958	29,508,529											723,401	
Mar-15	29,061,593	1,493,991	-	1,493,991	30,555,584											736,000	
Apr-15	30,182,298	1,085,651	4,564	1,090,215	31,272,513											961,845	
May-15	40,192,861	1,374,026	17,987	1,392,013	41,584,874											3,535,325	
Jun-15	59,223,135	1,746,882	42,149	1,789,031	61,012,165											7,484,395	
Jul-15	69,937,317	1,956,819	48,592	2,005,411	71,942,728											12,988,250	
Aug-15	86,491,789	2,045,143	50,202	2,095,346	88,587,134											14,889,036	
Sep-15	79,966,900	2,075,115	50,739	2,125,854	82,092,754											12,924,500	
Oct-15	68,655,724	1,509,095	48,323	1,557,418	70,213,142											8,903,256	
Nov-15	39,462,024	1,073,311	-	1,073,311	40,535,335											1,407,667	
Dec-15	31,226,922	1,037,874	-	1,037,874	32,264,796											570,333	
Jan-16	31,545,133	1,119,316	-	1,119,316	32,664,449											817,802	
Feb-16	29,102,146	1,026,062	-	1,026,062	30,128,208											723,401	
Mar-16	29,671,887	1,525,365	-	1,525,365	31,197,252											736,000	
Apr-16	30,816,126	1,108,450	4,660	1,113,109	31,929,235											961,845	
May-16	41,036,911	1,402,881	18,365	1,421,245	42,458,156											3,535,325	
Jun-16	60,466,821	1,783,567	43,034	1,826,600	62,293,421											7,484,395	
Jul-16	71,406,000	1,997,913	49,612	2,047,525	73,453,525											12,988,250	
Aug-16	88,308,116	2,088,091	51,257	2,139,348	90,447,464											14,889,036	
Sep-16	81,646,205	2,118,692	51,805	2,170,497	83,816,702											12,924,500	
Oct-16	70,097,494	1,540,786	49,338	1,590,124	71,687,618											8,903,256	
Nov-16	40,290,726	1,095,851	-	1,095,851	41,386,577											1,407,667	
Dec-16	31,882,687	1,059,669	-	1,059,669	32,942,357											570,333	
Jan-17	32,207,581	1,142,822	-	1,142,822	33,350,403											817,802	
Feb-17	29,713,291	1,047,609	-	1,047,609	30,760,900											723,401	
Mar-17	30,294,997	1,557,397	-	1,557,397	31,852,394											736,000	
Apr-17	31,463,265	1,131,727	4,758	1,136,485	32,599,749											961,845	
May-17	41,898,686	1,432,341	18,750	1,451,091	43,349,778											3,535,325	
Jun-17	61,736,624	1,821,022	43,937	1,864,959	63,601,583											7,484,395	
Jul-17	72,905,526	2,039,869	50,654	2,090,523	74,996,049											12,988,250	
Aug-17	90,162,587	2,131,941	52,333	2,184,274	92,346,861											14,889,036	
Sep-17	83,360,775	2,163,185	52,893	2,216,078	85,576,853											12,924,500	
Oct-17	71,569,542	1,573,142	50,374	1,623,516	73,193,058											8,903,256	
Nov-17	41,136,832	1,118,863	-	1,118,863	42,255,695											1,407,667	
Dec-17	32,552,224	1,081,922	-	1,081,922	33,634,146											570,333	
Jan-18	32,851,733	1,165,678	-	1,165,678	34,017,411											817,802	
Feb-18	30,307,557	1,068,561	-	1,068,561	31,376,118											723,401	
Mar-18	30,900,897	1,588,545	-	1,588,545	32,489,442											736,000	
Apr-18	32,092,530	1,154,362	4,853	1,159,214	33,251,744											961,845	
May-18	42,736,660	1,460,988	19,125	1,480,113	44,216,773											3,535,325	
Jun-18	62,971,356	1,857,442	44,816	1,902,258	64,873,614											7,484,395	
Jul-18	74,363,637	2,080,666	51,667	2,132,333	76,495,970											12,988,250	
Aug-18	91,965,838	2,174,580	53,380	2,227,960	94,193,798											14,889,036	
Sep-18	85,027,991	2,206,449	53,951	2,260,399	87,288,390											12,924,500	
Oct-18	73,000,933	1,604,605	51,382	1,655,986	74,656,919											8,903,256	
Nov-18	41,959,568	1,141,241	-	1,141,241	43,100,809											1,407,667	
Dec-18	33,203,268	1,103,561	-	1,103,561	34,306,829											570,333	
Jan-19	33,508,767	1,188,992	-	1,188,992	34,697,759											817,802	
Feb-19	30,913,708	1,089,933	-	1,089,933	32,003,641											723,401	
Mar-19	31,518,914	1,620,316	-	1,620,316	33,139,231											736,000	

**Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland**

Date	Inside Commercial	Outside Commercial	Outside Com - Special Base	Outside Com Total	Total Commercial	Inside - City	Outside - City	City Uses	Industrial
Apr-19	32,734,380	1,177,449	4,950	1,182,399	33,916,779	961,845	961,845		
May-19	43,591,393	1,490,208	19,508	1,509,715	45,101,109	3,535,325	3,535,325		
Jun-19	64,230,783	1,894,591	45,712	1,940,303	66,171,087	7,484,395	7,484,395		
Jul-19	75,850,910	2,122,279	52,700	2,174,980	78,025,890	12,988,250	12,988,250		
Aug-19	93,805,155	2,218,072	54,447	2,272,519	96,077,674	14,889,036	14,889,036		
Sep-19	86,728,551	2,250,578	55,030	2,305,607	89,034,158	12,924,500	12,924,500		
Oct-19	74,460,951	1,636,697	52,409	1,689,106	76,150,057	8,903,256	8,903,256		
Nov-19	42,798,759	1,164,065	-	1,164,065	43,962,825	1,407,667	1,407,667		
Dec-19	33,867,334	1,125,632	-	1,125,632	34,992,966	570,333	570,333		
Jan-20	34,178,943	1,212,772	-	1,212,772	35,391,714	817,802	817,802		
Feb-20	31,531,982	1,111,731	-	1,111,731	32,643,713	723,401	723,401		
Mar-20	32,149,293	1,632,723	-	1,632,723	33,802,015	736,000	736,000		
Apr-20	33,389,068	1,200,998	5,049	1,206,047	34,595,115	961,845	961,845		
May-20	44,463,221	1,520,012	19,898	1,539,910	46,003,131	3,535,325	3,535,325		
Jun-20	65,515,399	1,932,483	46,627	1,979,109	67,494,508	7,484,395	7,484,395		
Jul-20	77,367,928	2,164,725	53,754	2,218,479	79,586,407	12,988,250	12,988,250		
Aug-20	95,681,258	2,262,433	55,536	2,317,969	97,999,228	14,889,036	14,889,036		
Sep-20	88,463,122	2,295,589	56,130	2,351,719	90,814,841	12,924,500	12,924,500		
Oct-20	75,950,170	1,669,431	53,457	1,722,888	77,673,059	8,903,256	8,903,256		
Nov-20	43,654,735	1,187,347	-	1,187,347	44,842,081	1,407,667	1,407,667		
Dec-20	34,544,680	1,148,145	-	1,148,145	35,692,825	570,333	570,333		

Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland

Date	Wholesale		Total Other	Hydrant	Ranch	Total Consumption	%		Treated Water Demand
	Inside - Wholesale	Outside - Wholesale					Non-Revenue	%	
Jan-05	1,384,500	-	5,305,500	1,069,100	4,371,700	154,374,179	10.7%	172,900,000	
Feb-05	1,478,000	-	4,987,000	-	4,536,200	130,579,460	15.5%	154,500,000	
Mar-05	1,480,000	-	5,104,000	-	4,026,700	134,393,549	24.8%	178,800,000	
Apr-05	1,610,100	-	5,766,100	207,000	7,168,900	167,725,163	21.3%	213,000,000	
May-05	1,743,900	-	6,392,900	428,000	8,017,000	217,222,419	38.8%	355,000,000	
Jun-05	3,547,500	-	8,314,500	362,000	10,162,300	365,194,165	15.1%	430,300,000	
Jul-05	4,003,500	-	8,986,500	555,000	11,601,800	541,414,659	17.3%	654,400,000	
Aug-05	7,250,407	-	14,033,407	463,000	13,149,200	559,740,977	-1.0%	554,200,000	
Sep-05	6,925,000	-	11,364,000	463,000	10,561,200	509,232,948	0.5%	511,700,000	
Oct-05	5,655,000	-	11,113,000	434,000	8,990,400	374,363,982	-36.0%	275,200,000	
Nov-05	2,865,000	-	6,741,000	303,300	10,628,300	181,588,979	10.9%	203,700,000	
Dec-05	1,163,000	-	5,140,000	335,700	3,174,832	157,109,252	28.5%	219,600,000	
Jan-06	1,281,400	-	5,325,400	332,000	12,375,350	167,899,867	19.5%	208,700,000	
Feb-06	1,593,600	-	4,465,600	330,000	7,982,600	146,611,883	20.0%	183,200,000	
Mar-06	1,603,000	-	4,847,000	323,000	9,696,900	147,967,507	27.2%	203,200,000	
Apr-06	2,162,000	-	5,720,000	384,000	8,455,200	188,222,939	45.4%	344,500,000	
May-06	3,374,000	-	7,973,000	502,000	9,015,700	372,478,292	32.3%	550,500,000	
Jun-06	7,503,000	-	12,139,000	625,000	13,238,400	621,600,109	12.2%	707,900,000	
Jul-06	7,842,000	-	14,526,000	579,000	8,827,300	667,698,149	1.2%	675,900,000	
Aug-06	6,605,000	-	13,369,900	621,000	12,736,595	610,679,170	5.7%	647,300,000	
Sep-06	6,262,000	-	11,558,000	468,000	10,225,300	524,468,310	-14.2%	459,300,000	
Oct-06	4,115,000	-	9,523,000	373,000	12,306,530	374,920,931	-28.7%	291,300,000	
Nov-06	2,869,000	-	6,351,000	299,000	10,742,100	179,070,854	9.2%	197,200,000	
Dec-06	1,108,700	-	5,428,700	266,000	7,871,800	173,435,930	10.5%	193,700,000	
Jan-07	-	-	3,564,500	230,000	3,512,600	144,246,818	27.1%	197,900,000	
Feb-07	-	-	3,123,500	206,000	3,240,100	138,909,117	25.1%	185,500,000	
Mar-07	-	-	4,048,000	289,000	6,089,900	142,653,030	31.0%	206,600,000	
Apr-07	-	-	4,737,000	275,000	3,618,000	159,797,989	33.7%	241,000,000	
May-07	-	-	4,487,000	297,000	3,671,400	232,091,930	47.3%	440,000,000	
Jun-07	-	-	4,605,000	339,000	2,666,484	453,947,585	26.2%	614,700,000	
Jul-07	-	-	5,507,000	709,000	3,477,700	680,800,109	6.9%	731,600,000	
Aug-07	1,838	-	5,952,838	334,000	2,911,657	610,886,128	-0.3%	609,300,000	
Sep-07	-	-	5,433,000	282,000	5,601,700	544,506,078	-8.1%	503,700,000	
Oct-07	-	-	4,834,000	277,000	7,319,834	381,124,823	-23.0%	309,900,000	
Nov-07	-	-	4,233,000	242,000	6,950,000	195,910,304	1.6%	199,100,000	
Dec-07	-	-	4,285,000	193,000	4,959,300	161,076,389	21.0%	203,900,000	
Jan-08	-	-	-	227,000	1,890,000	152,700,099	27.9%	211,900,000	
Feb-08	-	-	-	251,000	3,873,400	142,622,426	26.8%	194,800,000	
Mar-08	-	-	-	308,000	7,891,900	150,130,597	29.5%	212,900,000	
Apr-08	-	-	-	285,000	9,592,200	163,799,175	40.4%	275,000,000	
May-08	-	-	-	343,000	7,898,300	325,262,640	32.5%	482,200,000	
Jun-08	-	-	-	450,000	6,113,100	452,723,200	22.7%	585,300,000	
Jul-08	-	-	-	451,000	5,792,200	586,459,100	20.7%	739,100,000	
Aug-08	-	-	-	354,000	6,938,800	695,740,200	-16.7%	596,400,000	
Sep-08	5,078	-	5,078	406,000	7,112,500	479,148,763	-5.7%	453,300,000	
Oct-08	-	-	-	329,000	8,689,000	371,050,327	-22.3%	303,300,000	
Nov-08	-	-	-	334,000	4,418,600	188,047,884	5.8%	199,600,000	
Dec-08	-	-	-	295,000	8,759,300	161,598,286	17.0%	194,800,000	
Jan-09	-	-	-	277,000	4,552,700	157,741,212	15.6%	187,000,000	
Feb-09	-	-	-	295,000	2,666,300	136,199,281	20.2%	170,700,000	
Mar-09	-	-	-	361,000	5,615,800	149,231,377	30.6%	215,100,000	
Apr-09	-	-	-	203,000	3,145,100	161,640,204	26.1%	218,700,000	
May-09	-	-	-	228,000	2,748,300	231,635,783	45.1%	422,000,000	
Jun-09	-	-	-	319,000	2,776,578	364,009,082	12.9%	417,700,000	
Jul-09	179	-	179	268,000	3,546,147	439,988,575	22.6%	568,300,000	
Aug-09	-	-	-	311,000	1,535,051	497,796,796	12.7%	570,500,000	
Sep-09	-	-	-	282,000	3,462,027	483,809,175	-4.5%	463,000,000	

Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland

Date	Wholesale		Total Other	Hydrant	Ranch	Total Consumption	%		Treated Water Demand
	Inside - Wholesale	Outside - Wholesale					Non-Revenue	%	
Oct-09	-	-	-	233,000	3,891,639	331,086,554	-39.2%	237,900,000	
Nov-09	-	-	-	238,000	5,155,080	160,125,390	9.8%	177,500,000	
Dec-09	-	-	-	170,000	1,986,800	148,556,502	21.0%	188,000,000	
Jan-10	-	-	-	188,000	2,680,860	154,777,132	18.1%	189,000,000	
Feb-10	6,830	-	6,830	202,000	3,377,500	136,794,158	20.3%	171,700,000	
Mar-10	-	-	-	289,000	4,325,250	140,560,625	27.5%	193,900,000	
Apr-10	-	-	-	253,000	2,314,500	155,187,181	28.6%	217,400,000	
May-10	-	-	-	227,000	2,155,900	199,382,698	39.5%	329,700,000	
Jun-10	47,000	28,000	75,000	422,000	2,794,500	345,332,170	33.5%	519,600,000	
Jul-10	214,000	-	214,000	379,000	2,555,465	521,005,337	13.3%	601,200,000	
Aug-10	377,000	1,000	378,000	435,000	2,683,100	546,280,290	12.2%	622,500,000	
Sep-10	319,000	40,000	359,000	363,000	1,476,600	587,561,564	0.9%	593,100,000	
Oct-10	246,000	-	246,000	322,000	3,338,100	476,460,701	-39.4%	341,900,000	
Nov-10	14,000	-	14,000	305,000	3,794,200	199,181,715	-6.0%	187,900,000	
Dec-10	1,000	1,000	2,000	322,000	1,173,000	148,142,090	21.0%	187,500,000	
Jan-11	1,000	(1,000)	-	362,000	3,704,300	153,347,985	19.5%	190,600,000	
Feb-11	1,000	-	1,000	233,000	3,265,300	136,155,066	21.9%	174,400,000	
Mar-11	-	-	-	273,000	1,705,845	137,466,512	30.2%	196,900,000	
Apr-11	1,000	-	1,000	235,000	1,191,700	162,624,313	36.8%	257,500,000	
May-11	10,000	-	10,000	316,000	301,200	251,172,759	31.2%	365,300,000	
Jun-11	10,000	-	10,000	310,000	3,221,500	367,499,726	34.0%	556,800,000	
Jul-11	224,000	15,675	239,675	343,000	3,634,000	516,176,991	18.1%	630,200,000	
Aug-11	267,000	29,000	296,000	495,000	2,514,300	586,924,850	18.8%	722,500,000	
Sep-11	447,000	-	447,000	298,000	3,250,300	610,174,712	-19.5%	510,800,000	
Oct-11	200,000	125	200,125	326,000	2,284,700	434,606,563	-30.4%	333,200,000	
Nov-11	13,000	-	13,000	198,000	1,847,200	193,251,718	2.8%	198,805,395	
Dec-11	3,000	-	3,000	195,000	984,714	153,365,878	20.0%	191,717,971	
Jan-12	-	-	-	275,000	1,992,953	154,334,074	21.7%	197,029,234	
Feb-12	-	-	-	3,915	1,737,004	137,151,305	22.9%	177,828,457	
Mar-12	-	-	-	281,000	2,369,820	142,561,033	29.8%	202,934,286	
Apr-12	-	-	-	500	2,440,000	159,815,425	33.1%	239,017,485	
May-12	-	-	-	5,000	2,035,969	252,029,307	39.1%	414,080,611	
Jun-12	-	-	-	42,500	3,666,000	2,467,583	383,288,247	25.8%	516,830,018
Jul-12	-	-	-	226,838	3,610,000	2,374,947	517,401,915	16.3%	618,319,433
Aug-12	-	-	-	337,000	4,465,000	2,557,424	584,324,118	5.4%	617,464,248
Sep-12	-	-	-	403,000	3,305,000	2,506,171	542,081,277	-7.4%	504,901,399
Oct-12	-	-	-	223,063	3,240,000	2,819,600	403,963,350	-30.9%	308,707,252
Nov-12	-	-	-	13,500	2,621,787	184,829,457	2.8%	190,141,095	
Dec-12	-	-	-	2,500	2,500	1,740,999	152,191,233	20.0%	190,249,583
Jan-13	-	-	-	-	2,575,459	158,804,272	21.7%	202,736,072	
Feb-13	-	-	-	3,915	2,244,700	141,109,189	22.9%	182,960,194	
Mar-13	-	-	-	281,000	3,062,478	146,824,967	29.8%	209,003,956	
Apr-13	-	-	-	500	2,440,000	2,807,381	164,469,962	33.1%	245,978,739
May-13	-	-	-	5,000	2,631,048	259,008,780	39.1%	425,547,787	
Jun-13	-	-	-	42,500	3,666,000	3,188,815	393,715,544	25.8%	530,890,298
Jul-13	-	-	-	226,838	3,610,000	3,069,103	531,169,125	16.3%	634,771,891
Aug-13	-	-	-	337,000	4,465,000	3,304,916	599,846,481	5.4%	633,866,966
Sep-13	-	-	-	403,000	3,305,000	3,238,682	556,546,119	-7.4%	518,374,137
Oct-13	-	-	-	223,063	3,240,000	3,643,721	415,022,073	-30.9%	317,158,286
Nov-13	-	-	-	13,500	3,388,090	190,278,225	2.8%	195,746,449	
Dec-13	-	-	-	2,500	2,500	2,249,863	156,537,475	20.0%	195,682,687
Jan-14	-	-	-	-	3,188,986	162,227,448	21.7%	207,106,239	
Feb-14	-	-	-	3,915	2,244,700	144,137,386	22.9%	186,886,511	
Mar-14	-	-	-	281,000	3,792,023	150,135,487	29.8%	213,716,449	
Apr-14	-	-	-	500	3,476,156	168,043,700	33.1%	251,323,567	
May-14	-	-	-	5,000	2,715,000	264,249,574	39.1%	434,158,339	
Jun-14	-	-	-	42,500	3,666,000	401,489,794	25.8%	541,373,181	

Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland

Date	Wholesale		Total Other	Hydrant	Ranch	Total Consumption	%		Treated Water Demand	
	Inside - Wholesale	Outside - Wholesale					Non-Revenue	%		Demand
Jul-14		226,838	361,000	3,800,226	541,348,192	16.3%		646,936,352		
Aug-14	337,000	465,000	4,092,214	611,311,634	5.4%		645,982,369			
Sep-14	403,000	330,500	4,010,202	567,242,046	-7.4%		528,336,459			
Oct-14	223,063	324,000	4,511,730	423,286,667	-30.9%		323,474,058			
Nov-14	13,500	251,500	4,195,202	194,469,371	2.8%		200,058,041			
Dec-14	2,500	258,500	2,785,826	159,846,726	20.0%		199,819,480			
Jan-15	-	275,000	3,783,476	165,835,656	21.7%		211,712,626			
Feb-15	3,915	217,500	3,297,574	147,330,095	22.9%		191,026,133			
Mar-15	-	281,000	4,498,931	153,610,829	29.8%		218,663,567			
Apr-15	500	244,000	4,124,180	171,807,680	33.1%		256,952,916			
May-15	5,000	271,500	3,865,139	269,806,045	39.1%		443,287,543			
Jun-15	42,500	366,000	4,684,526	409,749,956	25.8%		532,511,272			
Jul-15	226,838	361,000	4,508,663	552,190,793	16.3%		659,893,766			
Aug-15	337,000	465,000	4,855,084	623,527,908	5.4%		668,891,493			
Sep-15	403,000	330,500	4,757,783	578,634,859	-7.4%		538,947,870			
Oct-15	223,063	324,000	5,352,805	432,061,554	-30.9%		330,179,793			
Nov-15	13,500	251,500	4,977,271	198,881,262	2.8%		204,596,721			
Dec-15	2,500	258,500	3,305,160	163,340,775	20.0%		204,187,283			
Jan-16	-	275,000	4,121,072	169,400,944	21.7%		216,264,220			
Feb-16	3,915	217,500	3,591,814	150,488,796	22.9%		195,121,661			
Mar-16	-	281,000	4,900,365	156,977,258	29.8%		223,455,647			
Apr-16	500	244,000	4,492,177	175,512,864	33.1%		262,494,332			
May-16	5,000	271,500	4,210,021	275,451,467	39.1%		452,562,891			
Jun-16	42,500	366,000	5,102,522	418,226,253	25.8%		563,940,803			
Jul-16	226,838	361,000	4,910,966	563,446,786	16.3%		673,345,202			
Aug-16	337,000	465,000	5,288,298	636,227,718	5.4%		672,311,577			
Sep-16	403,000	330,500	5,182,315	590,460,435	-7.4%		549,962,362			
Oct-16	223,063	324,000	5,830,431	441,036,291	-30.9%		337,038,252			
Nov-16	13,500	251,500	5,421,388	203,212,918	2.8%		209,052,861			
Dec-16	2,500	258,500	3,600,076	166,821,611	20.0%		208,538,569			
Jan-17	-	275,000	4,121,072	172,696,417	21.7%		220,471,357			
Feb-17	3,915	217,500	3,591,814	153,413,412	22.9%		198,913,676			
Mar-17	-	281,000	4,900,365	160,004,517	29.8%		227,764,921			
Apr-17	500	244,000	4,492,177	178,920,132	33.1%		267,590,190			
May-17	5,000	271,500	4,210,021	280,863,317	39.1%		461,454,485			
Jun-17	42,500	366,000	5,102,522	426,453,779	25.8%		575,034,889			
Jul-17	226,838	361,000	4,910,966	574,528,403	16.3%		686,588,251			
Aug-17	337,000	465,000	5,288,298	648,751,913	5.4%		685,546,085			
Sep-17	403,000	330,500	5,182,315	602,100,901	-7.4%		560,804,440			
Oct-17	223,063	324,000	5,830,431	449,711,842	-30.9%		343,668,075			
Nov-17	13,500	251,500	5,421,388	207,182,096	2.8%		213,136,105			
Dec-17	2,500	258,500	3,600,076	170,074,436	20.0%		212,604,826			
Jan-18	-	275,000	3,948,668	175,728,469	21.7%		224,342,199			
Feb-18	3,915	217,500	3,441,551	156,106,990	22.9%		202,406,132			
Mar-18	-	281,000	4,695,360	162,743,160	29.8%		231,663,354			
Apr-18	500	244,000	4,304,248	182,045,366	33.1%		272,264,242			
May-18	5,000	271,500	4,033,896	285,949,572	39.1%		469,811,130			
Jun-18	42,500	366,000	4,889,059	434,240,606	25.8%		585,534,730			
Jul-18	226,838	361,000	4,705,517	585,098,507	16.3%		699,220,019			
Aug-18	337,000	465,000	5,067,063	660,708,966	5.4%		698,181,286			
Sep-18	403,000	330,500	4,965,514	613,203,067	-7.4%		571,145,139			
Oct-18	223,063	324,000	5,586,516	457,903,867	-30.9%		349,928,390			
Nov-18	13,500	251,500	5,194,585	210,814,846	2.8%		216,873,253			
Dec-18	2,500	258,500	3,449,467	173,086,813	20.0%		216,370,505			
Jan-19	-	275,000	3,783,476	178,831,823	21.7%		228,304,068			
Feb-19	3,915	217,500	3,297,574	158,863,731	22.9%		205,980,483			
Mar-19	-	281,000	4,498,931	165,549,253	29.8%		235,657,800			

**Table C-3 - Monthly Water Demands Past and Future for Average Conditions
City of Loveland**

Date	Wholesale		Hydrant	Ranch	Total Consumption	%		Treated Water Demand
	Inside - Wholesale	Outside - Wholesale				Non-Revenue		
Apr-19	500	4,124,180	244,000	4,124,180	185,244,725	33.1%	277,049,154	
May-19	5,000	3,865,139	271,500	3,865,139	291,148,442	39.1%	478,352,801	
Jun-19	42,500	4,684,526	366,000	4,684,526	442,196,369	25.8%	596,262,367	
Jul-19	226,838	4,508,663	361,000	4,508,663	595,892,716	16.3%	712,119,603	
Aug-19	337,000	4,855,084	465,000	4,855,084	672,918,840	5.4%	711,083,648	
Sep-19	403,000	330,500	330,500	4,757,783	624,540,683	-7.4%	581,705,138	
Oct-19	223,063	324,000	324,000	5,352,805	466,274,816	-30.9%	356,325,437	
Nov-19	13,500	251,500	251,500	4,977,271	214,534,276	2.8%	220,699,572	
Dec-19	2,500	258,500	258,500	3,305,160	176,168,750	20.0%	220,223,140	
Jan-20	-	3,948,668	275,000	3,948,668	182,330,930	21.7%	232,771,173	
Feb-20	3,915	217,500	217,500	3,441,551	161,966,439	22.9%	210,003,411	
Mar-20	-	281,000	281,000	4,695,360	168,808,254	29.8%	240,296,958	
Apr-20	500	4,304,248	244,000	4,304,248	188,871,807	33.1%	282,473,762	
May-20	5,000	4,033,896	271,500	4,033,896	296,792,180	39.1%	487,625,383	
Jun-20	42,500	4,889,059	366,000	4,889,059	450,724,403	25.8%	607,761,661	
Jul-20	226,838	4,705,517	361,000	4,705,517	607,300,456	16.3%	725,752,384	
Aug-20	337,000	5,067,063	465,000	5,067,063	685,801,111	5.4%	724,696,540	
Sep-20	403,000	4,965,514	330,500	4,965,514	636,524,667	-7.4%	592,867,174	
Oct-20	223,063	324,000	324,000	5,586,516	475,285,279	-30.9%	363,211,199	
Nov-20	13,500	251,500	251,500	5,194,585	218,767,069	2.8%	225,054,008	
Dec-20	2,500	258,500	258,500	3,449,467	179,603,827	20.0%	224,517,224	

**Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland**

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Res - Special Base	Outside Residential Total SF, MF
Jan-05	109,547,839	-	-	109,547,839	8,390,000	-	-	-	8,390,000
Feb-05	91,946,900	-	-	91,946,900	6,731,000	-	-	-	6,731,000
Mar-05	95,470,039	-	-	95,470,039	7,029,100	-	-	-	7,029,100
Apr-05	121,536,723	-	-	121,536,723	7,677,600	-	-	-	7,677,600
May-05	160,891,579	-	-	160,891,579	9,462,300	-	-	-	9,462,300
Jun-05	279,120,014	-	-	279,120,014	13,130,000	-	-	-	13,130,000
Jul-05	424,146,200	-	-	424,146,200	18,902,000	-	-	-	18,902,000
Aug-05	425,802,200	-	-	425,802,200	18,743,000	-	-	-	18,743,000
Sep-05	394,132,748	-	-	394,132,748	17,333,000	-	-	-	17,333,000
Oct-05	279,788,600	-	-	279,788,600	11,851,800	-	-	-	11,851,800
Nov-05	128,564,600	-	-	128,564,600	6,710,200	-	-	-	6,710,200
Dec-05	112,596,900	-	-	112,596,900	7,637,100	-	-	-	7,637,100
Jan-06	117,025,547	-	-	117,025,547	8,404,900	-	-	-	8,404,900
Feb-06	103,678,953	-	-	103,678,953	7,021,000	-	-	-	7,021,000
Mar-06	102,035,487	-	-	102,035,487	7,009,000	-	-	-	7,009,000
Apr-06	138,511,159	-	-	138,511,159	8,567,000	-	-	-	8,567,000
May-06	293,578,622	-	-	293,578,622	13,179,800	-	-	-	13,179,800
Jun-06	496,795,889	-	-	496,795,889	21,564,200	-	-	-	21,564,200
Jul-06	525,171,479	-	-	525,171,479	23,378,000	-	-	-	23,378,000
Aug-06	477,540,475	-	-	477,540,475	19,200,600	-	-	-	19,200,600
Sep-06	404,186,500	-	-	404,186,500	16,057,400	-	-	-	16,057,400
Oct-06	279,511,911	-	-	279,511,911	11,850,000	-	-	-	11,850,000
Nov-06	123,457,000	-	-	123,457,000	6,932,914	-	-	-	6,932,914
Dec-06	125,055,758	-	-	125,055,758	6,958,428	-	-	-	6,958,428
Jan-07	103,665,559	-	-	103,665,559	7,801,189	-	-	16,000	7,817,189
Feb-07	100,225,253	-	-	100,225,253	6,533,383	-	-	10,000	6,543,383
Mar-07	99,508,230	-	-	99,508,230	6,596,000	-	-	43,000	6,639,000
Apr-07	115,275,789	-	-	115,275,789	7,256,000	-	-	16,000	7,272,000
May-07	178,867,000	-	-	178,867,000	9,201,800	-	-	58,000	9,259,800
Jun-07	363,240,631	-	-	363,240,631	15,624,200	-	-	59,000	15,683,200
Jul-07	550,764,689	-	-	550,764,689	22,827,000	-	-	171,000	22,998,000
Aug-07	493,982,153	-	-	493,982,153	18,844,000	-	-	223,000	19,067,000
Sep-07	432,263,247	-	-	432,263,247	16,830,000	-	-	443,000	17,273,000
Oct-07	293,196,700	-	-	293,196,700	11,589,000	-	-	261,000	11,850,000
Nov-07	142,514,904	-	-	142,514,904	7,512,000	-	-	118,000	7,630,000
Dec-07	116,274,289	-	-	116,274,289	7,198,000	-	-	11,000	7,209,000
Jan-08	90,773,689	22,654,400	93,000	113,521,089	6,864,000	244,000	1,000	19,000	7,128,000
Feb-08	80,380,636	21,288,000	35,000	101,703,636	6,330,000	230,000	1,000	12,000	6,573,000
Mar-08	83,119,897	21,065,000	49,000	104,233,897	6,354,000	231,000	58,000	21,000	6,664,000
Apr-08	91,141,367	21,638,200	1,363,000	114,142,567	7,106,700	244,000	118,000	33,000	7,501,700
May-08	194,438,100	28,272,300	31,814,000	254,524,400	10,956,300	355,000	588,000	94,000	11,993,300
Jun-08	245,541,100	34,400,000	74,413,000	354,354,100	13,763,000	444,000	1,157,000	95,000	15,459,000
Jul-08	335,981,000	39,914,000	96,411,500	472,306,500	18,422,000	530,000	1,668,000	227,000	20,847,000
Aug-08	373,924,800	49,564,000	131,737,000	555,225,800	20,187,000	682,000	1,470,000	181,000	22,500,000
Sep-08	242,903,000	38,169,000	89,143,485	370,215,485	14,858,000	400,700	860,000	78,000	16,196,700
Oct-08	186,940,500	32,226,000	61,023,827	280,190,327	10,003,000	311,000	934,000	180,000	11,428,000
Nov-08	100,178,000	22,921,000	11,371,809	134,470,809	6,895,000	220,000	51,000	48,000	7,214,000
Dec-08	90,803,000	21,571,000	439,343	112,813,343	7,074,000	239,000	1,000	12,000	7,326,000
Jan-09	91,414,696	22,682,000	(38,000)	114,058,696	7,097,000	234,000	2,000	19,000	7,352,000
Feb-09	79,107,256	20,625,000	1,000	99,733,256	6,145,000	198,000	7,000	14,000	6,364,000
Mar-09	87,262,000	20,671,000	77,505	108,010,505	7,074,000	206,000	103,000	17,000	7,400,000
Apr-09	96,029,000	22,648,440	1,149,554	121,826,994	7,138,000	246,000	26,000	16,000	7,426,000
May-09	134,681,000	25,045,000	20,549,518	180,255,518	9,038,000	231,000	138,000	87,000	9,494,000
Jun-09	196,335,000	31,328,000	57,576,486	285,239,486	11,347,000	281,000	566,000	224,000	12,408,000
Jul-09	241,904,000	34,540,000	73,796,899	350,240,899	13,360,028	290,000	820,000	117,000	14,587,028
Aug-09	256,740,000	40,609,000	96,380,799	391,729,799	14,110,000	389,000	975,000	187,000	15,561,000
Sep-09	257,340,000	38,203,000	88,816,521	384,359,521	13,858,000	443,000	988,000	86,000	15,385,000

Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Res - Special Base	Outside Residential Total SF, MF
Oct-09	165,580,000	32,517,000	57,633,397	255,730,397	9,455,000	327,000	486,000	36,000	10,304,000
Nov-09	84,864,000	21,628,000	8,109,374	114,599,374	6,412,000	181,000	4,000	9,000	6,606,000
Dec-09	87,938,000	22,192,000	93,420	110,223,420	7,190,000	203,000	4,000	7,413,000	7,413,000
Jan-10	89,909,000	24,246,207	1,000	114,156,207	6,886,000	197,000	3,000	19,000	7,105,000
Feb-10	79,070,000	20,040,415	1,000	99,111,415	5,748,000	848,000	3,000	58,000	6,657,000
Mar-10	79,753,000	20,994,000	1,000	100,748,000	5,812,000	981,000	2,000	20,000	6,815,000
Apr-10	91,306,741	21,891,000	1,972,756	115,170,497	6,476,000	991,000	9,000	27,000	7,443,000
May-10	111,989,000	23,348,066	14,585,688	149,922,734	6,948,000	1,018,000	7,000	61,000	8,034,000
Jun-10	197,113,000	30,122,000	46,640,249	273,875,249	10,789,000	1,486,500	583,000	110,000	12,978,500
Jul-10	291,034,000	40,181,000	91,094,682	422,309,682	14,434,000	1,496,500	603,000	118,000	16,651,500
Aug-10	290,154,456	42,380,000	102,858,870	435,393,326	15,188,708	2,171,000	730,000	135,000	18,224,708
Sep-10	322,030,059	44,587,606	109,023,407	475,641,072	15,901,000	2,289,000	817,000	87,000	19,064,000
Oct-10	242,319,538	40,218,092	92,436,758	374,974,388	12,435,000	1,749,000	1,076,000	1,749,000	15,512,000
Nov-10	106,406,559	23,847,000	15,873,137	146,126,696	6,543,000	976,000	30,000	3,000	7,552,000
Dec-10	86,848,200	21,987,500	4,123	108,875,823	6,565,000	951,000	3,000	92,000	7,614,000
Jan-11	88,431,400	23,179,806	2,000	111,613,206	6,290,000	1,121,000	3,000	40,000	7,454,000
Feb-11	76,327,935	21,297,182	-	97,625,117	5,915,000	1,147,000	2,000	81,000	7,145,000
Mar-11	77,550,044	21,559,143	3,700	99,112,887	4,387,851	2,315,000	3,000	34,000	6,739,851
Apr-11	98,181,392	22,716,268	3,415,776	124,313,436	5,373,123	2,488,000	7,000	45,000	7,883,123
May-11	143,207,486	27,613,882	29,770,595	200,591,953	6,672,553	2,517,000	81,000	98,000	9,368,553
Jun-11	199,577,996	34,673,193	54,373,825	288,625,014	8,976,000	3,418,000	405,000	131,000	12,930,000
Jul-11	284,351,642	43,333,408	84,674,368	412,359,408	12,417,255	3,821,000	577,000	154,000	16,969,255
Aug-11	310,674,227	47,265,797	105,645,898	463,485,922	13,653,000	4,540,000	781,000	173,000	19,147,000
Sep-11	324,823,276	48,787,417	112,669,890	486,280,583	12,825,221	4,829,000	778,000	171,000	18,603,221
Oct-11	217,096,857	39,565,686	78,098,138	334,760,681	9,033,270	3,580,000	564,000	115,000	13,292,270
Nov-11	101,741,384	24,849,245	16,782,581	143,373,210	4,887,588	2,144,000	17,000	21,000	7,069,588
Dec-11	88,035,135	24,819,794	158,510	113,013,379	4,822,885	2,760,436	11,000	28,000	7,622,121
Jan-12	91,971,580	24,078,211	70,469	116,120,259	7,130,087	897,456	3,207	34,750	8,065,500
Feb-12	80,912,068	21,544,549	26,582	102,483,199	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-12	86,671,725	21,568,001	70,275	108,310,001	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-12	99,230,346	22,900,594	3,014,975	125,145,915	7,348,755	2,013,288	92,694	42,343	9,497,081
May-12	181,989,124	28,527,114	32,430,753	242,946,991	10,406,548	2,079,907	465,384	101,633	13,053,471
Jun-12	235,016,235	35,097,917	70,382,587	340,496,739	13,193,952	2,852,944	1,005,830	197,914	17,250,639
Jul-12	328,788,928	43,399,302	96,802,255	468,990,485	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-12	359,342,753	49,416,805	125,501,513	534,261,071	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-12	331,497,559	47,921,786	113,301,964	492,721,349	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-12	238,083,628	40,726,277	88,967,307	367,777,211	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-12	108,281,615	24,830,623	17,183,412	150,295,651	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-12	90,632,748	24,261,532	362,729	115,257,009	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-13	94,454,812	24,728,322	72,372	119,255,506	7,130,087	897,456	3,207	34,750	8,065,500
Feb-13	83,096,694	22,126,252	27,299	105,250,246	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-13	89,011,862	22,150,337	72,172	111,234,371	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-13	101,909,565	23,518,910	3,096,379	128,524,854	7,348,755	2,013,288	92,694	42,343	13,053,471
May-13	186,902,830	29,297,347	33,306,384	249,506,560	10,406,548	2,079,907	465,384	101,633	17,250,639
Jun-13	241,361,673	36,045,560	72,282,917	349,690,151	13,193,952	2,852,944	1,005,830	197,914	22,079,770
Jul-13	337,666,229	44,571,083	99,415,916	481,653,228	17,299,251	3,145,516	1,429,382	205,620	24,145,366
Aug-13	369,045,008	50,751,059	128,800,054	548,686,120	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-13	340,448,034	49,215,674	116,361,117	506,024,825	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-13	244,511,886	41,825,886	91,369,424	377,707,196	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-13	111,205,219	25,501,050	17,647,364	154,353,633	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-13	93,079,832	24,916,593	372,523	118,368,948	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-14	96,249,454	25,198,160	73,747	121,521,361	7,130,087	897,456	3,207	34,750	8,065,500
Feb-14	84,675,531	22,546,651	27,818	107,250,000	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-14	90,703,087	22,571,194	73,547	113,347,824	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-14	103,845,847	23,965,769	3,155,211	130,966,827	7,348,755	2,013,288	92,694	42,343	13,053,471
May-14	190,453,984	29,853,996	33,939,205	254,247,185	10,406,548	2,079,907	465,384	101,633	17,250,639
Jun-14	245,947,545	36,730,426	73,656,293	356,334,264	13,193,952	2,852,944	1,005,830	197,914	22,079,770

Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Res - Special Base	Outside Residential Total SF, MF
Jul-14	344,081,888	45,417,933	101,304,818	490,804,639	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-14	376,056,863	51,715,329	131,338,965	559,111,156	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-14	346,916,546	50,150,772	118,571,979	515,639,297	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-14	249,157,611	42,620,578	93,105,443	384,883,633	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-14	113,318,118	25,985,570	17,982,664	157,286,352	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-14	94,848,349	25,390,008	379,601	120,617,958	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-15	98,174,443	25,702,124	75,222	123,951,788	7,130,087	897,456	3,207	34,750	8,065,500
Feb-15	86,369,042	22,997,584	28,374	109,395,000	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-15	92,517,149	23,022,618	75,014	115,614,780	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-15	105,922,764	24,445,084	3,218,315	133,586,163	7,348,755	2,013,288	92,694	42,343	9,497,081
May-15	194,263,063	30,451,076	34,617,989	259,332,129	10,406,548	2,079,907	465,384	101,633	13,053,471
Jun-15	250,866,496	37,465,034	75,129,418	363,460,949	13,193,952	2,852,944	1,005,830	197,914	17,250,639
Jul-15	350,963,525	46,326,292	103,330,914	500,620,732	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-15	383,578,000	52,749,636	133,965,744	570,293,380	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-15	353,854,877	51,153,787	120,943,418	525,952,083	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-15	254,140,764	43,472,990	94,967,552	392,581,305	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-15	115,584,481	26,505,281	18,342,318	160,432,079	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-15	96,745,316	25,897,808	387,193	123,030,318	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-16	100,236,106	26,241,868	76,801	126,554,776	7,130,087	897,456	3,207	34,750	8,065,500
Feb-16	88,182,792	23,480,533	28,970	111,692,295	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-16	94,460,009	23,506,093	76,589	118,042,691	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-16	108,147,142	24,958,431	3,285,899	136,391,473	7,348,755	2,013,288	92,694	42,343	9,497,081
May-16	198,342,588	31,090,549	35,344,967	264,778,103	10,406,548	2,079,907	465,384	101,633	13,053,471
Jun-16	256,134,693	38,251,800	76,707,136	371,093,629	13,193,952	2,852,944	1,005,830	197,914	17,250,639
Jul-16	358,333,759	47,299,144	105,500,864	511,133,767	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-16	391,633,138	53,857,378	136,779,025	582,269,541	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-16	361,285,830	52,228,017	123,483,230	536,997,076	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-16	259,477,720	44,385,922	96,961,871	400,825,513	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-16	118,011,755	27,061,892	18,727,506	163,801,153	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-16	98,776,968	26,441,662	395,324	125,613,954	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-17	102,341,064	26,792,948	78,414	129,212,426	7,130,087	897,456	3,207	34,750	8,065,500
Feb-17	90,034,630	23,973,624	29,579	114,037,833	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-17	96,443,669	23,999,721	78,198	120,521,587	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-17	110,418,232	25,482,558	3,354,903	139,255,694	7,348,755	2,013,288	92,694	42,343	9,497,081
May-17	202,507,782	31,743,450	36,087,211	270,338,443	10,406,548	2,079,907	465,384	101,633	13,053,471
Jun-17	261,513,521	39,055,088	78,317,986	378,886,595	13,193,952	2,852,944	1,005,830	197,914	17,250,639
Jul-17	365,858,768	48,292,426	107,716,382	521,867,576	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-17	399,857,434	54,988,383	139,651,384	594,497,201	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-17	368,872,832	53,324,805	126,076,378	548,274,015	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-17	264,926,752	45,318,027	98,998,070	409,242,849	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-17	120,490,002	27,630,192	19,120,784	167,240,977	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-17	100,851,284	26,996,937	403,626	128,251,847	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-18	104,387,886	27,328,806	79,983	131,796,674	7,130,087	897,456	3,207	34,750	8,065,500
Feb-18	91,835,323	24,453,097	30,170	116,318,590	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-18	98,372,542	24,479,715	79,762	122,932,019	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-18	112,626,597	25,992,209	3,422,001	142,040,807	7,348,755	2,013,288	92,694	42,343	9,497,081
May-18	206,557,938	32,378,319	36,808,955	275,745,212	10,406,548	2,079,907	465,384	101,633	13,053,471
Jun-18	266,743,791	39,836,190	79,884,346	386,464,327	13,193,952	3,842,450	1,326,590	186,973	24,145,366
Jul-18	373,175,944	49,258,275	109,870,709	532,304,928	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-18	407,854,583	56,088,151	142,444,412	606,387,145	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-18	376,250,289	54,391,301	128,597,905	559,239,495	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-18	270,225,287	46,224,387	100,978,031	417,427,705	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-18	122,899,802	28,182,796	19,503,200	170,585,797	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-18	102,868,310	27,536,876	411,698	130,816,884	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-19	106,475,643	27,875,383	81,582	134,432,608	7,130,087	897,456	3,207	34,750	8,065,500
Feb-19	93,672,029	24,942,159	30,774	118,644,962	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-19	100,339,993	24,969,309	81,357	125,390,659	7,043,996	1,922,115	90,138	30,528	9,086,777

**Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland**

Date	Inside Residential	Inside Multi-Family	Inside Irrigation	Inside Residential Total SF, MF	Outside Residential	Outside Multi-Family	Outside Irrigation	Outside Res - Special Base	Outside Residential Total SF, MF
Apr-19	114,879,129	26,512,054	3,490,441	144,881,624	7,348,755	2,013,288	92,694	42,343	9,497,081
May-19	210,689,096	33,025,886	37,545,134	281,260,117	10,406,548	2,079,907	465,384	101,633	13,053,471
Jun-19	272,078,667	40,632,914	81,482,033	394,193,613	13,193,952	2,852,944	1,005,830	197,914	17,250,639
Jul-19	380,639,463	50,243,440	112,068,124	542,951,026	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-19	416,011,674	57,209,914	145,293,300	618,514,888	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-19	383,775,295	55,479,127	131,169,863	570,424,285	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-19	275,629,792	47,148,875	102,997,592	425,776,260	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-19	125,357,798	28,746,451	19,893,264	173,997,513	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-19	104,925,676	28,087,614	419,932	133,433,222	7,507,279	2,236,967	9,703	74,292	9,828,240
Jan-20	108,605,156	28,432,890	83,214	137,121,260	7,130,087	897,456	3,207	34,750	8,065,500
Feb-20	95,545,470	25,441,002	31,389	121,017,861	6,290,034	1,074,466	5,880	75,205	7,445,585
Mar-20	102,346,793	25,468,696	82,984	127,898,473	7,043,996	1,922,115	90,138	30,528	9,086,777
Apr-20	117,176,711	27,042,295	3,560,250	147,779,256	7,348,755	2,013,288	92,694	42,343	9,497,081
May-20	214,902,878	33,686,403	38,296,037	286,885,319	10,406,548	2,079,907	465,384	101,633	13,053,471
Jun-20	277,520,241	41,445,572	83,111,673	402,077,486	13,193,952	2,852,944	1,005,830	197,914	17,250,639
Jul-20	388,252,252	51,248,309	114,309,486	553,810,047	17,299,251	3,145,516	1,429,382	205,620	22,079,770
Aug-20	424,331,908	58,354,112	148,199,166	630,885,186	18,789,352	3,842,450	1,326,590	186,973	24,145,366
Sep-20	391,450,801	56,588,710	133,793,261	581,832,771	15,680,938	4,068,683	959,123	149,352	20,858,097
Oct-20	281,142,388	48,091,853	105,057,544	434,291,785	11,753,226	3,038,551	1,049,912	237,860	16,079,548
Nov-20	127,864,954	29,321,380	20,291,129	177,477,463	7,072,667	1,798,784	45,542	40,206	8,957,198
Dec-20	107,024,190	28,649,366	428,331	136,101,886	7,507,279	2,236,967	9,703	74,292	9,828,240

**Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland**

Date	Total Residential	Inside Commercial	Outside Commercial	Outside Commercial	Outside Com - Special Base	Outside Com Total	Total Commercial	Inside - City	Outside - City	City Uses
Jan-05	23,395,700	1,428,340	1,267,960	1,428,340	-	1,428,340	24,824,040	860,000	-	860,000
Feb-05	20,140,400	1,267,960	1,267,960	1,267,960	-	1,267,960	21,408,360	970,000	-	970,000
Mar-05	20,826,600	1,208,110	1,208,110	1,208,110	-	1,208,110	22,034,710	729,000	-	729,000
Apr-05	22,561,800	1,247,040	1,247,040	1,247,040	-	1,247,040	23,808,840	960,000	-	960,000
May-05	28,669,600	1,367,240	1,367,240	1,367,240	-	1,367,240	30,036,840	1,993,800	-	1,993,800
Jun-05	45,763,111	2,041,240	2,041,240	2,041,240	-	2,041,240	47,804,351	6,301,000	-	6,301,000
Jul-05	62,686,089	2,944,070	2,944,070	2,944,070	-	2,944,070	65,630,159	11,993,000	-	11,993,000
Aug-05	71,919,800	2,607,370	2,607,370	2,607,370	-	2,607,370	74,527,170	13,023,000	-	13,023,000
Sep-05	63,051,800	2,722,200	2,722,200	2,722,200	-	2,722,200	65,774,000	9,609,000	-	9,609,000
Oct-05	54,501,022	2,053,160	2,053,160	2,053,160	-	2,053,160	56,554,182	5,632,000	-	5,632,000
Nov-05	26,677,000	995,579	995,579	995,579	-	995,579	27,672,579	969,000	-	969,000
Dec-05	26,098,600	1,538,120	1,538,120	1,538,120	-	1,538,120	27,636,720	588,000	-	588,000
Jan-06	22,410,600	1,287,070	1,287,070	1,287,070	-	1,287,070	23,697,670	739,000	-	739,000
Feb-06	21,364,400	1,154,330	1,154,330	1,154,330	-	1,154,330	22,518,730	615,000	-	615,000
Mar-06	22,057,400	1,197,530	1,197,530	1,197,530	-	1,197,530	23,254,930	802,000	-	802,000
Apr-06	24,236,000	1,307,580	1,307,580	1,307,580	-	1,307,580	25,543,580	1,042,000	-	1,042,000
May-06	41,726,310	1,797,860	1,797,860	1,797,860	-	1,797,860	43,524,170	4,705,000	-	4,705,000
Jun-06	62,753,890	2,553,730	2,553,730	2,553,730	-	2,553,730	65,307,620	11,930,000	-	11,930,000
Jul-06	77,074,800	2,720,570	2,720,570	2,720,570	-	2,720,570	79,795,370	15,421,000	-	15,421,000
Aug-06	69,554,800	3,326,800	3,326,800	3,326,800	-	3,326,800	72,881,600	14,329,000	-	14,329,000
Sep-06	66,675,900	2,673,210	2,673,210	2,673,210	-	2,673,210	69,349,110	12,624,000	-	12,624,000
Oct-06	54,335,000	1,967,490	1,967,490	1,967,490	-	1,967,490	56,302,490	5,054,000	-	5,054,000
Nov-06	29,062,700	1,313,140	1,313,140	1,313,140	-	1,313,140	30,375,840	913,000	-	913,000
Dec-06	26,172,152	989,063	989,063	989,063	-	989,063	27,161,215	694,029	-	694,029
Jan-07	23,625,302	1,128,697	1,128,697	1,128,697	-	1,128,697	24,753,999	702,971	-	702,971
Feb-07	23,183,881	1,451,000	1,451,000	1,451,000	-	1,451,000	24,634,881	936,000	-	936,000
Mar-07	23,530,900	1,724,000	1,724,000	1,724,000	-	1,724,000	25,254,900	814,000	-	814,000
Apr-07	26,258,200	1,129,000	1,129,000	1,129,000	-	1,129,000	27,387,200	1,233,000	-	1,233,000
May-07	32,112,400	1,261,330	1,261,330	1,261,330	-	1,261,330	33,373,730	2,136,000	-	2,136,000
Jun-07	54,923,600	2,012,670	2,012,670	2,012,670	-	2,012,670	56,936,270	10,475,000	-	10,475,000
Jul-07	79,127,000	2,934,720	2,934,720	2,934,720	-	2,934,720	82,061,720	15,282,000	-	15,282,000
Aug-07	71,769,200	2,536,280	2,536,280	2,536,280	-	2,536,280	74,305,480	14,333,000	-	14,333,000
Sep-07	69,579,511	2,215,620	2,215,620	2,215,620	-	2,215,620	71,795,131	11,958,000	-	11,958,000
Oct-07	53,442,909	2,082,380	2,082,380	2,082,380	-	2,082,380	55,525,289	8,122,000	-	8,122,000
Nov-07	31,443,400	1,408,000	1,408,000	1,408,000	-	1,408,000	32,851,400	1,489,000	-	1,489,000
Dec-07	26,277,800	1,097,000	1,097,000	1,097,000	-	1,097,000	27,374,800	781,000	-	781,000
Jan-08	28,092,400	1,168,610	1,168,610	1,168,610	-	1,168,610	29,261,010	673,000	-	673,000
Feb-08	28,521,000	1,002,390	1,002,390	1,002,390	-	1,002,390	29,523,390	698,000	-	698,000
Mar-08	29,168,800	994,000	994,000	994,000	-	994,000	30,162,800	870,000	-	870,000
Apr-08	30,038,848	1,034,860	1,034,860	1,034,860	-	1,034,860	31,073,708	1,214,000	-	1,214,000
May-08	44,420,500	1,443,140	1,443,140	1,443,140	-	1,443,140	45,863,640	4,640,000	-	4,640,000
Jun-08	65,379,000	1,849,000	1,849,000	1,849,000	-	1,849,000	67,228,000	9,119,000	-	9,119,000
Jul-08	70,981,400	2,214,000	2,214,000	2,214,000	-	2,214,000	73,195,400	13,867,000	-	13,867,000
Aug-08	91,172,600	2,521,000	2,521,000	2,521,000	-	2,521,000	93,693,600	17,030,000	-	17,030,000
Sep-08	72,669,000	2,367,000	2,367,000	2,367,000	-	2,367,000	75,036,000	10,177,000	-	10,177,000
Oct-08	61,045,000	1,502,000	1,502,000	1,502,000	-	1,502,000	62,547,000	7,867,000	-	7,867,000
Nov-08	38,410,475	1,137,000	1,137,000	1,137,000	-	1,137,000	39,547,475	2,063,000	-	2,063,000
Dec-08	30,395,643	1,033,000	1,033,000	1,033,000	-	1,033,000	31,428,643	976,000	-	976,000
Jan-09	29,544,816	1,016,000	1,016,000	1,016,000	-	1,016,000	30,560,816	940,000	-	940,000
Feb-09	25,419,725	846,000	846,000	846,000	-	846,000	26,265,725	973,000	-	973,000
Mar-09	26,154,072	1,008,000	1,008,000	1,008,000	-	1,008,000	27,162,072	682,000	-	682,000
Apr-09	26,958,000	1,004,000	1,004,000	1,004,000	-	1,004,000	27,962,000	1,079,110	-	1,079,110
May-09	34,835,965	1,222,000	1,222,000	1,222,000	-	1,222,000	36,057,965	2,852,000	-	2,852,000
Jun-09	55,948,018	1,561,000	1,561,000	1,561,000	-	1,561,000	57,509,018	5,757,000	-	5,757,000
Jul-09	57,512,324	1,669,000	1,669,000	1,669,000	-	1,669,000	59,181,324	12,163,000	-	12,163,000
Aug-09	73,564,946	1,676,000	1,676,000	1,676,000	-	1,676,000	75,240,946	13,419,000	-	13,419,000
Sep-09	68,559,627	1,597,000	1,597,000	1,597,000	-	1,597,000	70,156,627	10,164,000	-	10,164,000

Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland

Date	Total Residential	Inside Commercial	Outside Commercial	Outside Com - Special Base	Outside Com Total	Total Commercial	Inside - City	Outside - City	City Uses
Oct-09	53,388,518	1,206,000	38,000	1,244,000	54,632,518	6,295,000	-	6,295,000	
Nov-09	31,353,956	893,000	-	893,000	32,246,956	1,279,000	-	1,279,000	
Dec-09	27,189,282	1,050,000	-	1,050,000	28,239,282	524,000	-	524,000	
Jan-10	28,833,065	977,000	-	977,000	29,810,065	837,000	-	837,000	
Feb-10	25,974,413	952,000	-	952,000	26,926,413	513,000	-	513,000	
Mar-10	26,591,375	972,000	-	972,000	27,563,375	820,000	-	820,000	
Apr-10	28,133,184	1,100,000	6,000	1,106,000	29,241,184	765,000	-	765,000	
May-10	32,743,064	1,268,000	46,000	1,314,000	34,057,064	4,986,000	-	4,986,000	
Jun-10	45,771,921	1,741,000	95,000	1,836,000	47,607,921	7,579,000	-	7,579,000	
Jul-10	64,731,690	1,692,000	84,000	1,776,000	66,507,690	12,388,000	-	12,388,000	
Aug-10	75,019,013	1,598,000	99,000	1,697,000	76,716,013	12,450,143	-	12,450,143	
Sep-10	73,554,892	1,986,000	96,000	2,092,000	75,646,892	15,011,000	-	15,011,000	
Oct-10	69,488,929	1,563,260	70,000	1,633,260	71,122,189	10,946,024	-	10,946,024	
Nov-10	38,957,819	1,098,000	-	1,098,000	40,055,819	1,334,000	-	1,334,000	
Dec-10	28,654,267	974,000	-	974,000	29,628,267	527,000	-	527,000	
Jan-11	28,616,074	922,000	-	922,000	29,538,074	676,405	-	676,405	
Feb-11	26,258,447	943,000	-	943,000	27,201,447	684,202	-	684,202	
Mar-11	26,337,929	2,591,000	-	2,591,000	28,928,929	706,000	-	706,000	
Apr-11	27,296,680	905,106	9,000	914,106	28,210,786	789,268	-	789,268	
May-11	37,715,753	21,000	21,000	1,206,000	38,921,753	1,663,300	-	1,663,300	
Jun-11	53,502,633	1,356,000	62,000	1,418,000	54,920,633	7,482,579	-	7,482,579	
Jul-11	67,285,653	1,714,000	97,000	1,811,000	69,096,653	13,535,000	-	13,535,000	
Aug-11	82,418,628	1,823,000	88,000	1,911,000	84,329,628	16,657,000	-	16,657,000	
Sep-11	83,086,966	1,769,642	93,000	1,862,642	84,949,608	16,346,000	-	16,346,000	
Oct-11	71,814,787	1,350,000	72,000	1,422,000	73,236,787	10,505,000	1,000	10,506,000	
Nov-11	38,270,720	870,000	-	870,000	39,140,720	1,610,000	-	1,610,000	
Dec-11	30,078,664	809,000	-	809,000	30,887,664	660,000	-	660,000	
Jan-12	29,549,811	1,133,415	-	1,133,415	30,683,226	950,644	-	950,644	
Feb-12	28,074,472	1,007,206	-	1,007,206	29,081,679	955,892	-	955,892	
Mar-12	28,649,152	2,204,368	-	2,204,368	30,853,520	809,729	-	809,729	
Apr-12	29,663,153	1,098,688	9,229	1,107,917	30,771,071	1,182,347	-	1,182,347	
May-12	42,771,325	1,402,130	38,851	1,440,980	44,212,305	5,094,831	-	5,094,831	
Jun-12	63,611,275	1,853,891	87,051	1,940,942	65,552,217	8,858,535	-	8,858,535	
Jul-12	71,241,054	2,096,566	98,356	2,194,922	73,435,976	13,827,391	-	13,827,391	
Aug-12	89,152,527	2,339,909	101,524	2,441,433	91,593,960	17,185,310	-	17,185,310	
Sep-12	81,095,821	2,278,619	102,434	2,381,054	83,476,874	16,150,915	-	16,150,915	
Oct-12	72,785,016	1,575,001	79,276	1,654,277	74,439,293	11,110,465	-	11,110,465	
Nov-12	40,598,776	1,143,825	-	1,143,825	41,742,601	1,585,037	-	1,585,037	
Dec-12	30,732,944	1,082,893	-	1,082,893	31,815,838	648,001	-	648,001	
Jan-13	30,347,656	1,164,017	-	1,164,017	31,511,673	950,644	-	950,644	
Feb-13	28,832,483	1,034,401	-	1,034,401	29,866,884	955,892	-	955,892	
Mar-13	29,422,680	2,263,886	-	2,263,886	31,686,565	809,729	-	809,729	
Apr-13	30,464,059	1,128,352	9,479	1,137,831	31,601,890	1,182,347	-	1,182,347	
May-13	43,926,151	1,439,987	39,900	1,479,887	45,406,037	5,094,831	-	5,094,831	
Jun-13	65,328,779	1,903,946	89,402	1,993,347	67,322,127	8,858,535	-	8,858,535	
Jul-13	73,164,562	2,153,174	101,011	2,254,185	75,418,747	13,827,391	-	13,827,391	
Aug-13	91,559,645	2,403,087	104,265	2,507,352	94,066,997	17,185,310	-	17,185,310	
Sep-13	83,285,408	2,340,142	105,200	2,445,342	85,730,750	16,150,915	-	16,150,915	
Oct-13	74,750,211	1,617,526	81,417	1,698,943	76,449,154	11,110,465	-	11,110,465	
Nov-13	41,694,943	1,174,708	-	1,174,708	42,869,651	1,585,037	-	1,585,037	
Dec-13	31,562,734	1,112,132	-	1,112,132	32,674,865	648,001	-	648,001	
Jan-14	30,924,261	1,186,133	-	1,186,133	32,110,394	950,644	-	950,644	
Feb-14	29,380,300	1,054,055	-	1,054,055	30,434,355	955,892	-	955,892	
Mar-14	29,981,710	2,306,900	-	2,306,900	32,288,610	809,729	-	809,729	
Apr-14	31,042,876	1,149,791	9,659	1,159,450	32,202,326	1,182,347	-	1,182,347	
May-14	44,760,747	1,467,347	40,658	1,508,004	46,268,752	5,094,831	-	5,094,831	
Jun-14	66,570,026	1,940,121	91,100	2,031,221	68,601,247	8,858,535	-	8,858,535	

Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland

Date	Total Residential	Inside Commercial	Outside Commercial	Outside Com - Special Base	Outside Com Total	Total Commercial	Inside - City	Outside - City	City Uses
Jul-14	74,554,689	2,194,084	102,930	2,297,015	76,851,703	13,827,391	13,827,391	13,827,391	13,827,391
Aug-14	93,299,278	2,448,745	106,246	2,554,992	95,854,270	17,185,310	17,185,310	17,185,310	17,185,310
Sep-14	84,867,830	2,384,605	107,199	2,491,804	87,359,634	16,150,915	16,150,915	16,150,915	16,150,915
Oct-14	76,170,465	1,648,259	82,964	1,731,222	77,901,688	11,110,465	11,110,465	11,110,465	11,110,465
Nov-14	42,487,147	1,197,027	-	1,197,027	43,684,174	1,585,037	1,585,037	1,585,037	1,585,037
Dec-14	32,162,426	1,133,262	-	1,133,262	33,295,688	648,001	648,001	648,001	648,001
Jan-15	31,542,746	1,209,856	-	1,209,856	32,752,602	950,644	950,644	950,644	950,644
Feb-15	29,967,906	1,075,136	-	1,075,136	31,043,042	955,892	955,892	955,892	955,892
Mar-15	30,581,345	2,353,038	-	2,353,038	32,934,382	809,729	809,729	809,729	809,729
Apr-15	31,663,733	1,172,787	9,852	1,182,639	32,846,372	1,182,347	1,182,347	1,182,347	1,182,347
May-15	45,655,962	1,496,694	41,471	1,538,165	47,194,127	5,094,831	5,094,831	5,094,831	5,094,831
Jun-15	67,901,426	1,978,923	92,922	2,071,846	69,973,272	8,858,535	8,858,535	8,858,535	8,858,535
Jul-15	76,045,783	2,237,966	104,989	2,342,955	78,388,737	13,827,391	13,827,391	13,827,391	13,827,391
Aug-15	95,165,264	2,497,720	108,371	2,606,092	97,771,356	17,185,310	17,185,310	17,185,310	17,185,310
Sep-15	86,565,187	2,432,297	109,343	2,541,640	89,106,827	16,150,915	16,150,915	16,150,915	16,150,915
Oct-15	77,693,874	1,681,224	84,623	1,765,847	79,459,721	11,110,465	11,110,465	11,110,465	11,110,465
Nov-15	43,336,890	1,220,968	-	1,220,968	44,557,858	1,585,037	1,585,037	1,585,037	1,585,037
Dec-15	32,805,674	1,155,927	-	1,155,927	33,961,601	648,001	648,001	648,001	648,001
Jan-16	32,205,144	1,235,263	-	1,235,263	33,440,407	950,644	950,644	950,644	950,644
Feb-16	30,597,232	1,097,714	-	1,097,714	31,694,946	955,892	955,892	955,892	955,892
Mar-16	31,223,553	2,402,451	-	2,402,451	33,626,004	809,729	809,729	809,729	809,729
Apr-16	32,328,672	1,197,416	10,059	1,207,474	33,536,146	1,182,347	1,182,347	1,182,347	1,182,347
May-16	46,614,738	42,342	1,528,124	1,570,466	48,185,204	5,094,831	5,094,831	5,094,831	5,094,831
Jun-16	69,327,356	2,020,481	94,874	2,115,354	71,442,711	8,858,535	8,858,535	8,858,535	8,858,535
Jul-16	77,642,744	2,284,963	107,194	2,392,157	80,034,901	13,827,391	13,827,391	13,827,391	13,827,391
Aug-16	97,163,734	2,550,172	110,647	2,660,820	99,824,554	17,185,310	17,185,310	17,185,310	17,185,310
Sep-16	88,383,056	2,483,375	111,639	2,595,014	90,978,070	16,150,915	16,150,915	16,150,915	16,150,915
Oct-16	79,325,446	1,716,530	86,400	1,802,930	81,128,375	11,110,465	11,110,465	11,110,465	11,110,465
Nov-16	44,246,964	1,246,608	-	1,246,608	45,493,573	1,585,037	1,585,037	1,585,037	1,585,037
Dec-16	33,494,593	1,180,202	-	1,180,202	34,674,795	648,001	648,001	648,001	648,001
Jan-17	32,881,452	1,261,203	-	1,261,203	34,142,655	950,644	950,644	950,644	950,644
Feb-17	31,239,774	1,120,766	-	1,120,766	32,360,540	955,892	955,892	955,892	955,892
Mar-17	31,879,247	2,452,903	-	2,452,903	34,332,150	809,729	809,729	809,729	809,729
Apr-17	33,007,574	1,222,561	10,270	1,232,831	34,240,405	1,182,347	1,182,347	1,182,347	1,182,347
May-17	47,593,647	1,560,215	43,231	1,603,446	49,197,093	5,094,831	5,094,831	5,094,831	5,094,831
Jun-17	70,783,231	2,062,911	96,866	2,159,777	72,943,007	8,858,535	8,858,535	8,858,535	8,858,535
Jul-17	79,275,242	2,332,947	109,445	2,442,392	81,715,634	13,827,391	13,827,391	13,827,391	13,827,391
Aug-17	99,204,173	2,603,726	112,971	2,716,697	101,920,870	17,185,310	17,185,310	17,185,310	17,185,310
Sep-17	90,239,100	2,535,526	113,983	2,649,509	92,888,609	16,150,915	16,150,915	16,150,915	16,150,915
Oct-17	80,991,280	1,752,577	88,214	1,840,791	82,832,071	11,110,465	11,110,465	11,110,465	11,110,465
Nov-17	45,176,150	1,272,787	-	1,272,787	46,448,938	1,585,037	1,585,037	1,585,037	1,585,037
Dec-17	34,197,980	1,204,986	-	1,204,986	35,402,966	648,001	648,001	648,001	648,001
Jan-18	33,539,081	1,286,428	-	1,286,428	34,825,509	950,644	950,644	950,644	950,644
Feb-18	31,864,570	1,143,181	-	1,143,181	33,007,750	955,892	955,892	955,892	955,892
Mar-18	32,516,832	2,501,961	-	2,501,961	35,018,793	809,729	809,729	809,729	809,729
Apr-18	33,667,725	1,247,012	10,475	1,257,488	34,925,213	1,182,347	1,182,347	1,182,347	1,182,347
May-18	48,545,520	1,591,419	44,096	1,635,515	50,181,035	5,094,831	5,094,831	5,094,831	5,094,831
Jun-18	72,198,895	2,104,169	98,803	2,202,972	74,401,868	8,858,535	8,858,535	8,858,535	8,858,535
Jul-18	80,858,706	2,379,606	111,634	2,491,240	83,349,946	13,827,391	13,827,391	13,827,391	13,827,391
Aug-18	101,188,256	2,655,801	115,230	2,771,031	103,959,287	17,185,310	17,185,310	17,185,310	17,185,310
Sep-18	92,043,882	2,586,236	116,263	2,702,500	94,746,382	16,150,915	16,150,915	16,150,915	16,150,915
Oct-18	82,611,106	1,787,628	89,979	1,877,607	84,488,713	11,110,465	11,110,465	11,110,465	11,110,465
Nov-18	46,079,673	1,298,243	-	1,298,243	47,377,916	1,585,037	1,585,037	1,585,037	1,585,037
Dec-18	34,881,939	1,229,086	-	1,229,086	36,111,025	648,001	648,001	648,001	648,001
Jan-19	34,209,863	1,312,156	-	1,312,156	35,522,019	950,644	950,644	950,644	950,644
Feb-19	32,501,861	1,166,044	-	1,166,044	33,667,905	955,892	955,892	955,892	955,892
Mar-19	33,167,169	2,552,000	-	2,552,000	35,719,169	809,729	809,729	809,729	809,729

**Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland**

Date	Total Residential	Inside Commercial	Outside Commercial	Outside Com - Special Base	Outside Com Total	Total Commercial	Inside - City	Outside - City	City Uses
Apr-19		34,341,080	1,271,953	10,685	1,282,638	35,623,717	1,182,347	1,182,347	1,182,347
May-19		49,516,430	1,623,248	44,977	1,668,225	51,184,655	5,094,831	5,094,831	5,094,831
Jun-19		73,642,873	2,146,252	100,779	2,247,032	75,889,905	8,858,535	8,858,535	8,858,535
Jul-19		82,475,881	2,427,198	113,867	2,541,065	85,016,945	13,827,391	13,827,391	13,827,391
Aug-19		103,212,021	2,708,917	117,535	2,826,451	106,038,473	17,185,310	17,185,310	17,185,310
Sep-19		93,884,760	2,637,961	118,588	2,756,550	96,641,309	16,150,915	16,150,915	16,150,915
Oct-19		84,263,328	1,823,381	91,778	1,915,159	86,178,487	11,110,465	11,110,465	11,110,465
Nov-19		47,001,267	1,324,208	-	1,324,208	48,325,475	1,585,037	1,585,037	1,585,037
Dec-19		35,579,578	1,253,667	-	1,253,667	36,833,246	648,001	648,001	648,001
Jan-20		34,894,060	1,338,399	-	1,338,399	36,232,459	950,644	950,644	950,644
Feb-20		33,151,898	1,189,365	-	1,189,365	34,341,264	955,892	955,892	955,892
Mar-20		33,830,512	2,603,040	-	2,603,040	36,433,553	809,729	809,729	809,729
Apr-20		35,027,901	1,297,392	10,899	1,308,290	36,336,192	1,182,347	1,182,347	1,182,347
May-20		50,506,759	1,655,713	45,877	1,701,590	52,208,348	5,094,831	5,094,831	5,094,831
Jun-20		75,115,731	2,189,177	102,795	2,291,972	77,407,703	8,858,535	8,858,535	8,858,535
Jul-20		84,125,398	2,475,742	116,144	2,591,886	86,717,284	13,827,391	13,827,391	13,827,391
Aug-20		105,276,262	2,763,095	119,885	2,882,980	108,159,242	17,185,310	17,185,310	17,185,310
Sep-20		95,762,455	2,690,720	120,960	2,811,680	98,574,135	16,150,915	16,150,915	16,150,915
Oct-20		85,948,594	1,859,849	93,614	1,953,462	87,902,057	11,110,465	11,110,465	11,110,465
Nov-20		47,941,292	1,350,692	-	1,350,692	49,291,984	1,585,037	1,585,037	1,585,037
Dec-20		36,291,170	1,278,741	-	1,278,741	37,569,911	648,001	648,001	648,001

Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland

Date	Industrial	Inside - Wholesale	Outside - Wholesale	Total Other	Hydrant	Ranch	Total Consumption	%		Treated Water Demand
								Non-Revenue	%	
Jan-05	3,921,000	1,384,500	-	5,305,500	1,069,100	4,377,700	154,379,460	10.7%	172,900,000	
Feb-05	3,509,000	1,478,000	-	4,987,000	-	4,536,200	130,579,460	15.5%	154,500,000	
Mar-05	3,624,000	1,480,000	-	5,104,000	-	4,026,700	134,393,549	24.8%	178,800,000	
Apr-05	4,156,000	1,610,100	-	5,766,100	207,000	7,768,900	167,725,163	21.3%	213,000,000	
May-05	4,649,000	1,743,900	-	6,392,900	428,000	8,017,000	217,222,419	38.8%	355,000,000	
Jun-05	4,767,000	3,547,500	-	8,314,500	10,623,000	362,000	365,194,165	15.1%	430,300,000	
Jul-05	4,983,000	4,003,500	-	8,986,500	555,000	11,601,800	541,414,659	17.3%	654,400,000	
Aug-05	6,783,000	7,250,407	-	14,033,407	463,000	13,149,200	559,740,977	-1.0%	544,200,000	
Sep-05	5,039,000	6,325,000	-	11,364,000	453,000	10,567,200	509,232,948	0.5%	511,700,000	
Oct-05	5,458,000	5,655,000	-	11,113,000	434,000	8,990,400	374,363,982	-36.0%	275,200,000	
Nov-05	3,876,000	2,865,000	-	6,741,000	303,300	10,628,300	181,588,979	10.9%	203,700,000	
Dec-05	3,977,000	1,163,000	-	5,140,000	335,700	3,174,832	157,109,252	28.5%	219,600,000	
Jan-06	4,044,000	1,281,400	-	5,325,400	332,000	12,375,350	167,899,867	19.5%	208,700,000	
Feb-06	2,877,000	1,592,600	-	4,465,600	330,000	7,982,600	146,611,883	20.0%	183,200,000	
Mar-06	3,244,000	1,603,000	-	4,847,000	323,000	9,696,090	147,967,507	27.2%	203,200,000	
Apr-06	3,558,000	2,162,000	-	5,720,000	384,000	8,455,200	188,222,939	45.4%	344,500,000	
May-06	4,599,000	3,374,000	-	7,973,000	502,000	9,015,700	372,478,292	32.3%	550,500,000	
Jun-06	4,636,000	7,503,000	-	12,139,000	625,000	13,238,400	621,600,109	12.2%	707,900,000	
Jul-06	6,684,000	7,842,000	-	14,526,000	579,000	8,827,300	667,698,149	1.2%	675,900,000	
Aug-06	6,764,900	6,605,000	-	13,369,900	621,000	12,736,595	610,679,170	5.7%	647,300,000	
Sep-06	5,296,000	6,262,000	-	11,558,000	468,000	10,225,300	524,468,310	-14.2%	459,300,000	
Oct-06	5,408,000	4,115,000	-	9,523,000	373,000	12,306,530	374,920,931	-28.7%	291,300,000	
Nov-06	3,982,000	2,369,000	-	6,351,000	299,000	10,742,100	179,070,854	9.2%	197,200,000	
Dec-06	4,320,000	1,108,700	-	5,428,700	266,000	7,871,800	173,435,930	10.5%	193,700,000	
Jan-07	3,564,500	-	-	3,564,500	230,000	3,512,600	144,246,818	27.1%	197,900,000	
Feb-07	3,123,500	-	-	3,123,500	206,000	3,240,100	138,909,117	25.1%	185,500,000	
Mar-07	4,048,000	-	-	4,048,000	289,000	6,089,900	142,653,030	31.0%	206,600,000	
Apr-07	4,737,000	-	-	4,737,000	275,000	159,797,989	159,797,989	33.7%	241,000,000	
May-07	4,487,000	-	-	4,487,000	297,000	3,671,400	232,091,930	47.3%	440,000,000	
Jun-07	4,605,000	-	-	4,605,000	338,000	2,668,484	453,947,585	26.2%	614,700,000	
Jul-07	5,507,000	-	-	5,507,000	709,000	3,477,700	680,800,109	6.9%	731,600,000	
Aug-07	5,851,000	1,888	-	5,952,838	334,000	2,911,657	610,886,128	-0.3%	609,300,000	
Sep-07	5,433,000	-	-	5,433,000	282,000	5,501,700	544,506,078	-8.1%	503,700,000	
Oct-07	4,834,000	-	-	4,834,000	277,000	7,319,834	381,124,823	-23.0%	309,900,000	
Nov-07	4,233,000	-	-	4,233,000	242,000	6,950,000	195,910,304	1.6%	199,100,000	
Dec-07	4,285,000	-	-	4,285,000	193,000	4,959,300	161,076,389	21.0%	203,900,000	
Jan-08	-	-	-	-	227,000	1,880,000	152,700,099	27.9%	211,900,000	
Feb-08	-	-	-	-	251,000	3,873,400	142,622,426	26.8%	194,800,000	
Mar-08	-	-	-	-	308,000	7,891,900	150,130,597	29.5%	212,900,000	
Apr-08	-	-	-	-	285,000	9,582,200	163,799,175	40.4%	275,000,000	
May-08	-	-	-	-	343,000	7,898,300	325,262,640	32.5%	482,200,000	
Jun-08	-	-	-	-	450,000	6,113,100	452,723,200	22.7%	585,300,000	
Jul-08	-	-	-	-	451,000	5,792,200	586,459,100	20.7%	739,100,000	
Aug-08	-	-	-	-	384,000	6,936,800	695,740,200	-16.7%	596,400,000	
Sep-08	-	5,078	-	5,078	408,000	7,112,500	479,148,763	-5.7%	453,300,000	
Oct-08	-	-	-	-	329,000	8,689,000	371,050,327	-22.3%	303,300,000	
Nov-08	-	-	-	-	334,000	4,418,600	188,047,884	5.8%	199,600,000	
Dec-08	-	-	-	-	295,000	8,759,300	161,598,286	17.0%	194,800,000	
Jan-09	-	-	-	-	277,000	4,552,700	157,741,212	15.6%	187,000,000	
Feb-09	-	-	-	-	295,000	2,568,300	136,199,281	20.2%	170,700,000	
Mar-09	-	-	-	-	361,000	5,615,800	149,231,377	30.6%	215,100,000	
Apr-09	-	-	-	-	203,000	3,143,100	161,640,204	26.1%	218,700,000	
May-09	-	-	-	-	228,000	2,748,300	231,635,783	45.1%	422,000,000	
Jun-09	-	-	-	-	319,000	2,776,578	364,009,082	12.9%	417,700,000	
Jul-09	-	179	-	179	268,000	3,548,147	439,988,575	22.6%	568,300,000	
Aug-09	-	-	-	-	311,000	1,535,051	497,796,796	12.7%	570,500,000	
Sep-09	-	-	-	-	282,000	3,482,027	483,809,175	-4.5%	463,000,000	

Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland

Date	Industrial	Inside - Wholesale	Outside - Wholesale	Total Other	Hydrant	Ranch	Total Consumption	%		Treated Water Demand
								Non-Revenue	Total Consumption	
Oct-09	-	-	-	-	233,000	3,891,639	331,086,554	-39.2%	237,900,000	
Nov-09	-	-	-	-	238,000	5,155,060	160,125,390	9.8%	177,500,000	
Dec-09	-	-	-	-	170,000	1,986,800	148,556,502	21.0%	188,000,000	
Jan-10	-	-	-	-	188,000	2,680,860	154,777,132	18.1%	189,000,000	
Feb-10	-	6,830	-	6,830	202,000	3,377,500	136,794,158	20.3%	171,700,000	
Mar-10	-	-	-	-	288,000	4,325,250	140,560,625	27.5%	193,900,000	
Apr-10	-	-	-	-	253,000	2,314,500	155,187,181	28.6%	217,400,000	
May-10	-	-	-	-	227,000	1,993,826,698	199,382,698	39.5%	329,700,000	
Jun-10	-	47,000	28,000	75,000	422,000	2,794,500	345,332,170	33.5%	519,600,000	
Jul-10	-	214,000	-	214,000	378,000	2,555,465	521,005,337	13.3%	601,200,000	
Aug-10	-	377,000	1,000	378,000	436,000	2,683,100	546,280,290	12.2%	622,500,000	
Sep-10	-	319,000	40,000	359,000	363,000	1,476,600	587,561,564	0.9%	593,100,000	
Oct-10	-	246,000	-	246,000	322,000	3,338,100	476,460,701	-39.4%	341,900,000	
Nov-10	-	14,000	-	14,000	305,000	3,794,200	199,181,715	-6.0%	187,900,000	
Dec-10	-	1,000	1,000	2,000	322,000	1,173,000	148,142,090	21.0%	187,500,000	
Jan-11	-	1,000	(1,000)	-	362,000	3,704,300	153,347,985	19.5%	190,600,000	
Feb-11	-	1,000	-	1,000	233,000	3,285,300	136,155,066	21.9%	174,400,000	
Mar-11	-	-	-	-	273,000	1,705,845	137,466,512	30.2%	196,900,000	
Apr-11	-	1,000	-	1,000	235,000	1,191,700	162,624,313	36.8%	257,500,000	
May-11	-	10,000	-	10,000	316,000	301,200	251,172,759	31.2%	365,300,000	
Jun-11	-	10,000	-	10,000	310,000	3,221,500	367,499,726	34.0%	556,800,000	
Jul-11	-	224,000	15,675	239,675	343,000	3,634,000	516,176,991	18.1%	630,200,000	
Aug-11	-	267,000	29,000	296,000	495,000	2,514,300	586,924,850	18.8%	722,500,000	
Sep-11	-	447,000	-	447,000	298,000	3,250,300	610,174,712	-19.5%	510,800,000	
Oct-11	-	200,000	125	200,125	328,000	2,284,700	434,606,563	-30.4%	333,200,000	
Nov-11	-	13,000	-	13,000	188,000	1,847,200	193,251,718	2.8%	198,805,395	
Dec-11	-	3,000	-	3,000	185,000	984,714	153,365,878	20.0%	191,717,971	
Jan-12	-	-	-	-	398,037	4,858,120	161,075,785	21.7%	205,635,979	
Feb-12	-	-	-	-	8,037	4,602,170	144,815,983	22.9%	187,766,371	
Mar-12	-	-	-	-	292,314	5,234,987	154,587,328	29.8%	220,053,603	
Apr-12	-	-	-	-	1,207	256,728	171,891,935	33.1%	257,078,927	
May-12	-	-	-	-	12,071	334,433	310,555,238	39.1%	510,237,893	
Jun-12	-	88,462	445,196	5,332,750	438,024,537	25.8%	590,637,023	2.8%	214,398,070	
Jul-12	-	244,992	386,456	5,240,113	584,205,183	16.3%	698,152,455	16.3%	698,152,455	
Aug-12	-	394,983	507,426	5,422,591	673,510,708	5.4%	711,709,083	5.4%	711,709,083	
Sep-12	-	465,225	376,462	5,371,338	619,420,259	-7.4%	576,935,911	-7.4%	576,935,911	
Oct-12	-	255,501	326,828	5,684,767	475,673,613	-30.9%	363,507,962	-30.9%	363,507,962	
Nov-12	-	14,207	327,160	5,486,954	208,408,808	2.8%	214,398,070	2.8%	214,398,070	
Dec-12	-	3,207	348,303	4,606,166	162,506,764	20.0%	203,144,712	20.0%	203,144,712	
Jan-13	-	-	-	-	398,037	5,440,626	165,621,985	21.7%	211,439,845	
Feb-13	-	-	-	-	8,037	239,420	148,875,931	22.9%	193,030,443	
Mar-13	-	-	-	-	292,314	5,927,644	159,037,401	29.8%	226,388,240	
Apr-13	-	1,207	256,728	5,672,547	176,736,654	33.1%	264,324,614	33.1%	264,324,614	
May-13	-	12,071	334,433	5,496,214	318,903,618	39.1%	523,954,164	39.1%	523,954,164	
Jun-13	-	88,462	445,196	6,053,982	449,709,091	25.8%	606,392,602	25.8%	606,392,602	
Jul-13	-	244,992	386,456	5,934,269	599,544,853	16.3%	716,484,077	16.3%	716,484,077	
Aug-13	-	394,983	507,426	6,170,082	691,156,285	5.4%	730,355,434	5.4%	730,355,434	
Sep-13	-	465,225	376,462	6,103,848	635,710,122	-7.4%	592,108,496	-7.4%	592,108,496	
Oct-13	-	255,501	326,828	6,508,888	488,437,580	-30.9%	373,262,137	-30.9%	373,262,137	
Nov-13	-	14,207	327,160	6,253,257	214,360,144	2.8%	220,520,436	2.8%	220,520,436	
Dec-13	-	3,207	348,303	5,115,030	166,986,595	20.0%	208,744,810	20.0%	208,744,810	
Jan-14	-	-	-	-	398,037	6,054,153	169,100,088	21.7%	215,880,135	
Feb-14	-	-	-	-	8,037	239,420	151,977,890	22.9%	197,052,399	
Mar-14	-	-	-	-	292,314	6,657,189	162,482,443	29.8%	231,292,226	
Apr-14	-	1,207	256,728	6,341,323	180,447,838	33.1%	269,875,003	33.1%	269,875,003	
May-14	-	12,071	334,433	6,122,984	325,133,726	39.1%	534,190,145	39.1%	534,190,145	
Jun-14	-	88,462	445,196	6,813,623	458,391,965	25.8%	618,100,683	25.8%	618,100,683	

**Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland**

Date	Industrial	Inside - Wholesale	Outside - Wholesale	Total Other	Hydrant	Ranch	%		Treated Water Demand
							Total Consumption	Non-Revenue	
Jul-14				244,992	386,456	6,665,392	610,860,344	16.3%	730,006,617
Aug-14				394,983	507,426	6,957,381	704,155,892	5.4%	744,092,319
Sep-14				465,225	376,462	6,875,368	647,724,998	-7.4%	603,299,305
Oct-14				255,501	326,828	7,376,896	497,934,559	-30.9%	380,519,692
Nov-14				14,207	327,160	7,060,369	218,914,499	2.8%	225,205,674
Dec-14				3,207	348,303	5,650,993	170,392,391	20.0%	213,002,291
Jan-15				-	398,037	6,648,643	172,767,213	21.7%	220,561,738
Feb-15				8,037	239,420	6,162,741	155,249,718	22.9%	201,294,606
Mar-15				-	292,314	7,364,097	166,102,080	29.8%	236,444,744
Apr-15				1,207	256,728	6,989,347	184,359,245	33.1%	275,724,844
May-15				12,071	334,433	6,730,305	331,751,366	39.1%	545,062,835
Jun-15				88,462	445,196	7,549,693	467,626,745	25.8%	630,552,961
Jul-15				244,992	386,456	7,373,829	622,921,908	16.3%	744,420,749
Aug-15				394,983	507,426	7,720,250	718,018,070	5.4%	758,740,695
Sep-15				465,225	376,462	7,622,949	660,532,558	-7.4%	615,228,428
Oct-15				255,501	326,828	8,217,972	508,031,341	-30.9%	388,235,615
Nov-15				14,207	327,160	7,842,438	232,715,978	2.8%	230,145,138
Dec-15				3,207	348,303	6,170,326	173,989,997	20.0%	217,499,548
Jan-16				-	398,037	6,986,238	176,395,601	21.7%	225,193,888
Feb-16				8,037	239,420	6,456,980	158,493,156	22.9%	205,500,002
Mar-16				-	292,314	7,765,532	169,623,047	29.8%	241,456,808
Apr-16				1,207	256,728	7,357,343	188,222,325	33.1%	281,502,406
May-16				12,071	334,433	7,075,188	338,533,300	39.1%	556,205,457
Jun-16				88,462	445,196	7,967,688	477,146,859	25.8%	643,389,986
Jul-16				244,992	386,456	7,776,133	635,483,410	16.3%	759,432,330
Aug-16				394,983	507,426	8,153,464	732,480,644	5.4%	774,023,518
Sep-16				465,225	376,462	8,047,481	673,873,327	-7.4%	627,654,191
Oct-16				255,501	326,828	8,695,597	518,421,828	-30.9%	396,175,985
Nov-16				14,207	327,160	8,286,555	228,464,883	2.8%	235,030,518
Dec-16				3,207	348,303	6,465,242	177,581,743	20.0%	221,989,480
Jan-17				-	398,037	6,986,238	179,755,500	21.7%	229,483,273
Feb-17				8,037	239,420	6,456,980	161,504,288	22.9%	209,404,194
Mar-17				-	292,314	7,765,532	172,808,090	29.8%	245,990,686
Apr-17				1,207	256,728	7,357,343	191,790,805	33.1%	286,839,370
May-17				12,071	334,433	7,075,188	345,105,530	39.1%	567,003,538
Jun-17				88,462	445,196	7,967,688	486,440,122	25.8%	655,921,122
Jul-17				244,992	386,456	7,776,133	647,897,952	16.3%	774,268,287
Aug-17				394,983	507,426	8,153,464	746,804,620	5.4%	789,159,883
Sep-17				465,225	376,462	8,047,481	687,060,805	-7.4%	639,937,175
Oct-17				255,501	326,828	8,695,597	528,542,860	-30.9%	403,910,439
Nov-17				14,207	327,160	8,286,555	232,860,073	2.8%	239,552,016
Dec-17				3,207	348,303	6,465,242	180,947,807	20.0%	226,197,292
Jan-18				-	398,037	6,813,834	182,850,198	21.7%	233,434,091
Feb-18				8,037	239,420	6,306,718	164,281,993	22.9%	213,005,727
Mar-18				-	292,314	7,560,527	175,700,159	29.8%	250,107,519
Apr-18				1,207	256,728	7,169,414	195,072,797	33.1%	291,747,867
May-18				12,071	334,433	6,899,062	351,320,115	39.1%	577,214,014
Jun-18				88,462	445,196	7,754,225	495,263,252	25.8%	667,818,325
Jul-18				244,992	386,456	7,570,684	659,764,167	16.3%	788,448,968
Aug-18				394,983	507,426	7,932,230	760,511,747	5.4%	803,644,414
Sep-18				465,225	376,462	7,830,681	699,667,256	-7.4%	651,678,985
Oct-18				255,501	326,828	8,451,683	538,140,443	-30.9%	411,244,876
Nov-18				14,207	327,160	8,059,752	236,907,068	2.8%	243,715,315
Dec-18				3,207	348,303	6,314,634	184,070,295	20.0%	230,100,619
Jan-19				-	398,037	6,648,643	186,017,450	21.7%	237,477,535
Feb-19				8,037	239,420	6,162,741	167,124,544	22.9%	216,691,338
Mar-19				-	292,314	7,364,097	178,662,746	29.8%	254,324,734

**Table C-4 - Monthly Water Demands Past and Future for Above Average Conditions
City of Loveland**

Date	Industrial	Inside - Wholesale	Outside - Wholesale	Total Other	Hydrant	Ranch	Total Consumption	%		Treated Water Demand
								Non-Revenue		
Apr-19				1,207	256,728	6,989,347	198,432,051	33.1%		296,771,915
May-19				12,071	334,433	6,730,305	357,669,883	39.1%		587,646,594
Jun-19				88,462	445,196	7,549,693	504,276,043	25.8%		679,971,270
Jul-19				244,992	386,456	7,373,829	671,880,411	16.3%		802,928,444
Aug-19				394,983	507,426	7,720,250	774,506,696	5.4%		818,433,091
Sep-19				465,225	376,462	7,622,949	712,539,243	-7.4%		663,668,117
Oct-19				255,501	326,828	8,217,972	547,945,061	-30.9%		418,737,527
Nov-19				14,207	327,160	7,842,438	241,049,028	2.8%		247,976,307
Dec-19				3,207	348,303	6,170,326	187,264,545	20.0%		234,093,653
Jan-20				-	398,037	6,813,834	189,581,734	21.7%		242,027,847
Feb-20				8,037	239,420	6,306,718	170,314,777	22.9%		220,827,750
Mar-20				-	292,314	7,560,527	182,081,372	29.8%		259,191,115
Apr-20				1,207	256,728	7,169,414	202,222,225	33.1%		302,440,441
May-20				12,071	334,433	6,899,062	364,487,535	39.1%		598,847,901
Jun-20				88,462	445,196	7,754,225	513,882,246	25.8%		692,924,379
Jul-20				244,992	386,456	7,570,684	684,636,624	16.3%		818,172,714
Aug-20				394,983	507,426	7,932,230	789,209,742	5.4%		833,970,025
Sep-20				465,225	376,462	7,830,681	726,088,286	-7.4%		676,287,868
Oct-20				255,501	326,828	8,451,683	558,417,867	-30.9%		426,740,805
Nov-20				14,207	327,160	8,059,752	245,712,802	2.8%		252,774,109
Dec-20				3,207	348,303	6,314,634	190,814,182	20.0%		238,530,945

**Table C-5 - Estimates of Passive Savings - Past and Future
City of Loveland**

Year	Population	Toilet		Passive Savings (in gpcd) D/W + Clothes Washers*				Total		Reduced Demand (1000s of gallons/day)	
		High	Low	High	Low	High	Low	High	Low	High	Low
2005											
2006		6.61	1.98	0.95	0.62						
2007		7.27	2.18	1.91	1.25						
2008		7.93	2.38	2.86	1.87						
2009		8.59	2.58	3.82	2.49						
2010		9.25	2.78	4.77	3.12						
2011	67455	9.91	2.97	5.73	3.74	4.84	2.46	326.81	166.19	Estimate of Past Water Demand Reductions from Passive Savings	
2012	68495	10.57	3.17	6.68	4.36	1.61	0.82	110.62	56.25		
2013	69690	11.23	3.37	7.63	4.98	3.23	1.64	225.09	114.46		
2014	70991	11.89	3.57	8.59	5.61	4.84	2.46	343.94	174.90		
2015	72403	12.56	3.77	9.54	6.23	6.46	3.28	467.71	237.84		
2016	73926	12.91	3.95	10.50	6.85	7.77	4.09	574.30	302.25		
2017	75449	13.26	4.13	11.45	7.48	9.08	4.89	684.88	369.12		
2018	76975	13.62	4.31	11.45	8.10	9.43	5.70	726.03	438.44		
2019	78502	13.97	4.49	11.45	8.72	9.79	6.50	768.27	510.23		
2020	80086	14.33	4.67	11.45	9.35	10.14	7.30	812.16	584.88		
										Estimate of Future Passive Savings Demand Reductions in 2020	

* dish washers plus clothes washers

**Table C-6 - Past and Forecasted Annual Water Demands without Passive Savings
City of Loveland
Average Conditions**

Year	Residential		Commercial		City Use	Other Uses	Hydrant	Ranch
	Inside City	Outside City	Inside City	Outside City				
2005	2,623,544	133,597	466,292	21,020	53,628	93,248	4,610	97,001
2006	3,186,549	150,123	517,424	22,288	68,868	101,227	5,102	123,473
2007	2,989,778	139,242	515,274	20,981	68,262	54,810	3,683	53,921
2008	2,967,702	140,831	590,295	18,266	69,194	5	4,033	78,957
2009	2,516,008	120,300	510,429	14,786	56,127	0	3,166	41,004
2010	2,816,305	133,651	538,454	16,429	68,156	1,295	3,707	32,669
2011	2,875,155	134,224	572,683	16,680	71,316	1,221	3,584	27,905
2012	2,810,555	132,251	556,283	16,639	65,942	1,258	3,646	27,397
2013	2,886,440	132,251	571,303	17,089	65,942	1,258	3,646	35,404
2014	2,941,283	132,251	582,157	17,413	65,942	1,258	3,646	43,838
2015	3,000,108	132,251	593,800	17,762	65,942	1,258	3,646	52,011
2016	3,063,110	132,251	606,270	18,135	65,942	1,258	3,646	56,651
2017	3,127,436	132,251	619,002	18,516	65,942	1,258	3,646	56,651
2018	3,189,984	132,251	631,382	18,886	65,942	1,258	3,646	54,281
2019	3,253,784	132,251	644,010	19,264	65,942	1,258	3,646	52,011
2020	3,318,860	132,251	656,890	19,649	65,942	1,258	3,646	54,281
	47,566,602	2,142,230						
	96%							
		4%						

Above Average Conditions

Year	Residential		Commercial		City Use	Other Uses	Hydrant	Ranch
	Inside City	Outside City	Inside City	Outside City				
2005	2,623,544	133,597	466,292	21,020	53,628	93,248	4,610	97,001
2006	3,186,549	150,123	517,424	22,288	68,868	101,227	5,102	123,473
2007	2,989,778	139,242	515,274	20,981	68,262	54,810	3,683	53,921
2008	2,967,702	140,831	590,295	18,266	69,194	5	4,033	78,957
2009	2,516,008	120,300	510,429	14,786	56,127	0	3,166	41,004
2010	2,816,305	133,651	538,454	16,429	68,156	1,295	3,707	32,669
2011	2,875,155	134,224	572,683	16,680	71,316	1,221	3,584	27,905
2012	3,164,806	166,347	607,925	19,733	78,359	1,488	4,239	61,779
2013	3,250,256	166,347	624,339	20,266	78,359	1,488	4,239	69,786
2014	3,312,010	166,347	636,202	20,651	78,359	1,488	4,239	78,220
2015	3,378,251	166,347	648,926	21,064	78,359	1,488	4,239	86,393
2016	3,449,194	166,347	662,553	21,506	78,359	1,488	4,239	91,033
2017	3,521,627	166,347	676,467	21,958	78,359	1,488	4,239	91,033
2018	3,592,060	166,347	689,996	22,397	78,359	1,488	4,239	88,663
2019	3,663,901	166,347	703,796	22,845	78,359	1,488	4,239	86,393
2020	3,737,179	166,347	717,872	23,302	78,359	1,488	4,239	88,663

Table C-6 - Past and Forecasted Annual Water Demands without Passive Savings

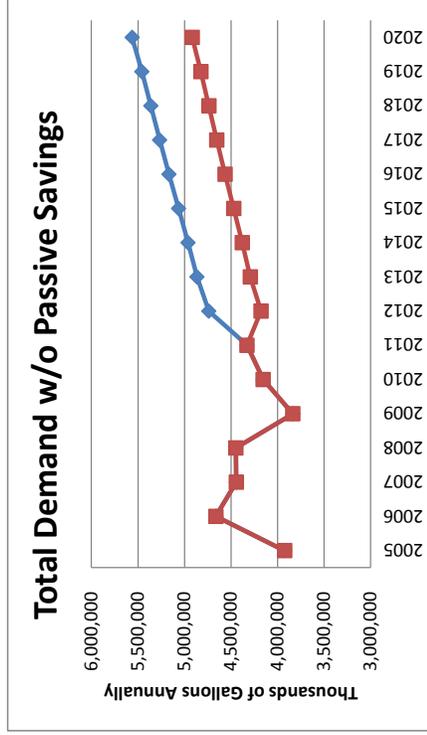
City of Loveland

Average Conditions

Year	Total		Demand (1000 gallons)	Acre-Feet of Demand
	Billed	Non-Revenue		
2005	3,492,940	430,360	3,923,300	12,040
2006	4,175,054	487,646	4,662,700	14,309
2007	3,845,950	597,250	4,443,200	13,636
2008	3,869,283	579,317	4,448,600	13,652
2009	3,261,820	574,580	3,836,400	11,773
2010	3,610,666	544,734	4,155,400	12,752
2011	3,702,767	625,956	4,328,723	13,284
2012	3,613,971	563,532	4,177,503	12,820
2013	3,713,332	579,385	4,292,717	13,174
2014	3,787,788	591,383	4,379,171	13,439
2015	3,866,777	604,074	4,470,851	13,721
2016	3,947,263	616,825	4,564,088	14,007
2017	4,024,701	628,876	4,653,577	14,281
2018	4,097,630	640,110	4,737,740	14,540
2019	4,172,164	651,599	4,823,763	14,804
2020	4,252,776	664,254	4,917,031	15,090
		13.5%		

Above Average Conditions

Year	Total		Demand (1000 gallons)	Acre-Feet of Demand
	Billed	Non-Revenue		
2005	3,492,940	430,360	3,923,300	12,040
2006	4,175,054	487,646	4,662,700	14,309
2007	3,845,950	597,250	4,443,200	13,636
2008	3,869,283	579,317	4,448,600	13,652
2009	3,261,820	574,580	3,836,400	11,773
2010	3,610,666	544,734	4,155,400	12,752
2011	3,702,767	625,956	4,328,723	13,284
2012	4,104,676	634,582	4,739,258	14,544
2013	4,215,080	651,925	4,867,005	14,936
2014	4,297,517	665,000	4,962,516	15,229
2015	4,385,066	678,846	5,063,912	15,541
2016	4,474,720	692,834	5,167,555	15,859
2017	4,561,518	706,149	5,267,667	16,166
2018	4,643,549	718,611	5,362,161	16,456
2019	4,727,368	731,353	5,458,721	16,752
2020	4,817,449	745,287	5,562,736	17,071
		13.4%		



**Table C-7 - Past and Forecasted Annual Water Demand with Passive Savings
City of Loveland**

Average Conditions

Year	Billed Water (in 1000s of gallons)						Ranch	
	Residential		Commercial		City Use	Other Uses		Hydrant
	Inside City	Outside City	Inside City	Outside City				
2005	2,623,544	133,597	466,292	21,020	53,628	93,248	97,001	
2006	3,186,549	150,123	517,424	22,288	68,868	101,227	123,473	
2007	2,989,778	139,242	515,274	20,981	68,262	54,810	53,921	
2008	2,967,702	140,831	590,295	18,266	69,194	5	78,957	
2009	2,516,008	120,300	510,429	14,786	56,127	0	41,004	
2010	2,816,305	133,651	538,454	16,429	68,156	1,295	32,669	
2011	2,875,155	134,224	572,683	16,680	71,316	1,221	27,905	
2012	2,781,414	130,939	556,283	16,639	65,942	1,258	27,397	
2013	2,827,141	129,581	571,303	17,089	65,942	1,258	35,404	
2014	2,850,674	128,171	582,157	17,413	65,942	1,258	43,838	
2015	2,876,894	126,702	593,800	17,762	65,942	1,258	52,011	
2016	2,910,033	125,357	606,270	18,135	65,942	1,258	56,651	
2017	2,943,371	123,962	619,002	18,516	65,942	1,258	56,651	
2018	2,986,628	123,093	631,382	18,886	65,942	1,258	54,281	
2019	3,030,515	122,196	644,010	19,264	65,942	1,258	52,011	
2020	3,074,886	121,264	656,890	19,649	65,942	1,258	54,281	

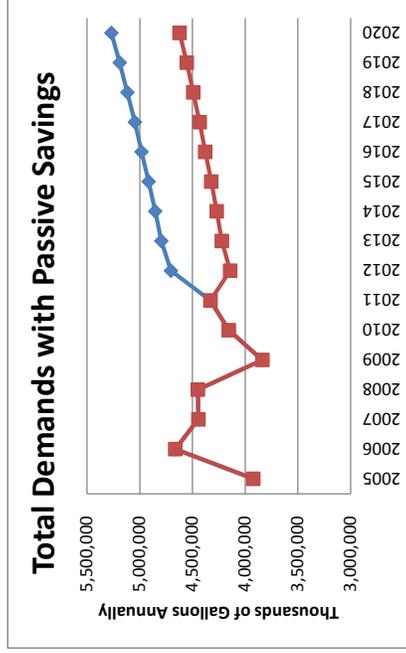
Above Average Conditions

Year	Billed Water (in 1000s of gallons)						Ranch	
	Residential		Commercial		City Use	Other Uses		Hydrant
	Inside City	Outside City	Inside City	Outside City				
2005	2,623,544	133,597	466,292	21,020	53,628	93,248	97,001	
2006	3,186,549	150,123	517,424	22,288	68,868	101,227	123,473	
2007	2,989,778	139,242	515,274	20,981	68,262	54,810	53,921	
2008	2,967,702	140,831	590,295	18,266	69,194	5	78,957	
2009	2,516,008	120,300	510,429	14,786	56,127	0	41,004	
2010	2,816,305	133,651	538,454	16,429	68,156	1,295	32,669	
2011	2,875,155	134,224	572,683	16,680	71,316	1,221	27,905	
2012	3,135,665	165,035	607,925	19,733	78,359	1,488	61,779	
2013	3,190,957	163,677	624,339	20,266	78,359	1,488	69,786	
2014	3,221,402	162,267	636,202	20,651	78,359	1,488	78,220	
2015	3,255,036	160,798	648,926	21,064	78,359	1,488	86,393	
2016	3,296,116	159,453	662,553	21,506	78,359	1,488	91,033	
2017	3,337,563	158,058	676,467	21,958	78,359	1,488	91,033	
2018	3,388,703	157,189	689,996	22,397	78,359	1,488	88,663	
2019	3,440,631	156,292	703,796	22,845	78,359	1,488	86,393	
2020	3,493,205	155,360	717,872	23,302	78,359	1,488	88,663	

**Table C-7 - Past and Forecasted Annual Water Demand with Passive Savings
City of Loveland**

Year	Average Conditions			Acre-Feet of Demand
	Total Billed	Total Non-Revenue	Total Demand (1000 gallons)	
2005	3,492,940	430,360	3,923,300	12,040
2006	4,175,054	487,646	4,662,700	14,309
2007	3,845,950	597,250	4,443,200	13,636
2008	3,869,283	579,317	4,448,600	13,652
2009	3,261,820	574,580	3,836,400	11,773
2010	3,610,666	544,734	4,155,400	12,752
2011	3,702,767	625,956	4,328,723	13,284
2012	3,583,517	558,784	4,142,301	12,712
2013	3,651,363	569,716	4,221,079	12,954
2014	3,693,099	576,599	4,269,698	13,103
2015	3,738,014	583,958	4,321,972	13,264
2016	3,787,292	591,827	4,379,118	13,439
2017	3,832,347	598,820	4,431,167	13,599
2018	3,885,115	606,912	4,492,027	13,786
2019	3,938,840	615,159	4,553,998	13,976
2020	3,997,815	624,431	4,622,247	14,185
		13.5%		

Year	Above Average Conditions			Acre-Feet of Demand
	Total Billed	Total Non-Revenue	Total Demand (1000 gallons)	
2005	3,492,940	430,360	3,923,300	12,040
2006	4,175,054	487,646	4,662,700	14,309
2007	3,845,950	597,250	4,443,200	13,636
2008	3,869,283	579,317	4,448,600	13,652
2009	3,261,820	574,580	3,836,400	11,773
2010	3,610,666	544,734	4,155,400	12,752
2011	3,702,767	625,956	4,328,723	13,284
2012	4,074,223	629,874	4,704,096	14,436
2013	4,153,111	642,341	4,795,451	14,717
2014	4,202,827	650,348	4,853,175	14,894
2015	4,256,302	658,912	4,915,214	15,084
2016	4,314,748	668,066	4,982,814	15,292
2017	4,369,164	676,371	5,045,536	15,484
2018	4,431,034	685,723	5,116,758	15,703
2019	4,494,043	695,256	5,189,299	15,925
2020	4,562,488	705,843	5,268,331	16,168
		13.4%		



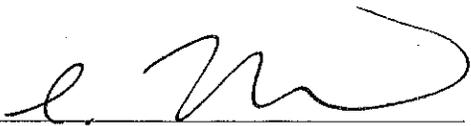
Appendix F
Public Comment Notice and Public Comments

AFFIDAVIT OF PUBLICATION REPORTER-HERALD

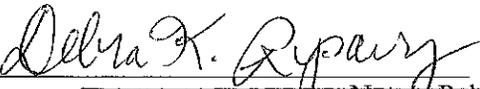
State of Colorado
County of Larimer

I, the undersigned agent, do solemnly swear that the LOVELAND REPORTER-HERALD is a daily newspaper printed, in whole or in part, and published in the City of Loveland, County of Larimer, State of Colorado, and which has general circulation therein and in parts of Larimer and Weld counties; that said newspaper has been continuously and uninterruptedly published for a period of more than six months next prior to the first publication of the annexed legal notice of advertisement, that said newspaper has been admitted to the United States mails as second-class matter under the provisions of the Act of March 3, 1879, or any, amendments thereof, and that said newspaper is a daily newspaper duly qualified for publishing legal notices and advertisements within the meaning of the laws of the State of Colorado; that a copy of each number of said newspaper, in which said notice of advertisement was published, was transmitted by mail or carrier to each of the subscribers of said newspaper, according to the accustomed mode of business in this office.

The annexed legal notice or advertisement was published in the regular and entire edition of said daily newspaper once; and that one publication of said notice was in the issue of said newspaper dated **February 23, 2013**.


Agent

Subscribed and sworn to before me this **25th** day of **February**, 2013 in the County of Larimer, State of Colorado.



Notary Public
DEBRA K RYSAV
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID # 19934006283
MY COMMISSION EXPIRES APRIL 30, 2017

Account # 222255
Ad #5580546
Fee \$22.31

PUBLIC NOTICE OF WATER CONSERVATION PLAN
CITY OF LOVELAND
PUBLIC COMMENT PERIOD: FEBRUARY 21 - APRIL 21, 2013
PUBLIC HEARING: CITY COUNCIL MEETING, MAY 14, 2013
Notice is hereby given that the City of Loveland is updating its Water Conservation Plan, pursuant to State Law. The City is seeking public comment over the next 60-days, and will conduct a Public Hearing on the Plan during the City Council Meeting on Tuesday, May 14, 2013. The City Council Meeting will be called to order at 6:30 p.m. in the City Council Chambers, 500 East Third Street, Loveland. Comments on the Water Conservation Plan will be received during the time designated in the meeting's agenda.
The City's Water Conservation Plan is designed to promote the efficient consumption of all water usage by residents, businesses, and local governments to more beneficially use our water resources, and insure a future adequate water supply.
The Water Conservation Plan is available for review and comment by the public at the City Service Center, 200 North Wilson Avenue, and at the Loveland Public Library, 300 North Adams, during regular business hours or online at www.cityofloveland.org/WCP.
The point of contact for the Water Conservation Plan is Lindsey Bashline, Customer Relations Specialist, who can be reached at 970-962-3727.
City of Loveland
Teresa G. Andrews, City Clerk
Published: Loveland Reporter-Herald on Feb. 23, 2013. Ad #5580546

WATER CONSERVATION PLAN

PUBLIC NOTICE OF WATER CONSERVATION PLAN

CITY OF LOVELAND

PUBLIC COMMENT PERIOD: FEBRUARY 21 – APRIL 21, 2013

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The Water Conservation Plan is available for review and comment by the public at the City Service Center, 200 North Wilson Avenue, and at the Loveland Public Library, 300 North Adams, during regular business hours or online by viewing a copy of the updated Water Conservation Plan here and submitting comments to SustainLoveland@cityofloveland.org.

The point of contact for the Water Conservation Plan is Lindsey Bashline, Customer Relations Specialist, who can be reached at 970-962-3727.

Comments: Inquiries were made as to how we track the Colorado Big Thompson sales price. Staff responded that we use Stratecon, Inc. to track the price. Inquiries were made as to how often we adjust the market price of C-BT and staff responded that it has varied over the years. At times we have changed the price monthly and at other times the price has remained steady for years. Staff informed LUC that we purchased 282 units of C-BT in 2012.

The City of Loveland cash-in-lieu fee is calculated as 1.05 times the recognized C-BT market price. Using the new recognized C-BT market price results in a cash-in-lieu fee of \$11,200 per acre-foot.

Item #3: Change of Installation of Services – Briana Reed-Harmel The power division has been piloting a change to the way that residential service installations are installed.

Recommendation: Staff recommends that this new installation procedure be incorporated into the Requirements for Electric Services book.

Motion: John Matis made the motion.

Second: CJ McKinney seconded the motion. The motion was approved unanimously.

Comments: Board members inquired over who inspects the service installations, who owns the service installation and what to do if the marking stakes are knocked out. Staff responded that the City inspects them and that they are required to meet the National Electric Code. Once energized, the City owns the service. If the stakes are knocked down, we have exact measurements to be able to locate the underground structures. Power staff also presented these changes to CAB who approved the change barring any negative comments from a survey of Developers and Contractors involved in the pilot program. Dave Schneider provided some suggestions on how to avoid too much leverage or damages made to the box and Briana Reed-Harmel thanked him for his suggestions and said she would look into it.

Item #4: Draft Updated Water Conservation Plan – Lindsey Bashline & Tracy Bouvette Unfortunately, Tracy Bouvette was ill and unable to make the meeting. In his stead, Lindsey Bashline and Greg Dewey gave verbal presentation. The purpose of this item is to provide LUC with an overview of the Draft Water Conservation Plan. To comply with the State's Water Conservation Act of 2004, staff has updated the 1996 Loveland Water Conservation Plan.

Recommendation: Information item only. No action required.

Comments:

Darell Zimbelman inquired what this plan was needed for. Staff responded that it is required for the Windy Gap Firing Project and for compliance to Colorado's Water Conservation Act of 2004. Board members inquired over how public comments would be handled and how board members would be kept informed of these public comments. Staff responded that we could send the comments to board members or summaries of the commentary to board members. Some board members expressed interest in having the innovative and non-standard comments passed on to them.

Gene Packer inquired about whether we have a way of measuring upstream usage versus downstream usage to help discover where leaks are occurring. Steve Adams responded that there are some large water distribution systems that do use in-stream measurements to determine where losses are occurring. However, these are very expensive and would be cost prohibitive for the City of Loveland to incorporate at this time. If we were to incorporate AMI, we could do instantaneous measurements to see where there are variations in consumption to find leaks. The City has purchase lead detection equipment and last year used the equipment to inspect 26 miles of waterlines. We are focusing first on using this equipment in areas with older pipes or in areas where we suspect leaks.

Board member asked for examples of unbilled usages. Staff responded that there are small parks or areas where we water just a few trees or plants and do not meter the usage or bill parks for the water.

A larger use would be at the fire training ground where there are 6 fire hydrants. We are coordinating with fire so that their training occurs in off peak periods. John Rust Jr. expressed that it may be good for us to communicate to the public the benefits of these authorized unmetered uses of water.

Steve Adams explained how we are looking to use Water Services of America who has proprietary software that can analyze information such as billing rates, readings, and volumetric measurements, and help find under billed errors and close the gap between water is metered and what is billed. They have saved companies millions of dollars and are paid based on the losses they find – 45% of the first 3 years of savings. We will be able to not only fix the problems, but also make more money.

Board members made inquiries as to what is normal for real losses of non-revenue water. Staff commented that anything under 5% is very good and that even under 15% is not bad. Board members inquired and made comments in regards to our efforts to educate not only schools, but also landscapers and working with Planning and HOA's to change landscaping requirements to conserve water through using more Xeriscape.

STAFF REPORTS

Item #5: Oil & Gas Aquifers as Potential Raw Water Supply – Larry Howard In the November LUC meeting, local attorney John Chilson spoke to the LUC and addressed the need for continued water management and the importance of completing the Windy Gap Firing Project. He expressed his concerns about climate change and about how drought and politics on the Colorado River could negatively affect future water supplies in this state. John proposed the possibility of using groundwater from aquifers in which oil and gas wells are being drilled in the vicinity as a future source of raw water for the city, or from springs in the vicinity of Chimney Hollow west of Carter Lake. This item provides information about the feasibility of using these sources, based on information from the Colorado Oil & Gas Conservation Commission website at <http://cogcc.state.co.us/>, other web sources, and discussion with staff member Greg Deranleau, Oil & Gas Location Assessment Supervisor.

Staff Report only. No action required.

Comments: Inquiry was made if we could send John Chilson this information, and staff responded that John Chilson did receive a copy of this item and he has been added to the monthly email list that provides a link to the most current LUC packet.

Item #6: Financial Report Update – Jim Lees This item summarizes the monthly and year-to-date financials for December 2012.

Staff Report only. No action required.

COMMISSION/COUNCIL REPORTS

Item #7: Commission/Council Reports

- Colorado Water Congress – January 31, 2013 to February 1, 2013
- City Council Meeting on Water Financing – February 19, 2013

John Rust Jr: At the Water Congress everyone present expressed that they are dealing with the same problems as us in replacing lines, burned out equipment, increase rates. These are state wide issues. In time, we will see tremendous rate increases across the state as utilities work through these problems. He said that we are fortunate that Loveland already has plans and is working on obtaining funding to deal with these problems unlike some other utilities that are still trying to figure out what they will do. He particularly enjoyed the presentation on age differences and generation differences and the importance of getting the younger generation involved in conferences like these because they will become our future leaders.

REGULAR AGENDA

Item 1: 2013 1st Quarter Goals and Milestones Report – Steve Adams This is a quarterly review of our progress on our 2013 utility goals and milestones report.

Recommendation: Discuss the presented information and approve the 1st Quarter 2013 LUC status report.

Motion: John Rust Jr. made the motion to accept the goal updates as amended.

Second: Dan Herlihey seconded the motion. The motion was approved unanimously.

Comments: John Rust Jr. asked that the following changes be made:

- Goal #10 - Should say “copper” thefts instead of “cooper” thefts.
- Goal #11 - Should say “will include staff” instead of “will includes staff”.
- Goal #15 – Change the hydraulic fracturing ordinance effective date to April 15, 2013.
- Goal #17 - Clarified that a preliminary draft version of the Drought Response Plan was presented on March 20, 2013.
- Goal #18 – Make sure that on the next quarterly update includes the enhancement pumps for the Windy Gap Firing Project in the Kremmling area.

Item 6: Water Conservation Plan Update – Lindsey Bashline & Greg Dewey The purpose of this item is to provide LUC with an overview of the Water Conservation Plan and summary of comments collected from the public comment period. To comply with the State’s Water Conservation Act of 2004, staff has updated the 1996 Loveland Water Conservation Plan.

Recommendation: Adopt a motion recommending that the City Council adopt the updated City of Loveland Water Conservation Plan.

Motion: Gary Hausman made the motion.

Second: John Matis seconded the motion. The motion was approved unanimously.

Comments: Board members inquired whether the plan should include information about leasing water back to agriculture, particularly if we have more water than what is needed in a particular year. They also commented on whether the plan should include a correlation on the percent quota of water rights we receive from Northern Water each year and how we use water for things such as watering lawns. Staff responded that the Water Conservation Plan is what we are planning to do on a continual basis; whereas, the Drought Management Plan covers these types of topics that change from year to year.

The Board inquired on the approval process and staff responded that we have already sent a preliminary version of the plan to the State. The State gave us feedback and expressed concern over not having tiered rates. We addressed those concerns and explained why we do not have tiered rates and how that rate structure has worked for our utility. The final plan is approved by LUC, then by City Council, and then it will be sent to the State for final approval. Although some plans have been rejected by the State, we are using a consultant with a very good track record of receiving plan approvals from the State, and he has a good working relationship with the State.

Item 7: Drought Management Plan Update – Greg Dewey The purpose of this item is to provide LUC with an update of the proposed Drought Management Plan. Comments and suggestions are requested prior to Staff presenting this to the City Council at a study session on May 14, 2013.

Recommendation:

Part 1 - Adopt a motion recommending that the City Council adopt the Drought Management Plan.

Motion: Dan Herlihey made the motion.

Second: John Rust Jr. seconded the motion. The motion was approved unanimously.

1

CITY OF LOVELAND
WATER AND POWER

UPDATED WATER CONSERVATION
PLAN

JUNE 4, 2013

GREAT WESTERN INSTITUTE

2

Colorado's Water Conservation Act of 2004, all covered entities, must have a water efficiency plan on file with the state that has been approved by the Colorado Water Conservation Board (CWCB).

- Approved Plan for CWCB grants and loans
- State compliance for future projects
- Community expectation

Water Conservation

3

- Colorado Water Conservation Board defines Water Conservation as:

Water use efficiency, wise water use, water transmission and distribution system efficiency, and supply substitution. The objective of water conservation is a long-term increase in the productive use of water supply in order to satisfy water supply needs without compromising desired water service.

Loveland's Conservation History

4

- Lawn Watering Restrictions – 1893
 - Town divided into two sections, one watered from 5am-1pm and the other from 1pm-9pm.
- 1970-1981 watering restrictions allowing watering only every two or three days.
- June 1980, City Council passed an ordinance requiring all water services to be metered.
- 1982 restrictions lifted after the installation of water meters and expansion of the water treatment plant.

	1981	1982	Percent change
Peak Day	19.5	15.0	-23.1
Average day	7.2	6.0	-16.7
Total production (million gallons)	2620.4	2203.8	-15.9

Loveland's Conservation History

5

- 1994 Water Conservation Specialist Position
- May 1996 Water Conservation Plan (City Council Approved June 4, 1996)
 - ▣ Promote the wise use of water among citizens
 - ▣ Reduce peak day demand
 - ▣ Reduce wastewater flows
- 1996 Jeff Peterson Xeriscape Demonstration Garden
 - ▣ 2004 Service Center Demonstration Garden
- 2006 Irrigation Task Force
- 2006 Hydrozone Program (Water Efficient Landscape Program)

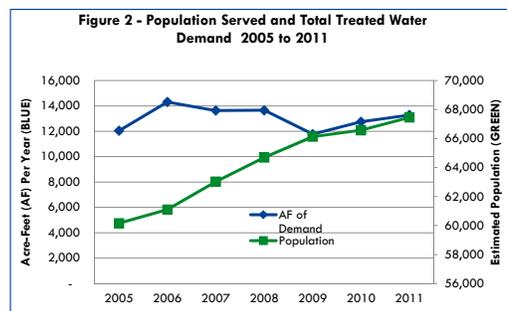
Overview

6

- Culture of Stewardship
- A Water Supply that

is:

Reliable
Secure
Sustainable



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Specifics/Guiding Principles

7

- First Community Metered in Colorado
- Uniform Water Rates
- No Rebates

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Conservation Plan Update

8

- Overview of Project Parts
 - Data Mining and Assessment
 - Goal Setting
 - Evaluations and Assessments
 - Program Selection
 - Implementation



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Background

9

- Funding Summary
 - ▣ Governor's Energy Office funding to Recharge Colorado
 - Seed Money for Data Mining from Billing Data
 - Symbiotic/Great Western Institute
 - ▣ Supplemental Funding by Water and Power
 - ▣ Meetings
 - Data
 - Forecasting
 - Goal Setting
 - Selection and Implementation

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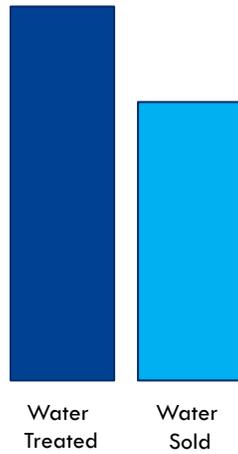
Specifics/Guiding Principles

10

- Loveland's water conservation plan focuses on assisting future water use efficiency within the utility's service area by:
 - ▣ Managing City water use both indoor and outdoor;
 - ▣ Identifying and implementing measures and programs that are expected to reduce summertime peak day water demand; and
 - ▣ Assisting customers that wish to improve their water efficiency.

Non-Revenue Water

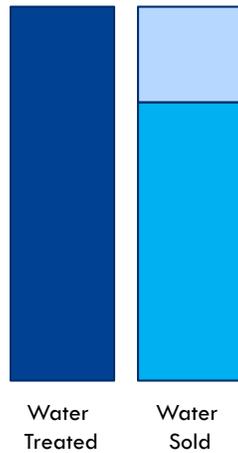
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Non-Revenue Water

12

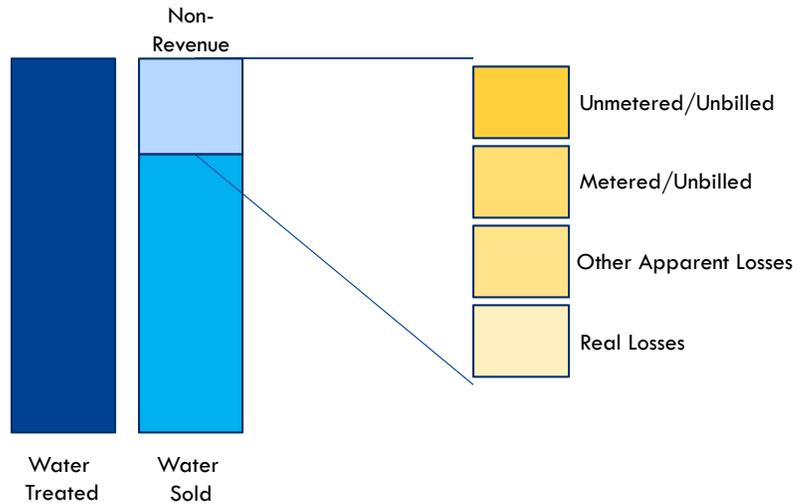


Non-Revenue Water –
Water that has a cost to produce
(e.g., energy, treatment, distribution)
which does not produce revenue.

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Non-Revenue Water

13



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Unbilled Authorized Uses

14

- Isolated locations in City Facilities
- Line Flushing
- Inactive accounts that may be using water
- Can Be 1 – 3% of Water Production

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Unbilled Unauthorized/ Unmetered Uses

15

- Theft
- Is Typically less than 1% of Water Production

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Apparent Losses

16

- Key Types
 - Customer Metering Inaccuracies
 - Systematic Data Handling Errors
- Can Be 3-6% of Water Production

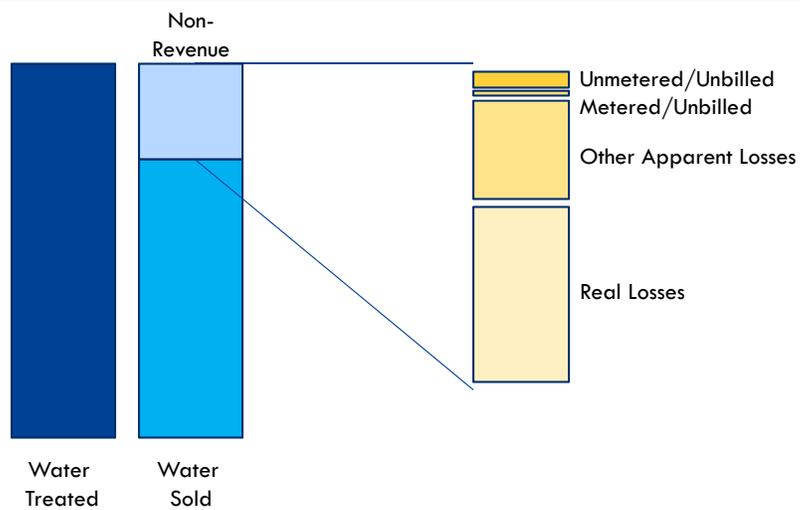
Real Losses

17

- Key Types
 - ▣ Leaks on the Supply Side of the Meter
 - Detected
 - Undetected
 - ▣ Dependent on Pipe Material/Age/Location

Non-Revenue Water

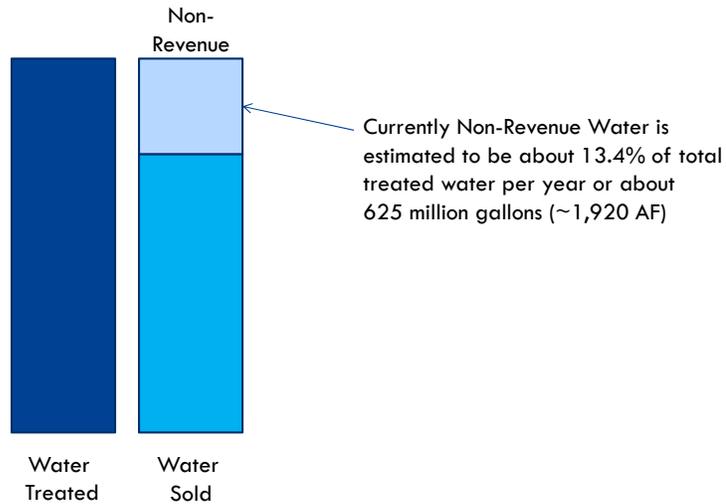
18



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Non-Revenue Water

19



Metering Issues

20

- Meters are aging
- Meter reading consistency (e.g., access issues, staff availability, timing of master meter reading and customer meter reading)

Size (inches)	5/8 – 3/4	1	1.5	2	3	4	6+
Quantity	23,616	729	375	274	56	27	8
Total							25,086*

* Includes 1-1.25 inch meter

Improving Metering

21

□ Key Actions

▣ Best Management Practices

- Tracking of Meter Age and Use
- Testing and/or Replacement of Large Meters
- Consistent Meter Replacement Programs

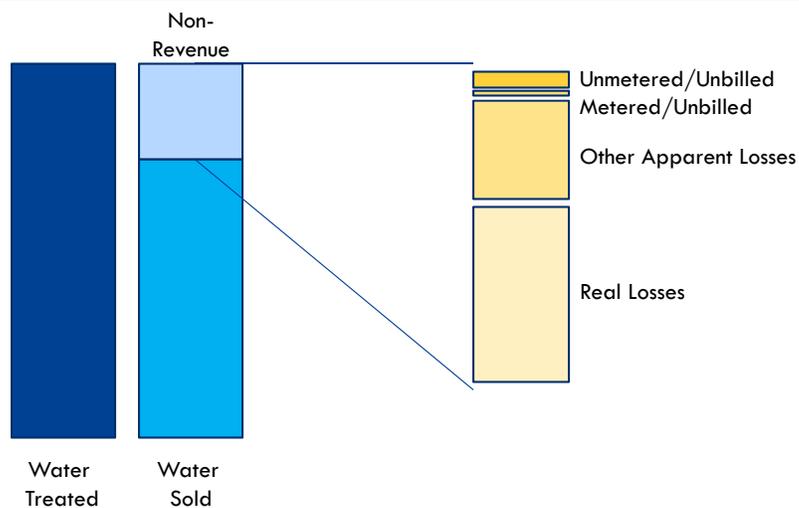
▣ Infrastructure

- New Meters
- Low Flow Meter Batching Devices
- Electronic Meter Reading Data Management
- Automatic Meter Reading (AMR)/Advanced Metering Infrastructure (AMI)

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Non-Revenue Water

22



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Real Losses – Leaks and Breaks

23

- Key Factors
 - Pipe Materials
 - Corrosive Soils
 - System Pressure
 - Age

	2008	2009	2010	2011	2012
Number	62	61	62	100	76
Estimated Losses (million gallons)	6	3	9	23	28

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Real Losses

24

- Key Actions
 - Best Management Practices
 - Improve Meter Accuracy (to identify find leaks)
 - Automatic Meter Reading (AMR)/Advanced Metering Infrastructure (AMI)
 - Submetering
 - Reduction of Unbilled Uses
 - Improved Tracking
 - Replace Lines

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Water Conservation Customer Survey

25

- Survey to evaluate various customer class interest in water conservation
 - Programs
 - Willingness to fund
 - Current perception of water
 - Preferences of ways to receive information

Other Key Conservation Programs

26

- System Wide Water Audit
- Water Rate Increases
- Messaging to Community
- Water Waste Ordinance
- City Facilities - Parks Irrigation Improvements
- Customer Assistance/Promotions
 - Slow the Flow
 - Garden in a Box
 - Commercial Audits
 - Water and Energy Assessments/Audits (LCCC)
 - Efficiency Express
- K-12 Education
- Additional Water Rate Studies

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Goals to Achieve

27

- Reduce Non-Revenue Water
- Reduce Summertime Peak Demand
- Maintain Appropriate Water Rates
- Support City sustainability efforts
- Support Largest Commercial and Irrigation Customers

Estimated savings are about 11% or 1,750 AF reduction by 2020

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Proposed Budget

28

	2013	2014	2015	2016	2017
Park Irrigation Retrofits	\$ 14,000	\$ 14,000	\$ 14,000	\$ 14,000	\$ 14,000
Water Waste Ordinance	1,500				
Slow the Flow	13,200	13,200	13,200	13,200	13,200
Garden-in-a-Box	4,000	4,000	4,000	4,000	4,000
Wise Water Use Messaging	25,000	8,000	8,000	8,000	8,000
Commercial Water Audits			15,000	15,000	
System Wide Water Audits	40,000	15,000	15,000	15,000	15,000
Meter and Water Line Replacement	260,000	260,000	260,000	260,000	260,000
Water Rate Study		25,000			25,000
K-12 Education	5,000	5,000	5,000	5,000	5,000
Larimer County Conservation Corps, Energy and Water Program and the Home Energy Audit Program	8,000	8,000	8,000	8,000	8,000
Efficiency Express	2,500	2,500	2,500	2,500	2,500
Total	373,200	354,700	354,700	354,700	354,700

2013-2017 Capital Improvement Plan

29

Table 6 – Summary of City's 5-Year (2013-2017) Detailed Capital Plan for Water Projects

		5-Year Total
Transmission and Distribution		
	Water Line Replacements	\$7,834,020
	Water Storage Tanks	\$240,140
	Meter Replacements	\$440,930
Water Treatment Plant (general)		\$9,978,360
Water Resources		
SIF Projects		
	Water Lines	\$860,130
	Water Storage	\$240,140
	Water Treatment	\$11,566,810
General Plant		\$971,200
O&M Projects		\$3,907,780
5-Year Total		\$36,039,510

Next Steps

30

- Presented to LUC February 20, 2013
- 60-day public comment period (Feb. 21 – April 21)
- M-Team – April 9, 2013
- Construction Advisory Board – April 24, 2013
- LUC for approval – April 24, 2013
- City Council study session – May 14, 2013
- Bring to City Council for approval – June 4, 2013
- Submit for CWCB for approval
- Implementation

Questions?

31





CITY OF LOVELAND
WATER & POWER DEPARTMENT
200 North Wilson • Loveland, Colorado 80537
(970) 962-3000 • FAX (970) 962-3400 • TDD (970) 962-2620

AGENDA ITEM: 8
MEETING DATE: 6/4/2013
TO: City Council
FROM: Steve Adams, Water & Power Department
PRESENTER: Greg Dewey, Water & Power Department

TITLE:

A Resolution Adopting the City of Loveland Drought Management Plan

RECOMMENDED CITY COUNCIL ACTION:

Adopt the resolution.

OPTIONS:

1. Adopt the action as recommended
 2. Deny the action
 3. Adopt a modified action (specify in the motion)
 4. Refer back to staff for further development and consideration
 5. Adopt a motion continuing the item to a future Council meeting
-

DESCRIPTION:

This is an administrative action to adopt the City of Loveland Drought Management Plan. The Construction Advisory Board (CAB) and the Loveland Utilities Commission (LUC) unanimously recommend the adoption. The City Council also reviewed the Plan at its May 14, 2013 Study Session and indicated conceptual approval.

BUDGET IMPACT:

- Positive
 - Negative
 - Neutral or negligible
-

SUMMARY:

This item reflects guidance from City Council to staff at the May 14, 2013 Study Session, when staff presented the 2013 Drought Management Plan to Council. The objective is final adoption by the City Council of a plan that establishes action items the City may take when experiencing drought.

Staff presented the conceptual draft of the Drought Management Plan to the City Management Team on April 9, 2013, the LUC on March 20, 2013, the LUC on April 24, 2013, and the CAB on April 24, 2013. Staff considered revisions reflecting comments received at those meetings. The CAB and the LUC unanimously recommended city council adopt a resolution adopting the Drought Management Plan. Staff presented the draft document at the May 14, 2013 City Council Study Session.

This resolution is attached for consideration, with the Drought Management Plan attached as Exhibit A to the resolution.

The City of Loveland has developed a robust water supply over many decades. The City has a sizable portfolio of water rights including: senior water rights for the Big Thompson River; west slope water rights including C-BT and Windy Gap; and a 6,835 ac-ft reservoir (Green Ridge Glade) with enough storage when full to provide nearly half of the City's annual average water demand. This water supply offers a very high degree of stability during periods of uncertain drought. The system has been designed to satisfy average (unrestricted) water demands during very infrequent periods of dryness.

Loveland is fortunate and has not endured any recent extraordinary challenges to our watershed, such as a forest fire, that could impact our water supply. While the duration of the current drought cannot be known at this time, staff and LUC believe that current water supplies are adequate to satisfy this year's projected demands without mandatory restrictions and recommend following the "Voluntary" drought response level. At this time, we believe increased education and voluntary participation in wise use of water will suffice, along with, continuing the Shave the Peak Program. Should conditions change, staff will return to Council and recommend implementing mandatory restrictions as part of one of the other drought response levels included in the Drought Management Plan.

REVIEWED BY CITY MANAGER:



LIST OF ATTACHMENTS:

Resolution
 Drought Management Plan (Exhibit A to the Resolution)
 Power Point Presentation
 PowerPoint Recommended Level Presentation

RESOLUTION #R-39-2013**A RESOLUTION ADOPTING THE CITY OF LOVELAND DROUGHT MANAGEMENT PLAN**

WHEREAS, pursuant to Section 13.04.230 of the Loveland Municipal Code, the Loveland City Council may adopt by resolution such rules, regulations, and restrictions upon the use of water as are necessary to protect the water supply or water system of the City of Loveland; and

WHEREAS, in light of the continued threat of drought conditions in Loveland, and the evolving condition of the City's water supply and the information related thereto, the City Council desires to establish a system by which water use restrictions shall be determined and implemented; and

WHEREAS, Water Utility staff and the Loveland Utilities Commission have recommended that the City Council adopt a five-tier drought management plan, which will provide a system of water supply shortage response levels and corresponding water restrictions and conservation measures to be implemented based on the projected water supply shortage; and

WHEREAS, the City Council has determined that adoption of a drought management plan will enable the City to respond timely and appropriately to changing water supply conditions.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the "City of Loveland Drought Management Plan" dated June 4, 2013, a copy of which is attached hereto as Exhibit A and incorporated herein by reference ("Drought Management Plan"), is hereby adopted by the Loveland City Council. A copy of the Drought Management Plan shall be placed on file with the Loveland City Clerk.

Section 2. That the City Council hereby finds that, based on information known as of the date of this Resolution, voluntary restrictions are appropriate. The City Council accordingly hereby declares that Tier 0 of the Drought Management Plan shall be in effect as of the date of this Resolution until further action by the City Council.

Section 3. That the City Council hereby directs staff to bring to a future meeting of the City Council for its consideration any information that would tend to indicate the need for a change in the restrictions and corresponding tier adopted herein.

Section 4. That this Resolution shall take effect as of the date of its adoption.

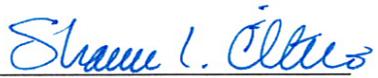
ADOPTED this 4th day of June, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

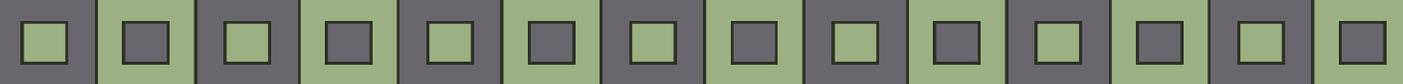

Assistant City Attorney



City of Loveland

Drought Management Plan

June 4, 2013



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Executive Summary

The Drought Management Plan (Plan) provides a short term, managed response to water shortages exceeding a 1-in-100 year drought event. The City's current policy of using a 1-in-100 year drought recurrence interval as the basis of planning for the City's raw water supply results in a one percent chance that in any year the City could not meet demands without curtailment. The Drought Management Plan will preserve the sufficiency of Loveland's water supply while ensuring adequate allocations of water to protect the public's health, safety, and welfare during a greater than 1-in-100 year drought.

Based on City water supply projections, if a shortage is expected the Plan provides a system of specific measures meant to lower customer treated water demand. These measures are arranged into four increasingly restrictive response levels linked to the severity of the projected water supply shortage.

The City of Loveland operates, maintains and develops a complex, highly-integrated water supply system balancing east and west slope sources including direct flow and stored supplies, providing flexibility to meet the varying annual water supply conditions and the municipal demands of the customers for both current and long term needs. The city promotes efficient and effective use of its developed water resources for the benefit of its citizens and customers.

Both water conservation and demand management are integral factors in the relationship between the water utility and customers. Demand management is the short-term response to drought or other emergency conditions, and is the subject of this proposed Drought Management Plan. This plan will guide the city's response when it is experiencing drought worse than a 1-in-100 year event. Water conservation differs from drought management in that it involves the application of wise use practices for the water resource over the long-term, and is the subject of a separate water conservation plan. In accordance with direction in the city's approved Raw Water Master Plan, the City does not plan for water conservation to provide supplies for drought management.

City staff projects each current year's demand for water based on historical demand patterns adjusted for growth, differing climatic conditions, and changing trends in water use. Demand as used in this plan is defined as the amount of raw water diverted from the various sources into Loveland's water treatment plant.

Municipal water supply projections are made in mid-April after the Northern Colorado Water Conservancy District Board sets the yearly quota for Colorado-Big Thompson water, which is also when the mountain snowpack is typically at or near its peak. Anticipated supply from all raw water sources are compared to projected demand, and the surplus or shortage is estimated. This estimate is updated regularly throughout the season.

Should a water supply shortage be projected, the city may choose among a number of steps to mitigate the effect without initially imposing usage restrictions on its customers. First, rentals of

raw water from the city to agricultural users may be curbed or cut completely. The Parks and Recreation Department has its own irrigation conservation plan which deals with drought and putting that into action also lowers the city's demand. The Thompson School District can also restrict outdoor use at its facilities and conserve water.

Loveland Water and Power's Customer Relations group will lead the public outreach campaign when the Drought Management Plan is implemented. Basic outreach tools, such as press releases and the city's website will be used. Other tools such as a Drought Blog, YouTube, utility bill inserts, community meetings, social media Key Account email blasts, and special events will be employed as needed.

Introduction

This Drought Management Plan (Plan) provides a short term, managed response to water shortages exceeding a 1-in-100 year drought event. The City's current policy of using a 1-in-100 year drought recurrence interval as the basis of planning for the City's raw water supply results in a one percent chance that in any year the City could not meet demands without curtailment. The Drought Management Plan will preserve the sufficiency of Loveland's water supply while ensuring adequate allocations of water to protect the public's health, safety, and welfare during a greater than 1-in-100 year drought. Water conservation differs from drought management in that it involves the application of wise use practices for the water resource over the long-term, and is the subject of a separate water conservation plan. In accordance with direction in the city's approved Raw Water Master Plan, the City does not plan for water conservation to provide supplies for drought management.

Purpose

The City of Loveland's Drought Management Plan is intended to manage the negative effects of drought while experiencing the fewest social and economic impacts until conditions return to normal. The city's current policy of using a 1-in-100 year drought recurrence interval as the basis of planning for the City's raw water supply, results in a one percent chance that in any year the city would not meet demands without curtailment. Based on city water supply shortage projections, this plan provides a system of specific measures meant to lower customer demand. This plan is meant to balance the current year's water needs with available supplies and simultaneously ensure that a reasonable amount of water is reserved to meet demands for the following year. It is also meant to establish a methodology to inform the public of the declaration, severity, change, and removal of a drought response level.

In summary, the purposes of this Drought Management Plan are to:

- Ensure an adequate water supply for each year during a drought event to preserve and protect the public health, safety and welfare with the least social and economic impact;
- Allocate uses so that reasonable quantities of water are reserved for future years to the extent possible;
- Establish methodology used to inform the decision to declare, change or remove a drought response level;
- Outline measures to result in the corresponding necessary level of water use reduction.

Included in this plan are four increasingly restrictive levels of response which may be implemented, from which the city may choose in order to reduce customer water usage and lower the overall demand on Loveland's water system. Each higher level corresponds to a drought of increasing severity. The degree of restriction in each level is meant to coincide with the drought severity and decrease the demand on the system by an estimated 10 percent.

Water conservation and demand management are integral factors in the relationship between the utility and its customers. Water conservation, defined as a long-term process involving the ongoing wise use of water resources and resulting in long-term permanent changes to customer water use, is the subject of a separate plan. Demand management is the short-term response to drought or other emergency conditions, and is the subject of this Drought Management Plan, which will guide the city's response when experiencing a drought worse than a 1-in-100 year event. Water conservation differs from demand management in that it involves the application of wise use practices for the water resource over the long-term, and is the subject of a separate water conservation plan. In accordance with direction in the city's Raw Water Master Plan, the City does not plan for water conservation to provide supplies for drought management.

The proposed Drought Management Plan defines four levels of supply and deficit factors and corresponding responses. It can remain in place indefinitely, ready for implementation when drought conditions warrant. Throughout the year, specific projections may be updated periodically as necessitated by changes in the City's raw water supplies.

Consideration is given to the following factors:

- Loveland's unrestricted water demand, as projected.
- City-owned reservoir storage in Green Ridge Glade Reservoir,
- Projected water supplies available from the Big Thompson River sources.
- Projected water supplies available from the Colorado River sources (Eureka Ditch, CBT and Windy Gap).
- Carryover of CBT water as authorized by Northern Water.
- Other appropriate data and experience in water supply operations

Loveland's Planned Drought Scenario

Loveland's raw water drought supply policy is discussed in the 2012 Raw Water Master Plan. This plan describes the City's policy of using a 1-in-100 year drought recurrence interval as the basis of planning for the City's raw water supply, which translates into a 1% chance that in any year the City could not meet demands without curtailment.

Between 1986 and 1988 the City initiated work on a two-phase drought study using the services of the engineering firm of Camp, Dresser & McKee, Inc. Phase I of the study contained a recommendation that the City prepare to meet its full demands during a drought event with an average recurrence of 1-in-100 years, which translates into a 1% chance that in any year the City could not meet demands without curtailment. Council accepted Phase I of the report, including the recommendation, on October 7, 1986. The 1-in-100 year level of drought protection remains the goal for the City's raw water supply planning.

This planning policy requires developing sufficient supplies to meet the City's full water demand during the 1-in-100 year drought without water use restrictions. The LUC and City Council

reaffirmed this policy as part of the approval process for the original Raw Water Master Plan in 2005 and the update in 2012.

As stated in the Raw Water Master Plan, Loveland's raw water supply planning goal is to provide the capability for unrestricted use of water to its customers in anything up to 1-in-100 year drought conditions. This translates to a less than 1 percent chance each year that the city will not be able to meet customer demands with current supplies.

In 2003, a Drought Management Plan was created in response to the 2002 drought. While only designed specifically for that year, aspects of that plan were taken to create this broader Drought Management Plan.

Water Supplies

The City of Loveland promotes the efficient and effective use of its developed water resources for the benefit of its citizens and customers. It operates and maintains a complex system of east and west slope sources including direct flow and stored rights, managed to meet the current and future demands of its customers. Loveland's water supplies used to meet municipal demand are the following:

Colorado River Supplies (West Slope):

- Eureka Ditch: This 180 acre-feet of water is delivered under contract from the CBT Project, and is not subject to the annual quota set by Northern Water's board. It is the first water delivered to the city from Northern each water year.
- CBT balance carried over: Water from the previous year may be kept in storage over the winter in the CBT facilities and made available for use in the following year. This may only be used the first year it is carried over under Northern Water's policy, or it is forfeited.
- Quota Water Available: The annual allocation declared by Northern Water's board, typically yielding between 0.5 - 1.0 acre-foot annually per unit. The initial allocation is set in early November each year, typically at 0.5 acre-foot for every CBT unit owned. Usually an additional allocation is granted in early April, based on the need for additional supplies and the availability of water.
- Carryover for the following year: Up to 20 percent, in acre-feet, of the City's ownership of CBT units may be carried over in the CBT system for use the following year. The City owns 12,068 units, so the City may carryover up to 2,414 acre-feet. Also the City uses carryover space from other CBT users to carry over unused City CBT water.
- Windy Gap Water: The City owns 40 units of Windy Gap Project water (WG) which is projected to yield over 4,000 acre-feet of yield during drought following construction of storage in the Windy Gap Firming Project.

Big Thompson River Supplies (East Slope):

- **GRG Reservoir Storage:** The total capacity of storage in the city’s Green Ridge Glade Reservoir is 6,835 acre-feet. The goal at the beginning of each new water year on November 1st is to start with the reservoir full.
- **Direct Flow:** Water which forms the basis of Loveland’s direct diversions, some of which is available year-round.
- **Ditches transferred in the 202A decree:** Transferred ditch shares in the 202A suite of cases. The water may be stored under specific terms, but doing so reduces the amount diverted.
- **Ditches transferred in the 392 decree:** Transferred ditch shares in the 392 case, with conditions different from the 202A transfers.

Further details of the city’s raw water inventory can be found in the 2012 Raw Water Master Plan.

Declaration of a Drought Level

When drought conditions are experienced, Water Resources staff will determine the projected sufficiency of the city’s supplies by monitoring drought indicators and forecasting raw water availability. Staff will make a recommendation to the LUC at or before its April meeting. An LUC and staff recommendation will be made to City Council, which will make the decision whether or not to move into drought management operations and if necessary will declare the appropriate drought response level. As drought conditions change, staff will inform the City Manager and recommend changes to the response level for City Council’s consideration and decision.

Description of Drought Response Levels

The Drought Management Plan contains four increasingly restrictive response levels. For every ten percent of projected supply shortage, a higher level response may be needed with the corresponding restrictions being implemented. During a drought, staff is responsible for monitoring drought indicators and forecasting raw water availability so that the city’s appropriate response may be made or changed as conditions warrant. It should be noted that a water shortage does not necessarily mean the city will run out of water. On the first day of each successive water year, which begins on November 1st, having a full water supply would mean that the City’s C-BT carryover capacity is fully utilized and Green Ridge Glade Reservoir is full. Not being able to achieve these levels by November 1st indicates a supply shortage, with less water available to meet demands over the following year. If the city is already in a drought, its ability to respond to subsequent drought year scenarios would be reduced.

The colored chart on the following page contains a summary of the four drought levels and the corresponding restrictions.

Drought Management Plan							
Response Level		Voluntary	I	II	III	IV	
% Projected Raw Water Supply Shortage		Water Conservation Measures	1-10%	11-20%	21-30%	>30%	
Type of Water Use	Customer	Turf/Lawn Watering	Shave the Peak Program on even/odd watering days	3 days/week	2 days/week	1 day/week	No lawn watering
		Trees, Shrubs, Perennials	No restrictions	Hand/drip/subsurface or 3 days/week	Hand/drip/subsurface or 2 days/week	Hand/drip/ subsurface only	No water outside
		Non-automated Car Washing	Best Management Practices	Best Management Practices	Best Management Practices	Not allowed	Not allowed
		Dedicated Irrigation Meters	Shave the Peak Program or Best Management Practices	3 days/week	2 days/week	1 day/week	Not allowed
		Spraying Impervious Surfaces	Only as necessary for health & safety	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)
		Hydraulic Fracturing	Customer provides raw water				
	City	Curtail Leases	Limited by water availability	Limited by water availability	Limited by water availability	No agricultural leases	No agricultural leases
		Public Facilities/Parks/ R2J School District/ Turf/Lawn Watering	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions
		Non-automated Car Washing	Best Management Practices	Best Management Practices	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)
		Washing City Fleet Vehicles	As needed	Once/week (except as necessary for health & safety)	Once/week (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)
		Fire Hydrant Flushing & Testing	As needed	Limited to transmission lines or critical situations	Limited to transmission lines or critical situations	Limited to critical situations	Limited to critical situations
	Permits	Medical Hardship	Does not apply	Permit required	Permit required	Permit required	No exception
		Religious Objection	Does not apply	Permit required	Permit required	Permit required	No exception
		New Lawns	Does not apply	Permit required	Permit required	Permit required	Not allowed
	Fines	Residential Fines per Violation	Does not apply	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000
Business Fines per Violation		Does not apply	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000	

- Notes:**
1. Vegetable gardens and swimming pools are exempt
 2. Measures are intended to avoid impact on successful business operations
 3. Best Management Practices as referenced by Greenco <http://www.greenco.org/> and Colorado WaterWise Council <http://coloradowaterwise.org/>

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Voluntary

During normal conditions, including drought up to the 1-in-100 year level of severity, the City of Loveland plans for an unrestricted supply of water to its customers. While no drought plans are in effect under these conditions, customers are encouraged to continue their wise use of water.

- Lawn Watering – Unrestricted. Recommend Shave the Peak Program whereby watering occurs on even/odd days based on address.
- Trees, Shrubs, and Perennials – Unrestricted.
- Non-Automated Car Washing – Unrestricted. Use of a shutoff nozzle and bucket are recommended.
- Dedicated Irrigation Meters – Unrestricted. Recommend Shave the Peak Program whereby watering occurs on even/odd days based on address. Following GreenCO.org Best Management Practices for irrigation is encouraged.
- Spraying of Impervious Surfaces – Unrestricted. Use of nozzles and minimizing water use is encouraged during the spraying of driveways, sidewalks, and siding.
- Hydraulic Fracturing – Customer provides all raw the water necessary, for treatment by the city.
- Raw water leases are limited to the availability of water above municipal needs.
- City Fleet Vehicles – As needed.
- Fire Hydrant Flushing & Testing – Unrestricted.
- New Lawns – Unrestricted.

Drought Response Level 1

At level 1, the city is projected to experience up to a 10 percent shortage of raw water. This response level addresses the shortage by implementing water use restrictions that would have minimal impact on the health of customers' landscaping.

- Lawn Watering – Limited to 3 days per week per the Level 1 Irrigation Schedule below.
- Trees, Shrubs, and Perennials – Unrestricted by hand, drip or subsurface applications. Otherwise limited to 3 days per week per the Level 1 Irrigation Schedule below.
- Non-Automated Car Washing – Shutoff nozzle and bucket required.
- Dedicated Irrigation Meters – Limited to 3 days per week per the Level 1 Irrigation Schedule below. GreenCO.org Best Management Practices for irrigation must be used.
- Spraying of Impervious Surfaces – Not allowed. This includes spraying of driveways, sidewalks, and siding, unless necessary for health and safety reasons.
- Hydraulic Fracturing – Customer provides all the necessary raw water, for treatment by the city.
- Raw water leases limited to availability of water above municipal needs.
- City Fleet Vehicles – Washed only once per week or as determined by the city manager for health or safety reasons.
- Fire Hydrant Flushing & Testing – Limited to transmission lines or critical situations.
- New Lawns – Should use GreenCO.org Best Management Practices.

Permits may be acquired for exceptions, if necessary due to medical hardship or religious objection. Newly seeded or sodded lawns may be eligible for a permit as well.

Level 1 Irrigation Schedule

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Last Number of Address	EVEN	ODD/OTHER	EVEN	ODD/OTHER	EVEN	OTHER	ODD
Property Type	Single Family, Duplex, Triplex, & Fourplex	<u>ODD</u> Single Family, Duplex, Triplex, & Fourplex <u>OTHER</u> Multifamily, HOA, Non-Residential	Single Family, Duplex, Triplex, & Fourplex	<u>ODD</u> Single Family, Duplex, Triplex, & Fourplex <u>OTHER</u> Multifamily, HOA, Non-Residential	Single Family, Duplex, Triplex, & Fourplex	Multifamily, HOA, Non-Residential	Single Family, Duplex, Triplex, & Fourplex

For single family, duplex, triplex, and fourplex residences, the watering schedule is based on whether the final digit of the address is an odd or even number. HOAs, multifamily, and all non-residential properties that do not have a dedicated irrigation meter are to water on Monday, Wednesday, and Friday regardless of their address number. Watering hours are Midnight to 9:59 am and 6 pm through 11:59 pm on the assigned day. In other words, there is no visible, above-ground watering between 10 am and 6 pm.

Drought Response Level 2

At Level 2, the city is projected to face an 11 percent – 20 percent shortage of raw water. Since the shortage is more severe, the measures are more restrictive. The following outdoor restrictions should have minimal effect on the long-term health of the customers' landscaping, but may cause wilting or browning during the hottest parts of the summer.

- Lawn Watering – Limited to 2 days per week per the Level 2 Irrigation Schedule below.
- Trees, Shrubs, and Perennials – Unrestricted by hand, drip or subsurface applications. Otherwise limited to 2 days per week per the Level 2 Irrigation Schedule below.
- Non-Automated Car Washing – Shutoff nozzle and bucket required.
- Dedicated Irrigation Meters – Limited to 2 days per week per the Level 2 Irrigation Schedule below. GreenCO.org Best Management Practices for irrigation must be used.
- Spraying of Impervious Surfaces – Not allowed. This includes spraying of driveways, sidewalks, and siding unless necessary for health and safety reasons.
- Hydraulic Fracturing – Customer provides all the necessary raw water for treatment by the city.
- Raw water leases limited to availability of water above municipal needs.
- City Fleet Vehicles – Washed only once per month or as determined by the city manager for health or safety reasons.
- Fire Hydrant Flushing & Testing – Limited to transmission lines or critical situations.
- New Lawns – Permit required. Use GreenCO.org Best Management Practices.

Permits may be acquired for exceptions, if necessary due to medical hardship or religious objection. Newly seeded or sodded lawns may be eligible for a permit as well.

Level 2 Irrigation Schedule

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Last Number of Address	EVEN	X	OTHER	ODD	EVEN	OTHER	ODD
Property Type	Single Family, Duplex, Triplex, & Fourplex	No watering except by permit.	Multifamily, HOA, Non-Residential	Single Family, Duplex, Triplex, & Fourplex	Single Family, Duplex, Triplex, & Fourplex	Multifamily, HOA, Non-Residential	Single Family, Duplex, Triplex, & Fourplex

For single family, duplex, triplex, and fourplex residences, the watering schedule is based on whether the final digit of the address is an odd or even number, as assigned above. HOAs, multifamily, and all non-residential properties are to water on Tuesday and Friday regardless of their address number. Watering hours are Midnight to 9:59 am and 6 pm through 11:59 pm on the assigned day. In other words, there is no visible, above-ground watering between 10 am and 6 pm.

Drought Response Level 3

Response level 3 applies for situations where the city is experiencing a 21 percent-30 percent raw water shortage. These are severe conditions, and the restrictions reflect that. The purpose is to reduce customer demand as much as possible while still keeping their outdoor landscaping alive. There will be significant wilting and browning of the customers' landscaping and possibly some long-term damage. The following watering schedule should, however, keep trees, shrubs, perennials, and most lawns alive.

- Lawn Watering – Limited to 1 day per week per the Level 3 Irrigation Schedule below.
- Trees, Shrubs, and Perennials – Water by hose with shutoff nozzle or low-volume efficient drip or subsurface irrigation.
- Non-Automated Car Washing – Not allowed.
- Dedicated Irrigation Meters – Limited to 1 day per week, per the Level 3 Irrigation Schedule below.
- Spraying of Impervious Surfaces – Not allowed. This includes spraying of driveways, sidewalks, and siding unless necessary for health and safety reasons.
- Hydraulic Fracturing – Customer provides all the necessary raw water for treatment by the city.
- No agricultural leases made.
- City Fleet Vehicles – Washing not allowed or as determined by the city manager for health or safety reasons.
- Fire Hydrant Flushing & Testing – Limited to critical situations.
- New Lawns – Permit required. Use GreenCO.org Best Management Practices.

Permits may be acquired for exceptions, if necessary due to medical hardship or religious objection. Newly seeded or sodded lawns may be eligible for a permit as well.

Level 3 Irrigation Schedule

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Last Number of Address	EVEN	X	OTHER	X	X	OTHER	ODD
Property Type	Single Family, Duplex, Triplex, & Fourplex	No watering except by permit.	Multifamily, HOA, Non-Residential	No watering except by permit.	No watering except by permit.	Dedicated irrigation taps.	Single Family, Duplex, Triplex, & Fourplex

For single family, duplex, triplex, and fourplex residences, the watering schedule is based on whether the final digit of the address is an odd or even number. HOAs, multifamily, and all non-residential properties are to water on Tuesdays only, regardless of their address number unless using a dedicated irrigation meter. Dedicated irrigation meters are to water on Fridays only. Watering hours are Midnight to 9:59 am and 6 pm through 11:59 pm on the assigned day. In other words, there is no visible, above-ground watering between 10 am and 6 pm.

Drought Response Level 4

Drought response level 4 is only for extreme drought conditions. At this level, the city is experiencing greater than a 30 percent raw water shortage and is unable to meet the needs of customers' outside watering demands. Under these restrictions, it is possible that customers may lose a significant portion of their landscaping.

- Lawn Watering – Not allowed.
- Trees, Shrubs, and Perennials – Water by hose with shutoff nozzle or low-volume efficient drip or subsurface irrigation.
- Non-Automated Car washing – Not allowed.
- Dedicated Irrigation Taps – Not allowed to irrigate lawns.
- Spraying of Impervious Surfaces – Not allowed. This includes spraying of driveways, sidewalks, and siding unless necessary for health and safety reasons.
- Hydraulic Fracturing – Customer provides all the necessary raw water for treatment by the city.
- No agricultural leases made.
- City Fleet Vehicles – Washing not allowed or as determined by the city manager for health or safety reasons.
- Fire Hydrant Flushing & Testing – Limited to transmission lines or critical situations.
- New Lawns – No newly seeded or sodded lawns may be installed.

There are no permits for exceptions for medical hardship or religious objections, as there are not much allowable outdoor uses.

Issuing Permits and Enforcing Drought Responses

Permits for exceptions may be acquired from the Loveland Water & Power office at 200 N. Wilson Ave, Loveland, CO 80537. They will be available if necessary due to medical hardship or religious objection. Frequent irrigation as required for newly seeded or sodded lawns may be eligible for a permit as well under Level III conditions.

Adopted per 13.04.235, the City Manager would designate persons within the Water staff to act as peace officers to enforce section 13.04.235 of the by the issuance of summonses and complaints in accordance with the Colorado Municipal Court Rules of Procedure. Education and warning for the first offense, citation for the second and possible court appearance thereafter.

Additional Information

- Watering vegetable gardens by hand is exempt from restriction under all drought levels.
- Swimming pools are allowed to operate and are exempt from restrictions under all drought levels.
- Loveland Parks and Thompson School District have separate plans which may achieve the same or better water savings than are outlined in this Drought Management Plan.
- Other dedicated irrigation tap areas may request to be placed on a separate plan. The plan must be submitted to the W&P Director and may be approved by him, given the level of savings is commensurate with what is being asked of other customers.
- Measures are intended to avoid negative impacts on successful business operations, wherever possible. Some examples include irrigation/landscape management and commercial car washes.
- Watering Tips and Best Management Practices are as referenced by Greenco (<http://www.greenco.org>) and the Colorado WaterWise Council (<http://coloradowaterwise.org>).
- Please visit the City of Loveland website for additional information as well as updates on the drought situation. (www.cityofloveland.org)

Customer Relations

Loveland Water and Power’s Customer Relations Division will assist the drought response efforts by leading the public information and education campaign. Staff will work quickly to enact a tailored drought response communication plan according to the situation and employ a multi-channel marketing campaign to maximize the outreach within the community.

Communication will include both information about the drought situation and education about wise water use.

Examples of potential methods of outreach staff may use to increase public awareness of the need to implement the Drought Management Plan include, but are not necessarily limited to:

- Purchasing advertising space in the Loveland Reporter-Herald newspaper
- Local radio public service announcements and advertising
- Basic outreach methods such as press releases, the city website, and social media
- Direct Mailings
- Door to door visits with local business
- A “Drought Blog” in the Reporter-Herald and online
- Channel 16 and YouTube
- Community meetings with local clubs, HOAs, and industry professionals
- Educational information in the schools
- Service Center open houses
- Key Accounts email blasts
- Events such as Earth Day, Children’s Day, Public Works Day, etc.

In addition to its integral role in drought response as presented above, the Water & Power Customer Relations group also actively supports and promotes the city’s water conservation program. Some of the activities the city encourages its customers to participate in are the following:

- *Shave the Peak Program* – This voluntary program encourages customers to water on even/odd days to reduce strain on the water treatment plant during peak hours in the summer
- *Slow the Flow* – Free sprinkler irrigation inspections are offered to city residential customers to ensure water is not being wasted in faulty irrigation systems.
- *Garden in a Box* – Every year Loveland participates in the Garden-In-A-Box program to provide a fun, inexpensive way for citizens to learn how to successfully replace high water requiring turf with water conserving xeriscaping.
- *Efficiency Express* – This program can save city commercial customers water as well as energy, by reviewing uses within the business.

For more information about Loveland's water conservation activities, please reference the City of Loveland Water Conservation Plan and the city's website at <http://www.cityofloveland.org>.

Conclusion

Excerpts from the Mission Statement of Loveland Water & Power ensure that the utility will provide reliable, high quality customer service offering safe and secure utilities. Being prepared to meet customer's demands during drought is an integral part of that mission. The Drought Management Plan provides the City of Loveland with options for a short-term, managed response to drought conditions that will preserve the integrity of the city's water supply system and the sufficiency of Loveland's raw water supply while ensuring adequate allocations of water to protect the public's health, safety, and welfare during a greater than 1-in-100 year drought.

Drought Management Plan Summary



Presentation to City Council
June 4, 2013

City of Loveland Drought Management Plan



- ☞ **Drought management** is the short-term managed response to water shortages at or exceeding a 1-in-100 year event.
- ☞ **Water conservation** is a long-term process involving the wise use of water resources. It is the subject of a separate plan.

City of Loveland Drought Management Plan - Purpose



- ☞ Preserve and allocate water to protect the public health, safety, and welfare.
- ☞ Ensure adequate water reserves for current year and future years to the extent possible.
- ☞ Establish a methodology to inform and educate the public.
- ☞ Outline demand-reducing measures based on the degree of water supply shortage.

City of Loveland Drought Management Plan



- ☞ Proposed plan outlines 4 supply shortage scenarios
 - ☞ Response level increases with every 10% increase in supply deficit
- ☞ If no supply shortage is projected, a response may be voluntary or existing conservation measures
- ☞ School District and Parks response plans could be implemented before residential restrictions are recommended

Voluntary

-  **Lawn Watering** - Recommend even/odd (i.e. Shave the Peak Program)
-  **Car Washing** - Recommend use of bucket and shutoff nozzle
-  **Water Leases** - Limited to the availability above municipal needs
-  **No Warnings & Fines**
Imposed for violations
-  **No Enforcement necessary**
Not actively looking for violators

Level I

-  **3** **Lawn Watering**
3 days per week
-  **Exemptions Allowed**
For medical hardship, religious objections, and new lawns
-  **Warnings & Fines**
Imposed for reported violations
-  **Enforcement**
Not actively looking for violators

Level II

-  **2** **Lawn Watering**
2 days per week
-  **Exemptions Allowed**
For medical hardship, religious objections, and new lawns
-  **Warnings & Fines**
Imposed for reported violations
-  **Enforcement**
Not actively looking for violators

Level III

-  **1** **Lawn Watering**
1 day per week
-  **Exemptions Allowed**
For medical hardship, religious objections, and new lawns
-  **Car Washing**
Non-automated car washing not allowed
-  **Water Leases**
No agricultural leases
-  **Warnings & Fines**
Imposed for violations
-  **Enforcement**
Actively looking for violators

Level IV

-  **0** Lawn Watering - Not allowed
-  Exemptions - Not allowed
-  Car Washing
Non-automated car washing not allowed
-  Water Leases - No agricultural leases
-  Warnings & Fines
Imposed for violations
-  Enforcement
Actively looking for violators

Drought Management Plan							
Response Level		Voluntary	I	II	III	IV	
% Projected Raw Water Supply Shortage		Water Conservation Measures	1-10%	11-20%	21-30%	>30%	
Type of Water Use	Customer	Turf/Lawn Watering	Shave the Peak Program on even/odd watering days	3 days/week	2 days/week	1 day/week	No lawn watering
	Trees, Shrubs, Perennials	No restrictions	Hand/drip/subsurface or 3 days/week	Hand/drip/subsurface or 2 days/week	Hand/drip/ subsurface only	No water outside	
	Non-automated Car Washing	Best Management Practices	Best Management Practices	Best Management Practices	Not allowed	Not allowed	
	Dedicated Irrigation Meters	Shave the Peak Program or Best Management Practices	3 days/week	2 days/week	1 day/week	Not allowed	
	Spraying Impervious Surfaces	Only as necessary for health & safety	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	
	Hydraulic Fracturing	Customer provides raw water					
	City	Curtail Leases	Limited by water availability	Limited by water availability	Limited by water availability	No agricultural leases	No agricultural leases
	Public Facilities/Parks/ R2J School District/ Turf/Lawn Watering	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions	Separate approved plans for equal or greater reductions	
	Non-automated Car Washing	Best Management Practices	Best Management Practices	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	
	Washing City Fleet Vehicles	As needed	Once/week (except as necessary for health & safety)	Once/week (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	Not allowed (except as necessary for health & safety)	
Permits	Fire Hydrant Flushing & Testing	As needed	Limited to transmission lines or critical situations	Limited to transmission lines or critical situations	Limited to critical situations	Limited to critical situations	
Medical Hardship	Does not apply	Permit required	Permit required	Permit required	No exception		
Religious Objection	Does not apply	Permit required	Permit required	Permit required	No exception		
New Lawns	Does not apply	Permit required	Permit required	Permit required	Not allowed		
Fines	Residential Fines per Violation	Does not apply	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000	
Business Fines per Violation	Does not apply	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000	\$50 to \$1000		

Notes: 1. Vegetable gardens and swimming pools are exempt
 2. Measures are intended to avoid impact on successful business operations
 3. Best Management Practices as referenced by Greenco <http://www.greenco.org/> and Colorado WaterWise Council <http://coloradowaterwise.org/>

Drought Management Plan Customer Relations



- ❧ Basic suite of outreach methods
 - ❧ (press releases, newspaper articles & ads, website, social media etc.)
- ❧ Local radio public service announcements and advertising
- ❧ Door to door visits with local businesses
 - ❧ (table top displays, posters)
- ❧ "Drought Blog" in Reporter-Herald newspaper
- ❧ Video Series on channel 16 and You Tube
- ❧ Community meetings
 - ❧ (Local Clubs, HOAs, Industry Professionals)
- ❧ Educational take home materials to schools
- ❧ Open House at the Service Center
- ❧ Email blasts to Key Accounts
- ❧ Direct mailings
- ❧ Events
 - ❧ (Key Accounts Earth Day Events, Children's Day, Public Works Day, Lunch and Learns, GIAB, Garden Tour, Corn Roast)

Proposed Process



Once City Council adopts the Drought Management Plan:

1. Staff determines projected sufficiency of water supplies
2. Staff reports to LUC
3. LUC and staff recommend to City Council
4. City Council enacts drought response actions
5. As drought conditions change, staff informs City Manager and recommends changes for City Council consideration

Recommendation



- ☞ Adopt the resolution adopting the City of Loveland Drought Management Plan.

Determination of City's Drought Response Level



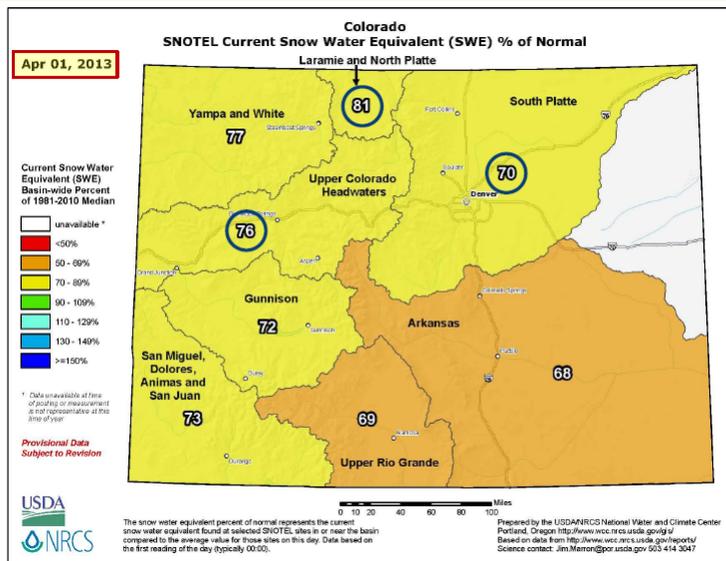
Presentation to City Council
June 4, 2013

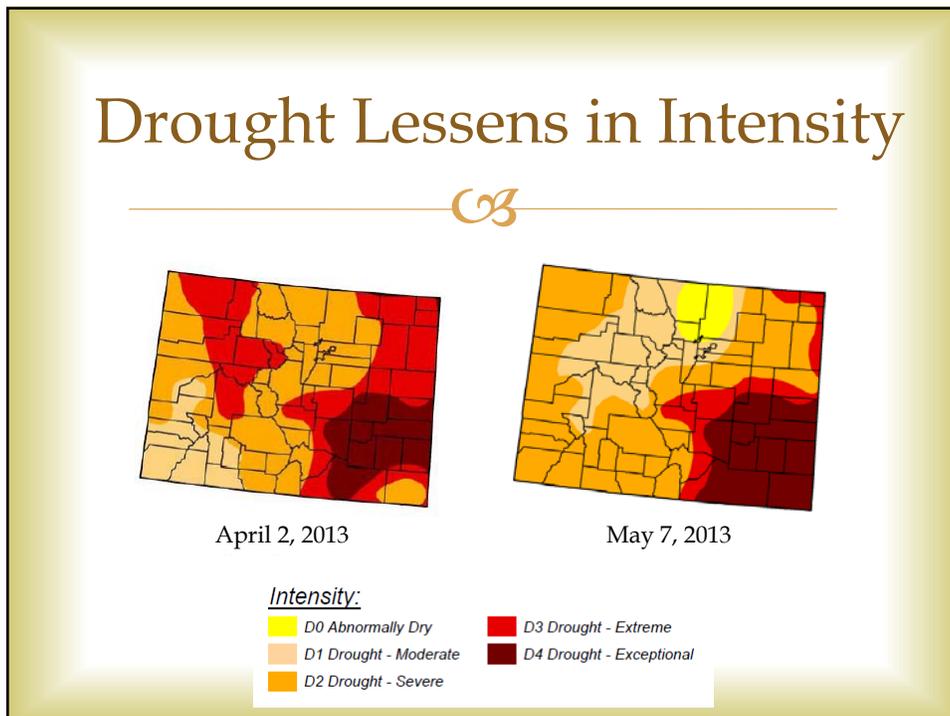
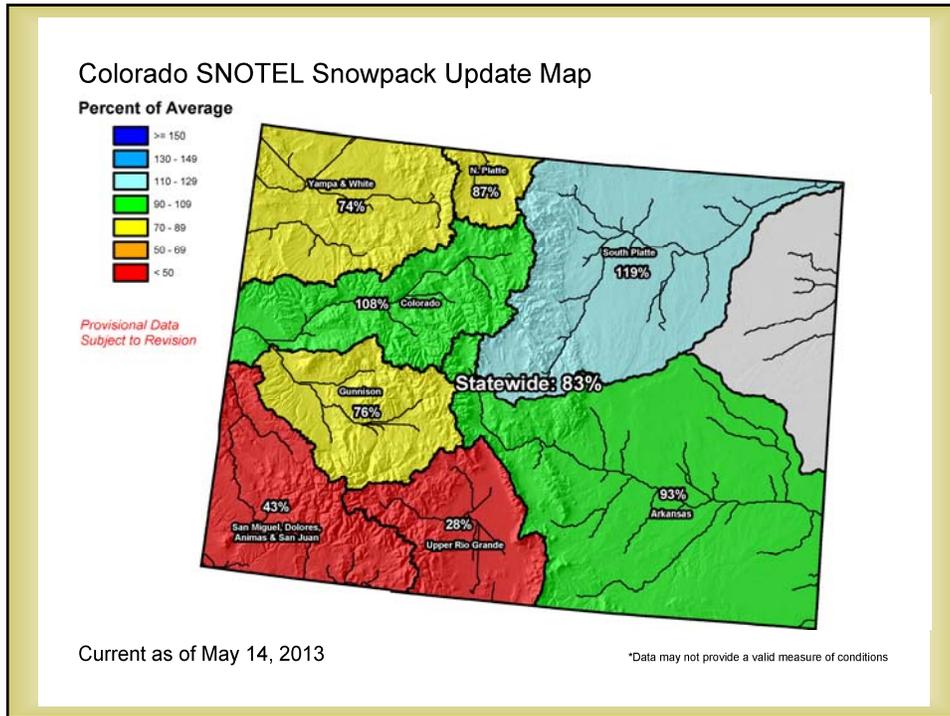
Specifics about 2013 Water Supply / Demand

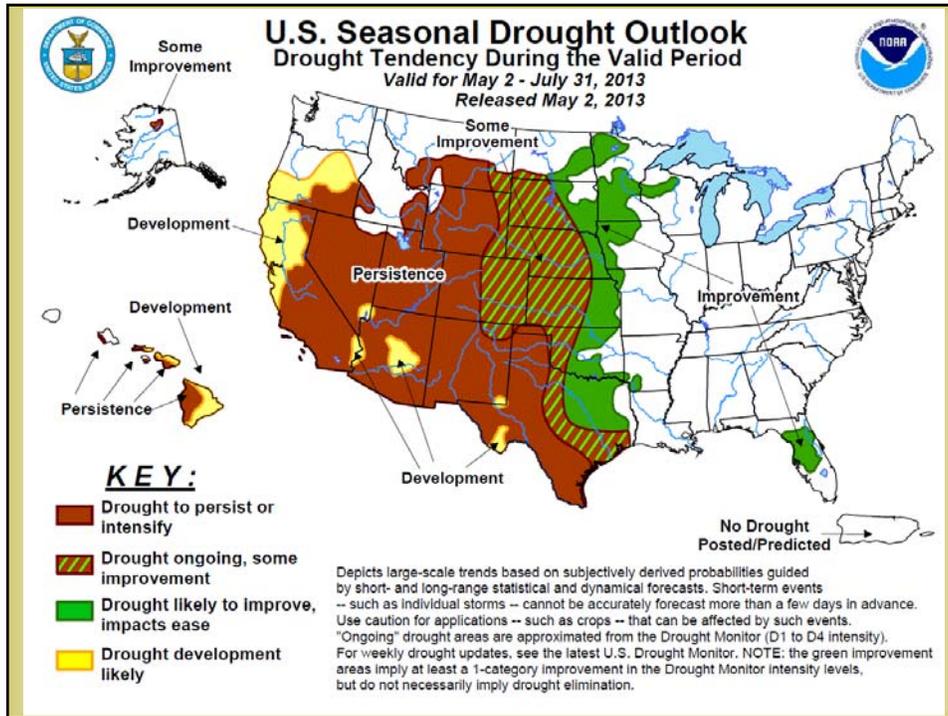


- ❧ Snowpack
- ❧ Temperature
- ❧ Precipitation
- ❧ Water Demand
- ❧ Water Supplies
- ❧ Surplus (not deficit) in projected supplies for 2013

The Drought Persists

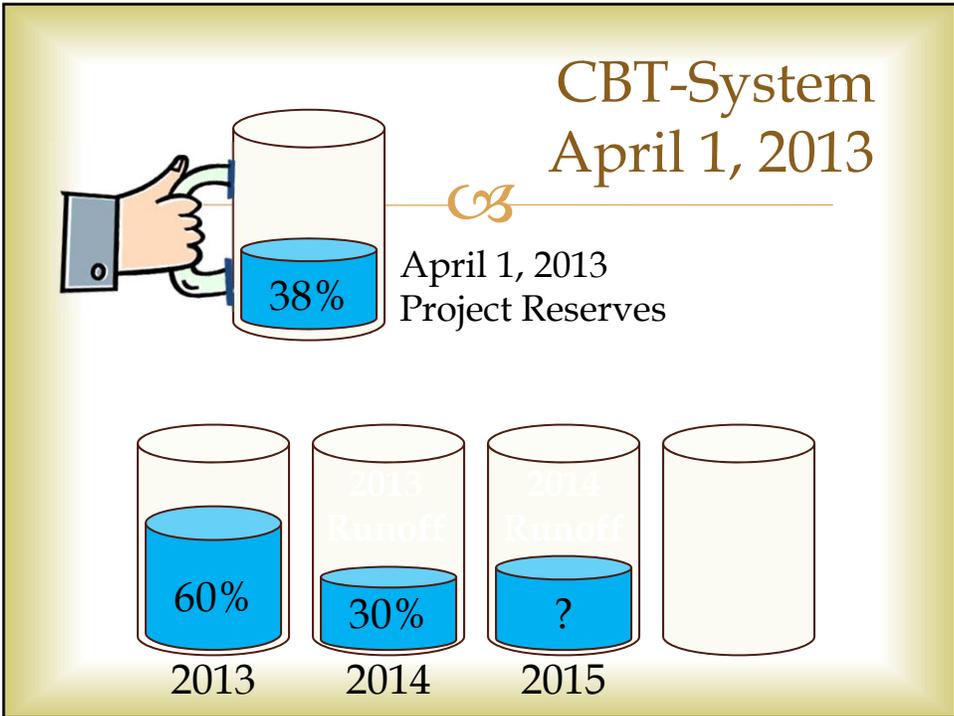
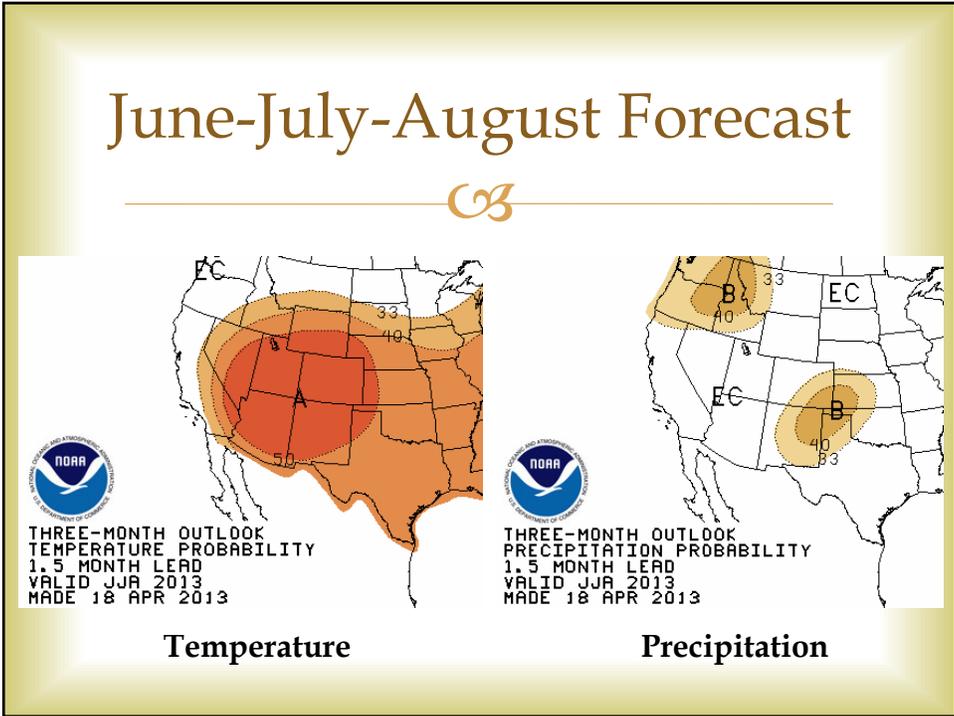




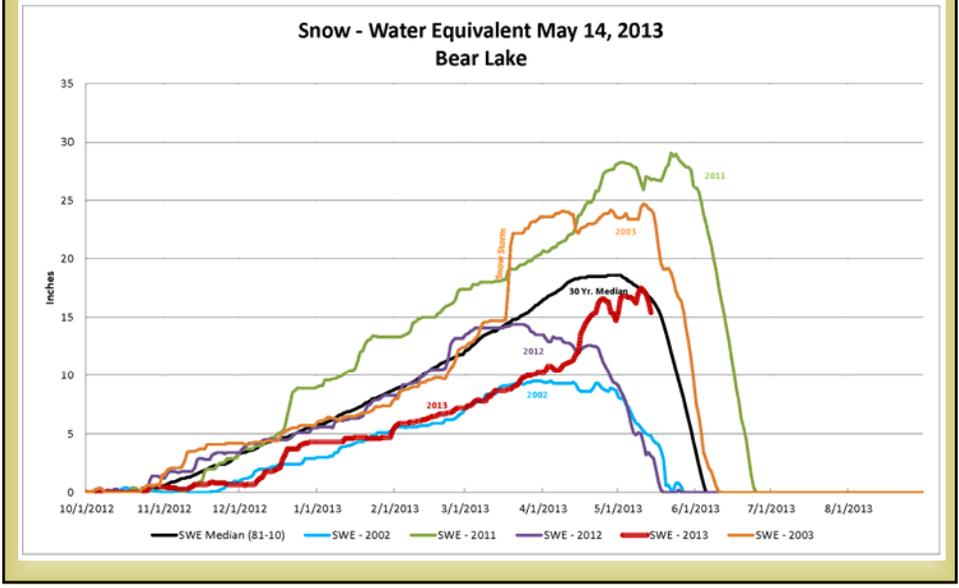


Summer Temperature Projections

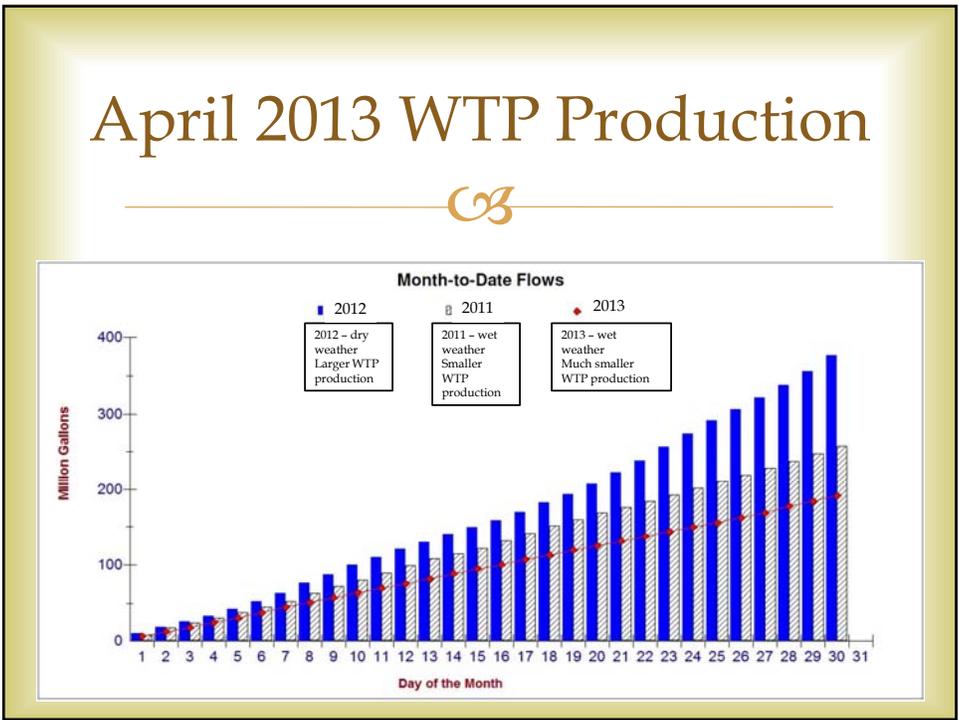


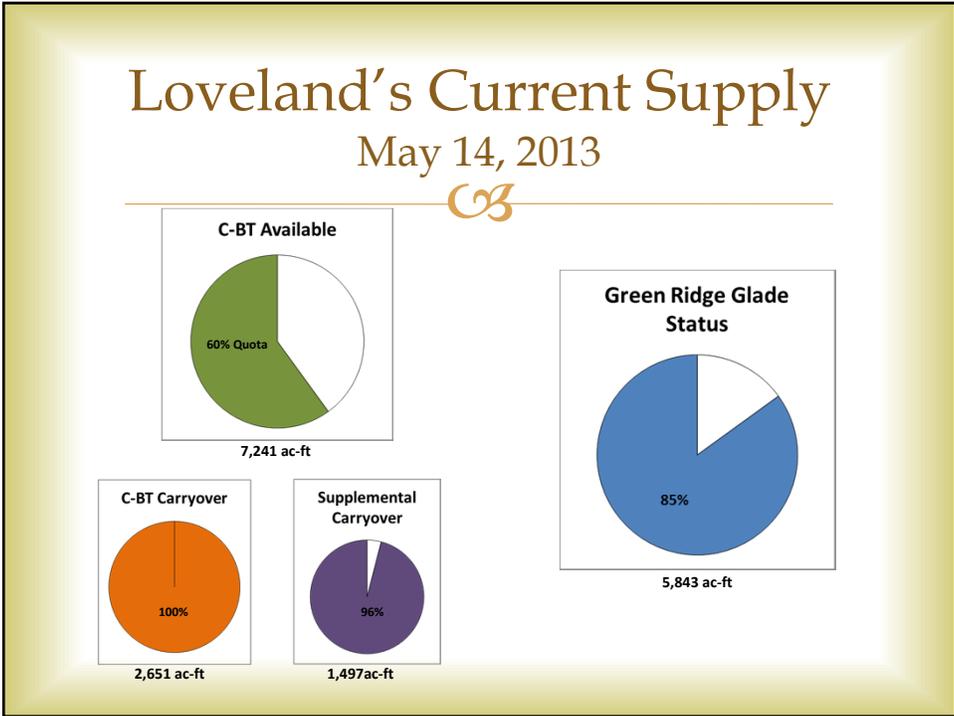


Big Thompson Basin Snow-Water Equivalent (SWE)



April 2013 WTP Production





Water Supply Projection Changes April 1st through May 14th

- ☞ Projected river availability was increased based on the most recent snowpack information as well as current river flow.
- ☞ In early April, projections showed not much, if any, Windy Gap Project Water pumping this year. As of May 10, Windy Gap is projected to pump close to 25,000 acre-ft. This means Loveland should have at least 1,500 acre-ft of Windy Gap available if needed.
- ☞ Projected demand was lowered due to cooler temperatures and increased precipitation.
- ☞ This report is considered mildly conservative and will be updated often throughout the spring and summer.

Loveland's Water Supply Projection for 2013

(all values in acre-feet)

May 14, 2013	Demand	Supply	Totals
Storage			
GRG Reservoir			
Volume Necessary to Fill	(992)		
C-BT System			
Eureka Ditch Available		0	
Balance Carried Over		3,081	
Quota Water Available		7,241	
Estimated Windy Gap		1,500	
Carryover for Next Year	(2,651)		
Supplemental Carryover	(1,566)		
Net Storage Available			6,614
Big Thompson River Rights			
Net River Rights Available			8,050
System Demands			
Remaining Demand	(10,202)		
Remaining Parks Leases	(700)		
Net Remaining Demands			(10,902)
Water Supply Status November 1, 2013			3,761
<small>Water Year is from November 1 through October 31</small>			
<small>Projected Demand Based on 2010 Production</small>			

Summary



- ☞ The City of Loveland has developed a robust water supply over many decades.
- ☞ This water supply offers a very high degree of stability during periods of uncertain drought.
- ☞ Loveland is fortunate and has not endured any extraordinary challenges to our watershed, such as a forest fire, that could impact our water supply.
- ☞ Should additional impacts to our water supply occur, the Drought Management Plan allows for a quick response.

City Council Recommendation

- ☞ Current water supplies are adequate to satisfy this year's projected demands without mandatory restrictions.
- ☞ Select "Voluntary" response level, including "Shave the Peak" or no more than every other day watering.
- ☞ Should conditions change, Staff will return to city council and recommend implementing one of the four mandatory restriction levels included in the Drought Management Plan to curtail demand.

Mayor Gutierrez called the Study Session of the Loveland City Council to order at 6:30 p.m. on the above date. Councilors present: Gutierrez, Clark, Farley, McKean, Trenary, Fogle, Taylor, and Klassen. Councilor Shaffer left the meeting at 9:43 p.m. City Manager, Bill Cahill was also present.

1. ECONOMIC DEVELOPMENT

Office of Creative Sector Development (OCSD) Update

Economic Development Director, Betsey Hale presented this item to Council as an update on the accomplishments of the OCSD program and on the possible transition of program staff to a more general role within the Economic Development Department. Ms. Hale reviewed the history of the program. Financial and policy support for OCSD was approved by City Council in the fall of 2010. The position of Business Development Specialist for the OCSD was filled in March 2011 by Marcie Erion. The program was to become financially sustainable without City investment after three years. Mary Bahus-Meyer, Colin Horback and Joshua Tobey addressed the status of the program funding and spoke in support of the transition of the staff position into the Economic Development Department. Also, the Creative Sector Development Commission recommended the dissolution of the Commission itself. Discussion ensued. Council directed staff to return to them with an update of the Economic Development Department's staffing and financial needs in conjunction with the 2014 budget cycle.

2. WATER & POWER

Updated Water Conservation Plan

Water Utilities Manager, Chris Matkins introduced this item to City Council. Lindsay Bashline presented the history of Loveland's water conservation and the conservation plan update project. This update produced the Draft Water Conservation Plan, as proposed by staff and the Loveland Utilities Commission. Discussion ensued. Council directed staff to bring this item to the June 4, 2013 regular meeting for consideration.

3. WATER & POWER

Drought Management Plan

Water Resources Civil Engineer, Greg Dewey presented Council with a Draft Drought Management Plan, as proposed by staff and the Loveland Utilities Commission (LUC). Information was also provided on the City's current water supply status for 2013 and a recommendation as to the drought response level. Discussion ensued. Council directed staff to bring this item to the June 4, 2013 regular meeting for consideration.

The study session was adjourned at 10:24 p.m.

Respectfully Submitted,

Jeannie M. Weaver, Deputy City Clerk

Cecil A. Gutierrez, Mayor

CALL TO ORDER Mayor Gutierrez called the regular meeting of the Loveland City Council to order on the above date at 6:30 PM.

PLEDGE OF ALLEGIANCE

ROLL CALL Roll was called and the following responded: Gutierrez, Farley, Klassen, Trenary, Shaffer, Fogle, Taylor, and Clark. Councilor McKean was absent.

PROCLAMATION Councilor Farley read the proclamation declaring the week of May 19 through May 25, 2013 as "NATIONAL PUBLIC WORKS WEEK", which was accepted by Keith Reester, Director of Public Works.

PROCLAMATION

WHEREAS, public works services provided in our community are an integral part of our citizen's everyday lives; and
WHEREAS, having the support of an understanding and informed citizenry is vital to the efficient operations of the various public works systems and programs such as stormwater, streets, transit, solid waste, fleet, development review, traffic, facilities and public buildings; and
WHEREAS, the health and safety and comfort of this community greatly depends on these facilities and services; and
WHEREAS, the quality and effectiveness of these facilities and services, as well as their planning, design, construction, is vitally dependent upon the efforts and skill of public works officials; and
WHEREAS, this year's observance of Public Works Week celebrates the theme, "Public Works: Creating a Lasting Impression", recognizing the valuable work carried out by our highly capable and reliable public works professionals, engineers and administrators and acknowledging their contributions to an improved quality of life in this community.

NOW, THEREFORE, we, the City Council of the City of Loveland do hereby proclaim May 19-25, 2013 as NATIONAL PUBLIC WORKS WEEK in the City of Loveland, and we call upon all citizens to acquaint themselves with the issues involved in providing our public works and to recognize the contributions which public works officials make every day to our health, safety, comfort and quality of life.
Signed this 21st day of May, 2013
Cecil A. Gutierrez, Mayor

PROCLAMATION Councilor Klassen read the proclamation declaring the month of May 2013 through as "FOSTER AND KINSHIP CARE MONTH", which was accepted by Steve Dozier.

PROCLAMATION

WHEREAS, the family, serving as the primary source of love, nurture, identity, self-esteem and support, is the very foundation of our community; and
WHEREAS, in Larimer County there are over 150 children and youths in foster or kinship care being provided with a safe, secure and stable home along with the compassion and care of a foster or kinship family; and
WHEREAS, foster and kinship families, who open their homes and hearts to children whose families are in crisis, play a vital role helping children and families heal and reconnect, and/or launching children into successful adulthood; and
WHEREAS, working family to family, foster and kinship providers mentor and support the birth parents with the goal of a timely reunification of the child to their family; and

City Council
May 21, 2013
Page 2 of 10

WHEREAS, there are numerous individuals, public and private organizations who work to increase public awareness of the needs of children in and leaving foster care as well as the enduring and valuable contribution of foster and kinship parents.

NOW, THEREFORE, we, the City Council of the City of Loveland do hereby proclaim May, 2013 as FOSTER AND KINSHIP CARE MONTH

for the City of Loveland and urge all citizens to volunteer their talents and energies on behalf of children in foster or kinship care, and the foster or kinship families who care for them, and the child welfare professional staff working with them during this month and throughout the year.

Signed this 21st day of May, 2013
Cecil A. Gutierrez, Mayor

PROCLAMATION Councillor Taylor read the proclamation declaring May 2013, to be "MOTORCYCLE SAFETY AWARENESS MONTH", which was accepted by Kristy McNeill.
PROCLAMATION

WHEREAS Colorado's climate and scenery make motorcycle riding an attraction in the beautiful state of Colorado, and riders consider our roadways to be some of the best for riding; and,

WHEREAS motorcycles are increasingly used as a regular means of transportation; and,
WHEREAS the motorcycle is an energy-efficient vehicle that reduces fuel consumption, traffic and parking congestion; and,

WHEREAS the motorcycle is an important form of transportation for commuting, touring and recreation; and,
WHEREAS as a matter of safety, it is necessary to develop appropriate driving habits to handle these vehicles on Colorado roadways; and

WHEREAS to prevent injuries and deaths on Colorado's roadways, motorcyclists and motorists must be vigilant in their efforts to share the road and ensure the safety of everyone; and,

WHEREAS Motorcycle Safety Awareness Month raises public awareness for a lifetime of safe motorcycle riding; and,
WHEREAS the International Women's Motorcycle Club, Leather & Lace Motorcycle Club, is committed to increasing the safe operation of motorcycles by promoting rider safety education programs; their goal is to alert the motorists of the town of Loveland, Colorado to: SHARE THE ROAD; and

WHEREAS Motorcycle Safety Awareness Month is designed to increase public awareness about motorcycles and to encourage their safe and proper use among motorcycle riders.

NOW, THEREFORE, we, the Loveland City Council, in the great state of Colorado, in recognition of over 9,477,243 registered motorcyclists nationwide, and in recognition of the continued role of Leather & Lace Motorcycle Club as a promoter of motorcycle safety, education and awareness, do hereby proclaim in the month of May 2013 as

MOTORCYCLE SAFETY AWARENESS MONTH

in the City of Loveland, Colorado and ask all citizens to join in a concerted effort to promote awareness, mutual respect, and safety on our roads.

Signed this 21st day of May, 2013
Cecil A. Gutierrez, Mayor

INFORMATION Mayor Gutierrez made the following procedural announcement: Anyone in the audience will be given time to speak to any item on the Consent Agenda. Please ask for that item to be removed from the Consent Agenda. Items pulled will be heard at the beginning of the Regular Agenda. You will be given an opportunity to speak to the item before the Council acts upon it. Public hearings remaining on the Consent Agenda are considered to have been opened and closed, with the information furnished in connection with these items considered as the only evidence presented. Adoption of the items remaining on the

Consent Agenda is considered as adoption of the staff recommendation for those items. Anyone making a comment during any portion of tonight's meeting should come forward to a microphone and identify yourself before being recognized by the Mayor. Please do not interrupt other speakers. Side conversations should be moved outside the Council Chambers. Please limit your comments to no more than three minutes.

CONSENT AGENDA

Mayor Gutierrez asked if anyone in the audience, Council or staff wished to remove any of the items or public hearings listed on the Consent Agenda. Councilor Shaffer moved to approve the Consent Agenda. The motion was seconded by Councilor Farley and roll call vote was taken with all councilors present voting in favor.

1. CITY CLERK

Approval of Council Minutes

Administrative Action: The minutes from the May 7, 2013 Regular Meeting were approved.

2. CITY MANAGER

BOARD & COMMISSION APPOINTMENTS

Administrative Action: The following appointments to the Construction Advisory Board and Library Board were approved:

Keith Benner to the Construction Advisory Board for a partial term effective from May 21, 2013 until June 30, 2013.

Banner Green to the Library Board for a partial term effective until December 31, 2013.

Ellen Lawson as an alternate member on the Library Board for a term effective until December 31, 2013

3. LIBRARY

UNITED WAY OF LARIMER COUNTY GRANT TO LOVELAND PUBLIC LIBRARY

Ordinance #5766

Administrative Action. "AN ORDINANCE ENACTING A SUPPLEMENTAL BUDGET AND APPROPRIATION TO THE 2013 CITY OF LOVELAND BUDGET FOR A CONTRIBUTION FROM THE UNITED WAY OF LARIMER COUNTY FOR THE SUMMER LITERACY PROGRAM" was approved and ordered published on second reading.

4. PUBLIC WORKS

SUPPLEMENTAL APPROPRIATION FOR COLT VIDEO SURVEILLANCE INSTALLATIONS

Ordinance #5767

Administrative Action: "AN ORDINANCE ENACTING A SUPPLEMENTAL BUDGET AND APPROPRIATION TO THE 2013 CITY OF LOVELAND BUDGET FOR THE TRANSIT VIDEO SURVEILLANCE PROJECT" was approved and ordered published on second reading.

5. DEVELOPMENT SERVICES

FIRE STATION NO. 2 ADDITION

1) Ordinance # 5768

Legislative Action: "AN ORDINANCE APPROVING THE ANNEXATION OF CERTAIN TERRITORY TO THE CITY OF LOVELAND, COLORADO, TO BE KNOWN AND DESIGNATED AS "FIRE STATION NO. 2 ADDITION" TO THE CITY OF LOVELAND was approved and ordered published on second reading.

2) Ordinance # 5769

Quasi-Judicial Action: "AN ORDINANCE AMENDING SECTION 18.04.040 OF THE LOVELAND MUNICIPAL CODE, THE SAME RELATING TO ZONING REGULATIONS

FOR "FIRE STATION NO. 2 ADDITION" TO THE CITY OF LOVELAND" was approved and ordered published on second reading.

6. PUBLIC WORKS

FAA IMPROVEMENT 2013 GRANT AGREEMENT

Resolution R-30-2013

Legislative Action: Resolution R-30-2013 Authorizing the City Manager to Execute the 2013 Grant Agreement (AIP Project No. 3-08-0023-32-2013) with the Federal Aviation Administration for Improvements at the Fort Collins-Loveland Municipal Airport was approved.

RESOLUTION # R-30-2013

A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE THE 2013 GRANT AGREEMENT (AIP PROJECT NO. 3-08-0023-32-2013) WITH THE FEDERAL AVIATION ADMINISTRATION FOR IMPROVEMENTS AT THE FORT COLLINS-LOVELAND MUNICIPAL AIRPORT

WHEREAS, the Cities of Fort Collins and Loveland (the "Cities") jointly own and operate the Fort Collins-Loveland Municipal Airport (the "Airport"); and

WHEREAS, the Cities, by resolution, have adopted the Fort Collins-Loveland Municipal Airport Master Plan; and

WHEREAS, the Federal Aviation Administration ("FAA") provides grant funding to eligible airports to enable those airports to pursue, in a timely manner, capital improvements included within an adopted Airport Master Plan; and

WHEREAS, the Cities have applied for \$1,900,000.00 in FAA capital grant funding ("2013 Grant Funding") for the purpose of rehabilitating the north half of the general aviation apron and installing perimeter fencing around the airport ("AIP Project No. 3-08-0023-32-2013");

WHEREAS, the Cities have been offered \$1,534,531.00 of the 2013 Grant Funding and anticipate the FAA's offer of the balance of \$365,469.00 shortly; and

WHEREAS, any capital grants funds provided by the FAA will be subject to the Cities' execution of the standard FAA grant agreement that will be in substantially the form of prior years' FAA grant agreements modified to reflect the purpose of AIP Project No. 3-08-0023-32-2013 ("2013 Grant Agreement"); and

WHEREAS, projects listed in AIP Project No. 3-08-0023-32-2013 are identified in the Fort Collins-Loveland Municipal Airport Master Plan as first priority projects; and

WHEREAS, the matching local funds of ten percent (10%) necessary to accept the initial capital grant funding of \$1,534,531.00 from the Federal Aviation Administration are divided equally between the State of Colorado and the Cities and have been previously appropriated as part of the Airport's 2013 budget; and

WHEREAS, the State of Colorado's matching local funds of five percent (5%) necessary to accept balance of the Grant Funding of \$365,469.00 from the Federal Aviation Administration have been appropriated and the Cities' required matching local funds of five percent (5%) are available in Airport Reserves and will be appropriated upon approval and receipt of the balance of the Grant Funding.

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO AS FOLLOWS:

Section 1. That the 2013 Grant Agreement is hereby approved.

Section 2. That the City Manager is authorized, following consultation with the City Attorney, to modify the 2013 Grant Agreement in form or substance as deemed necessary to effectuate the purposes of this resolution or to protect the interests of the City.

Section 3. That the City Manager and the City Clerk are hereby authorized and directed to execute the 2013 Grant Agreement on behalf of the City of Loveland.

Section 4. That this Resolution shall take effect as of the date and time of its adoption.

City Council
 May 21, 2013
 Page 5 of 10

ADOPTED this 21st, day of May, 2013.
 Cecil A. Gutierrez, Mayor

ATTEST:
 Teresa G. Andrews, City Clerk

7. FINANCE

Contract Award for Banking Services

Resolution #R-31-2013

Legislative Action Resolution R-31-2013 Authorizing the City Manager to Negotiate and Enter into an Agreement for Banking Services was approved.

RESOLUTION #R-31-2013

A RESOLUTION AUTHORIZING THE CITY MANAGER TO NEGOTIATE AND ENTER INTO AN AGREEMENT FOR BANKING SERVICES

WHEREAS, the City of Loveland, Colorado, is a municipal corporation operating under a home rule charter pursuant to Article XX of the Constitution of the State of Colorado; and

WHEREAS, Section 3.04.070 of the Loveland Municipal Code provides for the designation of depositories of City funds and monies by resolution of the City Council; and

WHEREAS, Section 31-20-303, Colorado Revised Statutes, provides that the governing body of the City may adopt a resolution appointing a custodian for City funds, and establishing requirements for the sale or other disposal of securities and for the deposit or reinvestment of any proceeds thereof; and

WHEREAS, Section 2.24.010 of the Loveland Municipal Code provides that it is the duty of the city manager to supervise the administration of the affairs of the City; and

WHEREAS, the City issued a request for proposals to provide banking services for City funds and monies; and

WHEREAS, the proposal submitted by 1st National Bank, National Association, Loveland, Colorado was determined to be the most qualified to meet the City's banking services needs as described in the request for proposals.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the City Council hereby finds and determines that 1st National Bank, National Association, Loveland, Colorado meets the requirements of the banking services request for proposals.

Section 2. That the City Manager is hereby authorized to negotiate and enter into an agreement with 1st National Bank, National Association, Loveland, Colorado appointing said bank as the primary banking services provider to the City of Loveland for purposes of managing necessary banking transactions. Said agreement shall, among other provisions as deemed advisable by the City Manager, in consultation with the City Attorney, require the firm to comply with all pertinent federal laws and regulations, state statutes and regulations, and City ordinances and policies concerning the deposit of public funds and transactions related thereto.

Section 3. That the City Manager is hereby authorized to designate appropriate members of the City staff to direct and administer the agreement and to monitor the activities of 1st National Bank, National Association, Loveland, Colorado to assure compliance with all pertinent federal laws and regulations, state statutes and regulations, and City ordinances and policies concerning the deposit of public funds and transactions related thereto.

Section 4. That this Resolution shall be effective as of the date of its adoption.

ADOPTED this 21st day of May, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:
 Teresa G. Andrews, City Clerk

8. DEVELOPMENT SERVICES

Kendall Brook Utility Easement Vacation

1ST Rdg. Ord. & P.H

Legislative Action: A public hearing was held and "AN ORDINANCE VACATING A PORTION OF A UTILITY EASEMENT ON LOT 5, BLOCK 21, KENDALL BROOK FIRST SUBDIVISION, CITY OF LOVELAND" was approved and ordered published on first reading.

9. DEVELOPMENT SERVICES/BUILDING

2012 International Codes

1st Rdg Ord. & P.H,

Administrative Action: A public hearing was held. Nine (9) ordinances, repealing and reenacting multiple chapters in Title 15 to adopt the following international codes by reference: International Building Code, 2012 Edition; International Residential Code, 2012 Edition; International Mechanical Code, 2012 Edition; International Plumbing Code, 2012 Edition; International Fuel Gas Code, 2012 Edition; International Property Maintenance Code, 2012 Edition; International Existing Building Code, 2012 Edition; International Energy Conservation Code, 2012 Edition; and the 2012 International Fire Code. Complete copies of these codes will be on file with the City Clerk. Also presented for consideration as a legislative action are two (2) ordinances making related changes to other sections of the Municipal Code. A motion, which is an administrative action, setting a public hearing for June 18, 2013, was approved and the City Clerk was directed to publish the notice of public hearing.

- A. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.08 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL BUILDING CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- B. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.10 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL RESIDENTIAL CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- C. AN ORDINANCE AMENDING CHAPTER 15.12 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL PROPERTY MAINTENANCE CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- D. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.16 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL MECHANICAL CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- E. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.18 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL FUEL GAS CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- F. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.20 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL PLUMBING CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- G. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.28 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL FIRE CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- H. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.48 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL ENERGY CONSERVATION CODE, 2012 EDITION was approved and ordered published by reference on first reading.
- I. AN ORDINANCE REPEALING AND REENACTING CHAPTER 15.52 OF THE LOVELAND MUNICIPAL CODE AND ADOPTING BY REFERENCE THE INTERNATIONAL EXISTING BUILDING CODE, 2012 EDITION was approved and ordered published by reference on first reading.

Colorado Municipal League (CML) policy meeting in Denver. Attended "Generations" event. There will be a groundbreaking event for Brinkman Building on May 30th.

Mayor Gutierrez Wanted to stress the importance of citizen attendance at Platte River Power Authority (PRPA) meetings. Only 1 person, Mindy McCloughan attended the strategic planning session.

c) City Manager Report None

d) City Attorney Report None

PROCEDURAL INFORMATION

Anyone who wishes to address the Council on any item on this part of the agenda may do so when the Mayor calls for public comment. All public hearings are conducted in accordance with Council Policy. When Council is considering adoption of an ordinance on first reading, Loveland's Charter only requires that a majority of the Council present vote in favor of the ordinance for it to be adopted on first reading. However, when an ordinance is being considered on second or final reading, at least five of the nine members of Council must vote in favor of the ordinance for it to become law.

REGULAR AGENDA

CONSIDERATION OF ITEMS REMOVED FROM CONSENT AGENDA

11. ECONOMIC DEVELOPMENT

**Woodward Governor Fee Waiver
Resolution #R-32-2013**

Administrative Action: City Manager, Bill Cahill presented this item. Woodward Governor Company ("Woodward") expanded operations in Loveland in 1991. The City and Woodward are parties to a development agreement dated December 14, 1990 (as amended in 1991) providing Woodward a waiver of any and all fees for building permits associated with the original building and any expansions. \$9,900.00 of City Council Economic Incentive Funds will be used to backfill the capital expansion fees. Councilor Shaffer moved to approve the resolution. Councilor Klassen seconded. The motion carried with all councilors present voting in favor.

RESOLUTION #R-32-2013

A RESOLUTION WAIVING CERTAIN DEVELOPMENT-RELATED FEES FOR WOODWARD GOVERNOR, COMPANY EXPANSION AT 3800 N. WILSON AVENUE, LOVELAND, COLORADO

WHEREAS, Woodward Governor Company, a Delaware corporation ("Woodward") operates a manufacturing facility on approximately 40 acres of real property it owns at 3800 N. Wilson Avenue, Loveland, Colorado (the "Facility"); and
WHEREAS, Woodward proposes to construct a freestanding 10,450 square foot building to expand the Facility (the "Expansion"), and,

WHEREAS, Woodward has requested from the City certain economic incentives for the Expansion, in accordance with that certain Agreement between the City and Woodward dated December 14, 1990, as amended by Amendment to Agreement dated March 26, 1991 attached hereto as Exhibit A and incorporated herein by reference (the "Agreement"), which provides for waiver of "any fees for building permits or plans examination and approval in connection with the original facility or any enlargement or enlargements in the future" and "fees or charges ordinarily charged by the City for development of the nature described in [the] Agreement... for the initial development and for any expansion or enlargement of the facility, whether or not those fees or charges are otherwise specifically mentioned in [the] Agreement"; and

WHEREAS, the waiver for the Expansion includes permit and inspection fees, capital expansion fees, and City construction materials use tax for the Expansion as set forth on Exhibit B attached hereto and incorporated herein by reference (the "Waived Fees"), but not County Open Space Tax, County Jail Tax, or County Fairgrounds Tax, which are imposed by the County; and

WHEREAS, Loveland Municipal Code Section 16.38.070 provides that the City Council may grant an exemption from all or any part of the capital expansion fees or permit fees upon a finding that such waiver is in the best interests of the public by encouraging activities that provide significant social, economic, or cultural benefits; and

WHEREAS, Section 16.38.070 provides further that, whenever any capital related CEF is waived, the City Council shall direct that the waive fee be paid by the general fund or another appropriate fund; and

WHEREAS, Section 3.16.590 of the Loveland municipal Code provides that the City Council may grant by resolution a use tax credit upon a finding that such credit will serve a public purpose, including but not limited to providing the public with significant social and economic benefits; and

WHEREAS, City Council believes that ratifying the Agreement and granting Woodward an exemption from the Waived Fees and a credit for the use taxes is in the best interests of the public because the Expansion will provide significant social and economic benefits to the citizens of Loveland, primarily in the form of jobs, economic development, and increased property tax revenues to the City.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOVELAND, COLORADO:

Section 1. That the City Council hereby finds that ratifying the Agreement and granting Woodward an exemption from the Waived Fees and a credit for the use taxes is in the best interests of the public because the Expansion will provide significant social and economic benefits to the citizens of Loveland, primarily in the form of jobs, economic development, and increased property tax revenues to the City.

Section 2. That the Agreement is hereby ratified, and the waiver of the Waived Fees and the credit for City use taxes are hereby approved. If Woodward has paid the Waived Fees and/or City Use Taxes prior to the date of this Resolution in order to obtain a building permit, a refund of amounts so paid is hereby authorized.

Section 3. Any portion of the Waived Fees that are capital related capital expansion fees shall be backfilled by the general fund or other appropriate fund.

Section 4. That this Resolution shall be effective as of the date and time of its adoption.

ADOPTED this 21st day of May, 2013.

Cecil A. Gutierrez, Mayor

ATTEST:

City Clerk

Exhibits are available in City Clerk's Office

12. DEVELOPMENT SERVICES

OIL & GAS MAILED NOTIFICATION AMENDMENT

1st Rdg & P.H.

Legislative Action: Current Planning Manager, Bob Paulsen presented this item. On March 19, 2013, the City Council adopted Ordinance # 5753, adding chapters 18.77 and 18.78 to the Municipal Code in order to regulate oil and gas development. Now that the oil and gas regulations are in effect, it is necessary to establish mailed notification distances for neighborhood meetings and public hearings that are required as part of the oil and gas permitting process. Mailed notices are provided by applicants to all property owners within the specified distance at least 15 days in advance of required neighborhood meetings and public hearings. A public hearing was opened at 8:27pm and closed at 8:27pm. Discussion ensued. Councilor Shaffer moved to approve and ordered published on first reading, "AN ORDINANCE AMENDING SECTIONS 18.05.030 AND 18.05.060 OF THE LOVELAND MUNICIPAL CODE TO ESTABLISH

MAILED NOTIFICATION DISTANCES FOR NEIGHBORHOOD MEETINGS AND PUBLIC HEARINGS ASSOCIATED WITH OIL AND GAS PERMIT APPLICATIONS UNDER CHAPTERS 18.77 AND 18.78". Councilor Trenary seconded the motion. The motion carried and was approved with all councilors present voting in favor.

13. COMMUNITY PARTNERSHIP

Human Services Grant Fund Increase

Information and Informal Direction Item: Alison Hade introduced this item to Council. The Human Services Commission is requesting a \$50,000 increase in funding to their base funding level of \$450,000. In addition, the Commission is asking that a specified percentage increase be given in years when City General Fund revenues are greater than anticipated and an unassigned fund balance occurs. The Commission's request was detailed in a letter sent to the City Council in November, 2012. Discussion ensued. Council direction was in support of an increase in 2014, but not in favor of automatically increasing it each year.

ADJOURNMENT

Having no further business to come before Council, the May 21, 2013 Regular Meeting was adjourned at 9:57 pm.

Respectfully Submitted,

Teresa G. Andrews, City Clerk

Cecil A. Gutierrez, Mayor



CITY OF LOVELAND
ECONOMIC DEVELOPMENT OFFICE
 Civic Center • 500 East Third • Loveland, Colorado 80537
 (970) 962-2304 • FAX (970) 962-2900 • TDD (970) 962-2620

AGENDA ITEM: 10
MEETING DATE: 6/4/2013
TO: City Council
FROM: Economic Development
PRESENTER: Mike Scholl, Economic Development Manager

TITLE:

Refund of City Sales Tax and Fee & Materials Use Tax Waiver for Crunchy Grocer, LLC

RECOMMENDED CITY COUNCIL ACTION:

This is an information only item. Staff is looking for direction from Council.

DESCRIPTION:

Crunchy Grocer LLC is seeking a refund of 1/3 of City sales tax for a period of five years not to exceed \$175,000 and fee and materials use tax waivers estimated at \$7,500. The Crunchy Grocer is a natural and organic food grocer that will be located at 1461 E. Eisenhower. According to the City's approved Economic Development Incentive policy, any agreement that exceeds \$20,000 is required to go before Council as an informational item prior to final consideration. Pending Council review, the item is expected to be returned for final consideration at the regular meeting on Tuesday, June 18, 2013.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

If approved, the City will refund 1/3 of the sales tax collected for five years and waive \$7,500 in fees.

SUMMARY:

Jonas Buehl, a local entrepreneur approached the City for assistance for the grocery store. He is investing \$1,060,000 in the store with approximately \$620,411 for construction and equipment. The 6,000 square foot store will feature natural and organic grocers. The City currently experiences significant retail leakage in this sector. In addition, he will be making significant investments in the mechanical, electrical and plumbing systems of a unit that had formerly been vacant.

There is very little risk to the City with regard to this agreement. Other than the initial fee waiver, the City is not providing any upfront cash assistance. The sales tax refund is based entirely on performance of the store and will be refunded to the Crunchy Grocer only after it is collected.

The agreement is consistent with the City's adopted Economic Development Incentive policy, which provides for the use of sales tax refund for retail sectors where the City experiences retail leakage.

REVIEWED BY CITY MANAGER:



LIST OF ATTACHMENTS:

Crunchy Grocer LLC Agreement /Waiver(draft)

CRUNCHY GROCER LLC
AGREEMENT FOR CITY SALES TAX REFUND, FEE WAIVER, AND
CONSTRUCTION MATERIALS USE TAX WAIVER

This **SALES TAX REFUND AGREEMENT** is made and entered into this ___ day of ___, 2013, by and between the **CITY OF LOVELAND, COLORADO**, a home rule municipality (the “City”), and **CRUNCHY GROCER LLC**, a Colorado limited liability company (the “Crunchy Grocer”).

WHEREAS, the Crunchy Grocer is planning to open a natural and organic grocery store in Loveland at 1461 E. Eisenhower Boulevard (the “Store”); and

WHEREAS, the Crunchy Grocer recently entered into a six year lease agreement for 1461 E. Eisenhower and is in the process of completing substantial renovations at a cost of \$210,000 including a new internal mechanical, electrical and plumbing systems to make the building more functional and suitable for the operation of its business; and

WHEREAS, the Crunchy Grocer will fill a community need for a retail natural and organic grocer, which need is currently underserved in the City of Loveland ; and

WHEREAS, before leasing and renovating the Store, the Crunchy Grocer asked the City to assist with the development of the Store by providing a refund of sales taxes in an amount equal to one-third (1/3) of all City sales taxes collected by the Crunchy Grocer and received by the City with respect to transactions in or from the Store during a sixty month (60) month period; and

WHEREAS, before leasing and renovating the Store, the Crunchy Grocer also asked the City to assist with the development of the Store by waiving certain building permit fees and the City’s construction materials use tax in connection with the redevelopment of the Store; and

WHEREAS, waiver of building permit fees is authorized under City Code Section 16.38.071, and credit for or refund of City construction materials use tax and sales tax is authorized by City Code Section 3.16.590, upon a finding that such waiver of credit will serve a public purpose, including but not limited to significant social and economic benefits; and

WHEREAS, by the adoption of Resolution #R-XX-2013, the City Council has made a finding that the terms of the this Agreement providing assistance in the form of the sales tax refund, fee waiver, and construction materials use tax credit to the Crunchy Grocer are in the best interests of the City and serve the public purposes of redeveloping a formerly vacant facility and establishing the operation of the Store filling the need for a natural and organic grocer in Loveland, thereby producing significant social and economic benefits to the citizens of Loveland, primarily in the form of economic development and increased assessed values for property tax purposes and sales tax revenues to the City; and

WHEREAS, by the adoption of Resolution #R-~~XX~~-2013, the City Council has approved this Agreement to provide the Crunchy Grocer with the requested assistance on the terms and conditions provided herein.

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

1. Refund of City Sales Taxes Collected and Paid

On the express condition that the Crunchy Grocer completes the renovation and tenant improvements and obtains a temporary or permanent certificate of occupancy or letter of completion for the Store on or before December 31, 2013 and subject to the provisions of Section 3 below, the Crunchy Grocer shall receive a refund of City sales taxes as authorized by Loveland Municipal Code Section 3.16.590 in an amount equal to one-third (1/3) of all City sales taxes collected by the Crunchy Grocer and received by the City with respect to transactions in or from the Store during the sixty (60) month period commencing on October 1, 2013, up to a maximum total refund amount of one hundred and seventy five thousand dollars (\$175,000). Said refund shall be paid monthly, in arrears, by the City to the Crunchy Grocer. In no event shall the City have any obligation to refund the Crunchy Grocer any amount of City sales taxes in excess of one hundred and seventy five thousand dollars (\$175,000).

If the Crunchy Grocer fails to complete the tenant finish and obtain a temporary or permanent certificate of occupancy for the Store on or before December 31, 2013, then the City’s obligation to refund City sales taxes as set forth above shall expire at that time and the City shall have no further obligation to refund City sales taxes due with respect to the Store.

The Crunchy Grocer may request an extension of the December 31, 2013 completion deadline, for good cause shown, and the City Manager may extend that date by written notice to the Crunchy Grocer.

2. Building Permit Fees and Materials Use Tax Waiver

On the express condition that the Crunchy Grocer completes the renovation and tenant improvements and obtains a temporary or permanent certificate of occupancy or letter of completion for the Store on or before December 31, 2013, the City use tax imposed pursuant to Loveland Municipal Code Section 3.16.590 and the building permit fees imposed pursuant to Code Section 16.38.071, not to exceed a cumulative total of Seven Thousand Five Hundred Dollars (\$7,500) shall be waived (the “Waived Taxes and Fees”). The amount of the Waived Taxes and Fees is based on the current estimate:

Fee	Current Fee Estimate
Non Residential Building Plan Check	\$1,046.34
Non Residential Permit Fee	\$1,609.75
Non Residential Mechanical Permit Fee	\$391.25
Non Residential Electrical Permit Fee	\$664.75

Non Residential Plumbing Permit Fee	\$321.25
City Use Tax	\$3,150.50
Total:	\$7,183.34

If the Crunchy Grocer fails to complete the tenant finish and obtain a temporary or permanent certificate of occupancy for the Store on or before December 31, 2013, then:

- a. Any portion of the Waived Taxes and Fees not utilized by December 31, 2013 shall expire at that time and the City shall have no obligation to waive fees or use taxes due with respect to the Building after such date;
- b. Any fees and use taxes that would have been due with respect to the renovation and improvement of the Store in the absence of the foregoing waiver shall be deemed to have been deferred and shall be paid to the City by the Crunchy Grocer on or before the issuance of a temporary or permanent certificate of occupancy or letter of completion for the Store. If not timely paid, the City may use any or all collection remedies available to it under Loveland Municipal Code and shall be entitled to withhold the temporary or permanent certificate of occupancy or letter of completion for the Store; and
- c. The Crunchy Grocer may request an extension of the December 31, 2013 completion deadline, for good cause shown, and the City Manager may extend that date by written notice to the Crunch Grocer.

The Waived Taxes and Fees shall not include any amounts for use taxes or fees payable to Larimer County in connection with the renovation of the Store, which shall be paid by the Crunchy Grocer as required by law.

3. Multi-Year Fiscal Obligation

The City’s obligations to reimburse the Company as provided in Section 1 above will extend beyond December 31, 2013 and is therefore considered a multi-year fiscal obligation under Article X, Section 20 of the Colorado Constitution and the City’s Charter Section 11-6. As such, it is a multi-year fiscal obligation subject to annual appropriation by the Loveland City Council. The City shall have no obligation for the refund of sales taxes as provided in Section 1 above if the refund is being sought or is to be paid on or after December 31, 2013 if the necessary appropriation has not been made by the City Council to authorize such payment. However, the City agrees that the Economic Development Director shall include in the proposed annual budget and appropriation ordinances for 2014 and subsequent years when needed for the City Council’s consideration the necessary appropriation to pay up to a total of one hundred and seventy five thousand dollars (\$175,000) for the refund as provided in Section 1 above.

4. Applicable Law and Venue

This Agreement shall be governed by and enforced in accordance with the laws of the State of Colorado. In addition, the hereto acknowledge that there are legal constraints imposed upon the City by the constitutions, statutes, and rules and regulations of the State of Colorado and of the United States, and imposed upon the City by its Charter and Code, and that, subject to

such constraints, the parties intend to carry out the terms and conditions of this Agreement. Notwithstanding any other provisions of this Agreement to the contrary, in no event shall any of the parties hereto exercise any power or take any action which shall be prohibited by applicable law. Whenever possible, each provision of this Agreement shall be interpreted in such a manner so as to be effective and valid under applicable law. Venue for any judicial proceeding concerning this Agreement shall be in the District Court for Larimer County, Colorado.

5. Waiver of Confidentiality

Under C.R.S. § 24-72-204 of the Colorado Open Records Act and under City Code Section 3.16.230, the City is required to maintain as confidential documents that are not subject to public inspection the Crunchy Grocer's sales tax information and records that are submitted to and on file with the City. However, notwithstanding these provisions of law or any other applicable provisions of the law, the Crunchy Grocer hereby authorizes the City to provide information as to gross receipts, sales tax collections, and amount of sales tax refunded under this Agreement to members of the Loveland City Council, and acknowledges that information provided to Council is subject to public inspection.

6. Time is of the Essence

Time shall be of the essence for the performance of all obligations under this Agreement.

7. Assignment

The Crunchy Grocer shall not assign or transfer any or all of its interests, rights, or obligations under this Agreement without the prior written consent of the City Council. Any such assignment or transfer without the City Council's prior written consent shall be deemed null and void and of no effect.

8. Construction

This Agreement shall be construed according to its fair meaning and as if it was prepared by both of the parties hereto and shall be deemed to be and contain the entire Agreement between the parties hereto. There shall be deemed to be no other terms, conditions, promises, understandings, statements, or representations expressed or implied, concerning this Agreement, unless set forth in writing and signed by the City and the Crunchy Grocer

9. Headings

Section headings used in this Agreement are used for convenience of reference only and shall in no way define, control, or affect the meaning or interpretation of any provision of this Agreement.

10. Notices

Any written notice given under this Agreement and all other correspondence between the parties shall be directed to the following and shall be deemed received when hand-delivered or

three (3) days after being sent by certified mail, return receipt requested, to the following addresses:

If to the City: Bill Cahill
City Manager
City of Loveland
500 East Third Street, Suite 330
Loveland, CO 80537

With Copy to: John R. Duval
City Attorney
City of Loveland
500 East Third Street, Suite 330
Loveland, CO 80537

If to the Crunchy Grocer: Jonas Buehl
Crunchy Grocer LLC
1461 E. Eisenhower
Loveland, CO 80537

Either party hereto may at any time designate a different address or person receiving notice by so informing the other parties in writing.

11. Binding Effect

This Agreement shall be binding upon and, except as otherwise provided in this Agreement, shall inure to the benefit of the successors and assigns of the respective parties hereto.

12. No Waiver

In the event the City waives any breach of this Agreement, no such waiver shall be held or construed to be a waiver of any subsequent breach hereof.

13. Severability

If any provision of this Agreement, or the application of such provision to any person, entity, or circumstance, shall be held invalid, the remainder of this Agreement, or the application of such provision to persons, entities, or circumstances other than those in which it was held invalid, shall not be affected.

14. Right of Offset

The Crunchy Grocer agrees that the City shall have the right to withhold from and set off against any amounts which may become payable to the Crunchy Grocer by the City under this Agreement against any amounts which the Crunchy Grocer may owe to the City, whether arising under this Agreement or otherwise. For example, but not by way of limitation, if the crunchy Grocer fails to pay any amounts due to the City for services not related to this Agreement, such as utility or other services, the City shall have the right to withhold payment of and set off against any amounts that may be due by the City to the Crunchy Grocer against any amounts that may be due to the City by the Crunchy Grocer.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date and year first above written.

[remainder of page intentionally left blank]

CITY OF LOVELAND, COLORADO

By: _____
William D. Cahill, City Manager

ATTEST:

City Clerk

APPROVED AS TO FORM:

Deputy City Attorney

STATE OF COLORADO)
) ss.
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this ____ day of ____, 2013, by William D. Cahill as City Manager of the City of Loveland, Colorado, and by Teresa Andrews as City Clerk of the City of Loveland, Colorado.

Witness my hand and official seal. My commission expires: _____.

Notary Public

(S E A L)



CITY OF LOVELAND
ECONOMIC DEVELOPMENT OFFICE
 Civic Center • 500 East Third • Loveland, Colorado 80537
 (970) 962-2304 • FAX (970) 962-2900 • TDD (970) 962-2620

AGENDA ITEM: 11
MEETING DATE: 6/4/2013
TO: City Council
FROM: Economic Development Department
PRESENTER: Mike Scholl, Economic Development Manager

TITLE:

Fee Deferral and Waiver Agreement for Leed Fabrication (LEED)

RECOMMENDED CITY COUNCIL ACTION:

This is an information only item.

DESCRIPTION:

LEED, located at 5100 Boyd Lake Avenue is seeking a deferral of the cash-in-lieu payment for the required street improvements to Boyd Lake Avenue. Further, the City is offering a \$75,000 waiver of building permit fees and construction materials use tax. The street improvements are required as part of the City's site development standards, which were triggered by the proposed 40,200 square foot addition to the existing facility and the proposed construction of an additional 28,100 square foot building.

According to the City's approved Economic Development Incentive Policy, any agreement that exceeds \$20,000 is required to go before Council as an informational item prior to final consideration. Pending Council review, the item is expected to be returned for final consideration at the regular meeting on Tuesday, June 18, 2013.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

If the final agreement is approved by the City Council, the City will waive \$75,000 in fees and materials use tax.

SUMMARY:

LEED designs and manufactures a wide range of well head production equipment, emission control devices, miscellaneous pressure vessels, and provides field services and technical support for these and other oil field requirements. The company has seen rapid growth in recent years due to the recent oil boom. With the expansion, LEED will relocate 15 employees and add

up to 210 new employees over the next five years. The expected average salary of the new employees is \$40,000.

The cash-in-lieu payment amount is based upon the current estimated cost per lineal foot for one-half of a collector street equivalent. The current City estimate is \$250.97 for a collector half-street multiplied by 1,322 lineal feet for an estimated cash-in-lieu payment amount of **\$331,782**.

The cash-in-lieu payment amount will be finalized after the Roadway Improvement Design is completed by LFS and approved by the City. The final cash-in-lieu payment amount shall be determined by the City.

There have been some challenges with the review of the site plan permit and building permit including the landscaping, parking, and the street and right-of-way improvements. In response, the Design Review Team has issued a permit for grading and for the installation of the footing and foundation prior to final approval of the Site Development Plan to help LEED meet their building schedule.

REVIEWED BY CITY MANAGER:



LIST OF ATTACHMENTS:

LFS Loveland, LLC and LEED Fabrication, Inc. Agreement (draft)
Economic Impact Analysis

Leed Fabrication Service, Inc Economic Impact Analysis for the City of Loveland

Martin Shields, Professor of Economics
Michael Marturana, Research Economist
Colorado State University

15 March 2013

About Leed Fabrication

- Leed Fabrication provides products and services to support the petroleum industry
- Leed Fabrication considering purchasing the 5100 Boyd Lake property and hiring over 200 employees over two years
 - Acquisition price of the facility: \$2.1 million
 - In the second year at their location, Leed Fabrication expects to perform a \$5.0 million expansion to the facility
- Leed Fabrication expects to relocate 15 employees and plans to hire an additional 220 FTEs, over the next five years
 - The average expected annual wage is \$40,000
 - Expected wage growth rate: 5 percent
 - 2011 average earnings per worker in Larimer County: \$42,120

Notes About the Calculations

- Due to current market conditions, we assume a real estate value growth rate of 1 percent
- We assume 30 percent of Leed Fabrication employees reside in Loveland (we provide a range of estimates based on different commuting patterns in Table 5)
 - According to the US Census Bureau, roughly 30 percent of Loveland workers in goods producing industries reside in Loveland
- A discount rate of 3 percent is assumed for present value calculations
- Fiscal impacts are calculated using CSU's Insight-based fiscal impact model

Estimated Revenue Impacts to the City of Loveland from Leed Fabrication

- Over five years, city tax revenue generated is estimated at \$688,648 (Table 1)
- The greatest municipal revenue impact is \$407,142, over five years, from employee effects (Table 1)
 - \$392,495 in retail sales tax
 - \$12,629 from single family property taxes
 - \$2,019 in multifamily property taxes
- \$176,364 from operations, over five years
 - \$65,952 in real property taxes
 - \$42,522 from personal property taxes
 - \$35,550 on taxable materials used in operations
 - \$32,340 in sales tax on utility purchases
- \$105,000 from use tax on construction materials

Estimated Cost to the City of Loveland

- \$583,464 over five years in providing government services (Table 2)
 - \$493,920 in providing government services to Leed Fabrication

- \$89,544 over five years in government services employees of Leed Fabrication that reside in Loveland

Net Fiscal Impacts of Leed Fabrication on the City of Loveland

- The City of Loveland is estimated to experience a net revenue gain of \$105,184 over a period of five years (Table 3)
 - Five year net present value: \$93,484
- Ten year estimates show a net public revenue of \$94,489
 - Ten year net present value: \$72,418
- The net revenue per new employee over the next five years is reported in Table 4
- If a larger percentage of Leed Fabrication’s workers reside in Loveland, then the net public revenue to the City decreases (Table 5)
- Table 6 details the major expenses in the next 5 years and corresponding present values for Leed Fabrication

Table 1: Revenue benefits to Loveland from Leed Fabrication

Revenue Source and Breakdown	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Construction	\$105,000					\$105,000
Operations	\$6,060	\$23,275	\$48,322	\$49,539	\$49,169	\$176,364
Real property tax		\$5,894	\$19,821	\$20,019	\$20,219	\$65,952
Personal property taxes during operations		\$5,287	\$13,053	\$12,949	\$11,233	\$42,522
Sales tax on (taxable) materials	\$300	\$6,000	\$9,000	\$9,750	\$10,500	\$35,550
Sales tax on utilities	\$5,760	\$6,094	\$6,448	\$6,821	\$7,217	\$32,340
Offsite Employee Effects	\$19,500	\$68,587	\$96,050	\$106,394	\$116,610	\$407,142
City sales tax on retail sales	\$19,500	\$67,568	\$92,445	\$101,582	\$111,401	\$392,495
Single family property taxes		\$862	\$3,116	\$4,138	\$4,512	\$12,629
Multifamily property taxes		\$158	\$490	\$674	\$697	\$2,019
Visitor Impacts	\$26	\$27	\$28	\$29	\$30	\$141
Total Public Revenues	\$130,586	\$91,889	\$144,400	\$155,962	\$165,810	\$688,648

Sources: Leed Fabrication and Insight

Table 2: Costs to Loveland from providing government services to Leed Fabrication

Public Cost Source	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Operations	\$26,086	\$88,237	\$117,850	\$126,414	\$135,333	\$493,920
City Residents	\$4,717	\$15,993	\$21,348	\$23,054	\$24,432	\$89,544
Total Public Costs	\$30,803	\$104,229	\$139,198	\$149,468	\$159,765	\$583,464

Sources: Leed Fabrication and Insight

Table 3: Net revenue to Loveland from Leed Fabrication

	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total	5 Year Average
Total Public Revenues	\$130,586	\$91,889	\$144,400	\$155,962	\$165,810	\$688,648	\$137,730
Total Public Costs	\$30,803	\$104,229	\$139,198	\$149,468	\$159,765	\$583,464	\$116,693
Net Public Revenue	\$99,783	-\$12,340	\$5,202	\$6,494	\$6,045	\$105,184	\$21,037

Sources: Leed Fabrication and Insight

Table 4: Net public revenues per new worker over five years

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Revenue	\$99,783	-\$12,340	\$5,202	\$6,494	\$6,045
Total New Jobs	35	150	200	210	220
Net Public Revenue per New Worker	\$2,851	-\$82	\$26	\$31	\$27

Sources: Leed Fabrication and Insight

Table 5: Net revenue to the City of Loveland for different commuting patterns over 5 and 10 years

Percent of workers residing in Loveland	5 Year Net Revenue	Present Value of 5 Year Net Gain	10 Year Net Revenue	Present Value of 10 Year Net Gain
30%	\$105,184	\$93,454	\$94,489	\$72,418
40%	\$81,236	\$72,177	\$36,408	\$27,904
50%	\$54,812	\$48,700	-\$24,438	-\$18,730

Sources: Leed Fabrication and Insight

Table 6: Net present value of major expenses for Leed Fabrication

Expense	Furniture	Computer Equipment	Taxable Operational Materials	Utilities	Total
5 Year Total Expense Spent in Loveland	\$105,000	\$155,000	\$2.27 Mil	\$956,732	\$3.49 Mil
Present Value of Expense	10%	10%	50%	100%	
Present Value of Expense	\$98,368	\$147,368	\$2.13 Mil	\$878,360	\$3.25 Mil
Present Value of Expense Sent in Loveland	\$9,837	\$14,737	\$1.06 Mil	\$878,360	\$1.96 Mil

Source: Leed Fabrication



CITY OF LOVELAND
FINANCE DEPARTMENT

Civic Center • 500 East Third • Loveland, Colorado 80537
(970) 962-2695 • FAX (970) 962-2900 • TDD (970) 962-2620

AGENDA ITEM: 12
MEETING DATE: 6/4/2013
TO: City Council
FROM: Brent Worthington, Finance
PRESENTER: Brent Worthington

TITLE:

April 2013 Financial Report

RECOMMENDED CITY COUNCIL ACTION:

This is an information only item. No action is required.

DESCRIPTION:

The Snapshot Report includes the City's preliminary revenue and expenditures including detailed reports on tax revenue and health claims year to date, ending April 30, 2013.

BUDGET IMPACT:

- Positive
 Negative
 Neutral or negligible

SUMMARY:

The Snapshot Report is submitted for Council review and includes the reporting of the City's revenue and expenditures, including detailed reports on tax revenue and health claims as of April 30, 2013. Citywide Revenue (excluding internal transfers) of \$72,887,946 is 103.2% of year to date (YTD) budget or \$2,282,085 over the budget. Sales Tax collections are 103.6% of the YTD budget or \$427,537 over budget. Building Material Use Tax is 116.3% of YTD budget, or \$72,219 over budget. Sales and Use Tax collections combined were 105.4% of YTD budget or \$704,376 over budget. When the combined sales and use tax for the current year are compared to 2012 for the same period last year, they are higher by 9.3% or \$1,160,641.

Citywide total expenditures of \$58,676,772 (excluding internal transfers) are 74.2% of the YTD budget or \$20,453,932 under the budget.

REVIEWED BY CITY MANAGER:

William D. Cabell

LIST OF ATTACHMENTS:

Snapshot Report for April 2013
Presentation

Snapshot

Monthly Financial Report

April 2013

A Snapshot In Time

- ◇ Citywide Revenue, excluding transfers between funds, \$72.9 million (3.2% above budget projections)
- ◇ Sales & Use Tax Collection, \$13.7 million (5.4% above budget projections)
- ◇ Citywide Expenditures, excluding transfers between funds, \$58.7 million (25.8% below budget projections)
- ◇ Citywide Year-To-Date Revenues exceed Year-To-Date Expenditures by \$14.2 million
- ◇ General Fund Revenue, excluding transfers between funds, \$25.0 million (6.4% above budget projections)
- ◇ General Fund Expenditures, excluding transfers between funds, \$17.7 million, (9.8 % below budget projections)
- ◇ General Fund Revenues exceed Expenditures by \$4.9 million

Citywide Revenues & Expenditures 2-3

General Fund Revenues & Expenditures 4-5

Capital Projects 5

Tax Totals & Comparison 6-9

Sales Tax SIC & Geo Codes 10-12

Health Care Claims 13

Activity Measures 14

The Sales Tax Basics

April 2013	Sales Tax	Motor Vehicle Use Tax	Building Materials Use Tax	Combined
Budget 2013	\$ 11,919,620	\$ 615,460	\$ 443,580	\$ 12,978,660
Actual 2013	12,347,157	820,081	515,798	13,683,036
% of Budget	103.6%	133.2%	116.3%	105.4%
Actual 2012	\$ 11,432,656	\$ 770,888	\$ 318,853	\$ 12,522,397
Change from prior year	8.0%	6.4%	61.8%	9.3%

Financial Sustainability

The City remains in a strong financial position because of a tradition of conservative fiscal management. To uphold this tradition, the City ensures that operations are paid for by current-year revenues, fund balances are positive and reserves are sufficient to overcome financial challenges, and debt is considered extraordinary and avoided in favor of a pay-as-we-go system. This sound fiscal policy allows the City to achieve Council goals and priorities and to meet challenges as they arise.

In 2011, the City embarked upon a community-wide financial sustainability effort to ensure that shortfalls projected in its General Fund 10-year financial plan were addressed using a balanced plan consisting of 81% expenditure cuts and 19% revenue increases. The Financial Sustainability Strategy, adopted by the City Council on June 7, 2011, includes ongoing processes designed to ensure that the City retains a healthy financial outlook.

Although sales and use tax revenue is greater in 2013 than in 2007 year-to-date, inflation adjustment of the revenue shows that collections in 2013 have not significantly grown above 2007 levels when inflation is taken into account, emphasizing the importance of continuing the strategy implementation.



Citywide Revenues & Expenditures

Combined Statement of Revenues and Expenditures				
April 2013				
REVENUE	Current Month	YTD Actual	YTD Revised Budget	% of Budget
General Governmental				
1	General Fund	\$ 6,009,530	\$ 24,979,918	\$ 23,475,782 106.4%
2	Special Revenue	693,111	2,336,417	3,220,782 72.5%
3	Other Entities	2,013,648	8,119,185	8,532,393 95.2%
4	Internal Service	1,520,954	5,628,710	5,521,850 101.9%
5	<i>Subtotal General Govt Operations</i>	\$ 10,237,243	\$ 41,064,228	\$ 40,750,808 100.8%
6	Capital Projects	595,077	3,300,226	2,193,482 150.5%
Enterprise Fund				
7	Water & Power	6,760,798	24,598,709	23,407,390 105.1%
8	Stormwater	345,763	1,452,119	1,445,293 100.5%
9	Golf	220,546	652,391	835,370 78.1%
10	Solid Waste	498,097	1,820,271	1,973,518 92.2%
11	<i>Subtotal Enterprise</i>	\$ 7,825,205	\$ 28,523,491	\$ 27,661,571 103.1%
12	Total Revenue	\$ 18,657,525	\$ 72,887,946	\$ 70,605,861 103.2%
	<i>Prior Year External Revenue</i>		65,856,559	
	<i>Increase From Prior Year</i>		10.7%	
13	Internal Transfers	170,105	2,560,337	6,513,820 39.3%
14	Grand Total Revenues	\$ 18,827,630	\$ 75,448,283	\$ 77,119,681 97.8%
EXPENDITURES				
General Governmental				
15	General Fund	\$ 5,856,139	\$ 17,351,633	\$ 18,896,328 91.8%
16	Special Revenue	783,636	2,531,671	2,891,061 87.6%
17	Other Entities	2,160,113	7,219,404	12,080,612 59.8%
18	Internal Services	1,956,248	4,733,129	5,979,463 79.2%
19	<i>Subtotal General Gov't Operations</i>	\$ 10,756,137	\$ 31,835,838	\$ 39,847,464 79.9%
20	Capital	1,918,289	7,682,917	15,144,221 50.7%
Enterprise Fund				
21	Water & Power	3,032,153	16,286,209	20,986,920 77.6%
22	Stormwater	229,386	820,193	701,603 116.9%
23	Golf	283,995	750,615	872,776 86.0%
24	Solid Waste	437,101	1,301,001	1,577,720 82.5%
25	<i>Subtotal Enterprise</i>	\$ 3,982,635	\$ 19,158,017	\$ 24,139,019 79.4%
26	Total Expenditures	\$ 16,657,061	\$ 58,676,772	\$ 79,130,704 74.2%
	<i>Prior Year External Expenditures</i>		57,167,973	
	<i>Increase (-Decrease) From Prior Year</i>		2.6%	
27	Internal Transfers	170,105	2,560,337	6,513,820 39.3%
28	Grand Total Expenditures	\$ 16,827,167	\$ 61,237,109	\$ 85,644,524 71.5%

** Based on seasonality of receipts and expenditures since 1995.

Special Revenue Funds: Community Development Block Grant, Cemetery, Local Improvement District, Lodging Tax, Affordable Housing, Seizure & Forfeitures, Transit, Transportation.

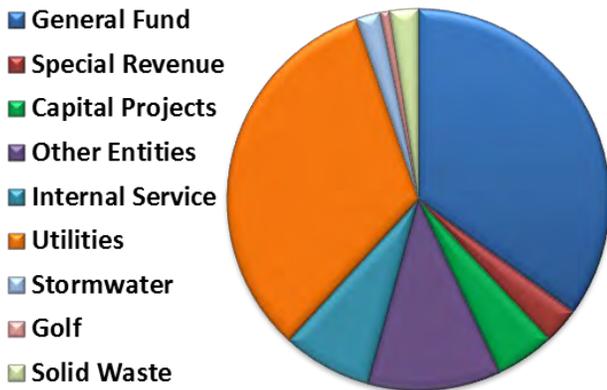
Other Entities Fund: Special Improvement District #1, Airport, General Improvement District #1, Loveland Urban Renewal Authority, Loveland/Larimer Building Authority, Loveland Fire and Rescue Authority.

General Government Capital Projects Fund: Capital Expansion Fee Funds, Park Improvement, Conservation Trust, Open Space, Art In Public Places.

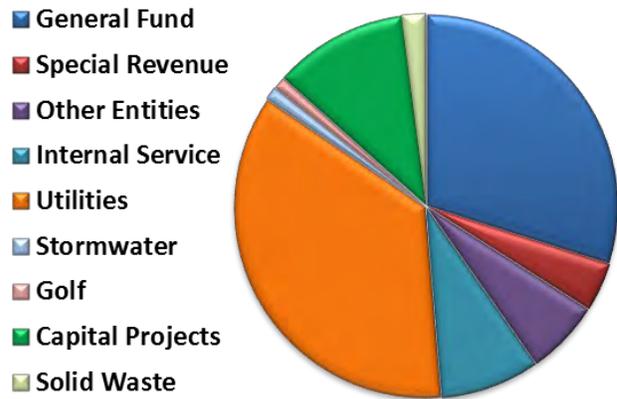
Internal Service Funds: Risk/Insurance, Fleet, Employee Benefits.



YTD Operating Revenues of \$72.9 Million



YTD Operating Expenditures of \$58.7 Million

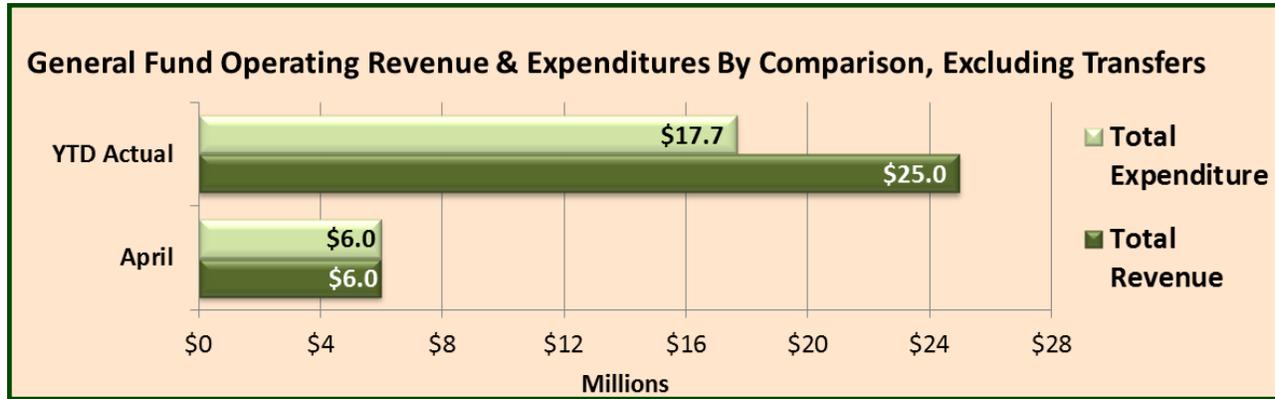


- ◆ General Fund Revenue, excluding transfers between funds, \$25 million (6.4% above budget projections)
 - * 11.1% above 2012 YTD
- ◆ General Fund Expenditures, excluding capital and transfers between funds, \$17.4 million (8.2% below budget projections)
 - * 0.5% above 2012 YTD
- ◆ Water & Power Revenue, excluding transfers between funds, \$24.6 million (5.1% above budget projections)
 - * 11.2% above 2012 YTD
- ◆ Water & Power Expenditures, excluding transfers between funds, \$16.3 million (22.4% below budget projections)
 - * 2.1% below 2012 YTD
- ◆ Other Entities Fund Revenue, excluding transfers between funds, \$8.1 million (4.8% below budget projections)
 - * 12.6% above 2012 YTD
- ◆ Other Entities Expenditures, excluding capital and transfers between funds, \$7.2million (40.2% below budget projections)
 - * 1.3% above 2012 YTD

General Fund Revenues & Expenditures

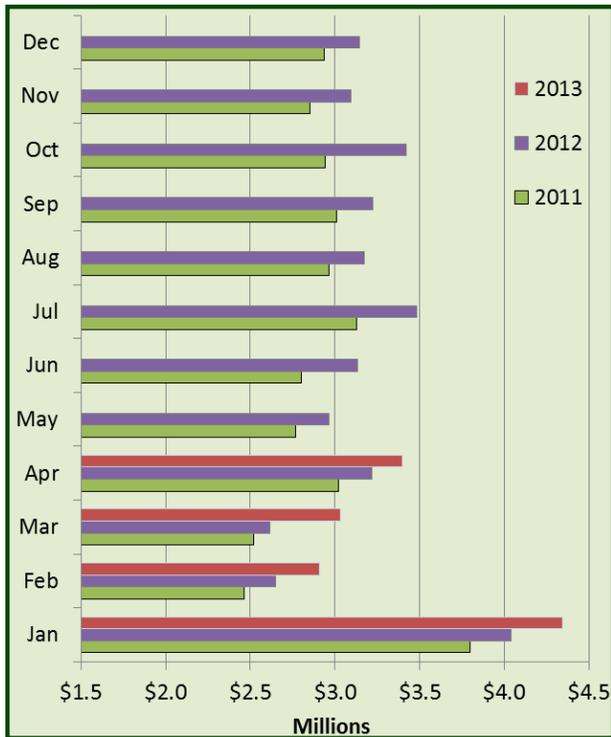
General Fund Revenue & Expenditures April 2013				
REVENUES	Current Month	YTD Actual	YTD Revised Budget	% of Budget
1 Taxes				
2 Property tax	\$ 717,843	\$ 2,949,166	\$ 2,620,510	112.5%
3 Sales tax	3,109,701	12,347,157	11,919,620	103.6%
4 Building use tax	79,229	515,798	443,580	116.3%
5 Auto use tax	208,144	820,081	615,460	133.2%
6 Other taxes	205,266	1,126,279	869,560	129.5%
7 Intergovernmental	(73,580)	68,202	112,040	60.9%
8 License & permits				
9 Building permits	102,893	570,425	440,840	129.4%
10 Other permits	(5,377)	89,481	77,956	114.8%
11 Charges for services	1,137,131	4,154,971	3,868,340	107.4%
12 Fines & forfeitures (1)	58,379	269,994	355,680	75.9%
13 Interest income	15,242	109,723	113,360	96.8%
14 Miscellaneous	454,659	1,958,640	2,038,836	96.1%
15 Subtotal	\$ 6,009,530	\$ 24,979,917	\$ 23,475,782	106.4%
16 Interfund transfers	6,570	76,270	76,270	100.0%
17 Total Revenue	\$ 6,016,100	\$ 25,056,187	\$ 23,552,052	106.4%
EXPENDITURES				
Operating Expenditures				
18 Legislative	\$ 9,656	\$ 37,368	\$ 44,986	83.1%
19 Executive & Legal	241,984	668,870	866,711	77.2%
20 Economic Development	98,735	357,442	366,788	97.5%
21 Cultural Services	164,710	496,204	569,044	87.2%
22 Development Services	352,649	855,010	938,480	91.1%
23 Finance	397,152	1,152,452	1,361,151	84.7%
24 Fire & Rescue	-	4,975	-	0.0%
25 Human Resources	97,216	285,156	329,858	86.4%
26 Information Technology	291,914	1,111,282	1,540,189	72.2%
27 Library	273,387	859,814	922,126	93.2%
28 Parks & Recreation	981,887	2,458,038	3,150,201	78.0%
29 Police	1,804,370	5,370,872	5,428,551	98.9%
30 Public Works	470,324	1,485,052	1,570,113	94.6%
31 Non-Departmental	798,278	2,526,325	2,508,820	100.7%
32 Subtotal Operating	\$ 5,982,262	\$ 17,668,860	\$ 19,597,018	90.2%
33 Internal Transfers	159,831	2,464,225	4,130,620	59.7%
34 Total Expenditures	\$ 6,142,094	\$ 20,133,085	\$ 23,727,638	84.9%

(1) There are three main drivers for the revenue being below budget: lower than projected revenue from traffic fines; lower than projected parking fine revenue; and lower than projected fines from municipal ordinance violations.



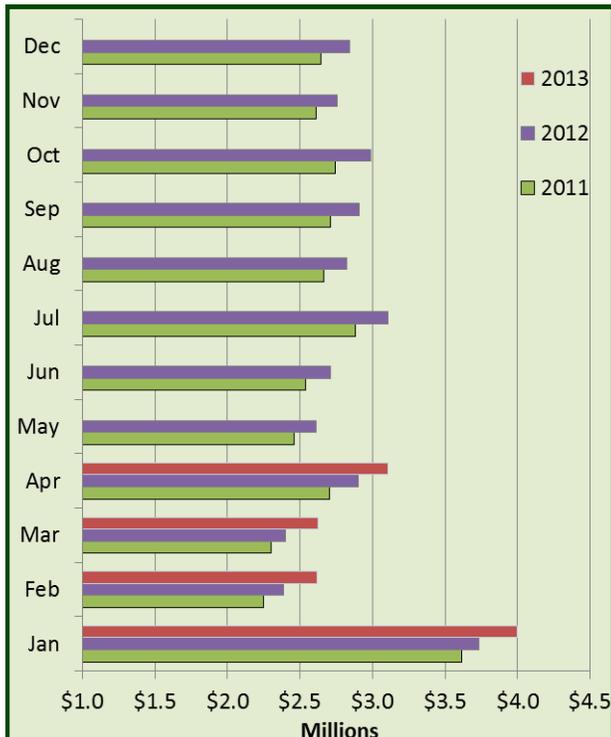
Capital Projects \$500,000+

Project Title	2013 Budget	2013 Expenditures	Remaining 2013 Budget	% of 2013 Budget (Exp/Bud)
Water Capital				
Floc/Sed #1 and #2 Retrofit	\$ 600,000	\$ -	\$ 600,000	0.00%
Water Treatment Plant Phase II Expansion (38 MGD)	2,423,200	11,900	2,411,300	0.49%
Filter Plant No. 2 Pipe Gallery Improvements	908,240	941,553	-33,313	103.67%
W 29th St. & W 1st St. Water Line Replacement	725,910	2,095	723,815	0.29%
Raw Water Capital				
Windy Gap Firming Project	618,000	-	618,000	0.00%
Purchase of Colorado-Big Thompson Project (CBT)	500,000	-	500,000	0.00%
Wastewater Utility Capital				
Digester Mixing System	1,200,000	-	1,200,000	0.00%
Digester Building Code Compliance	900,000	-	900,000	0.00%
Power Capital				
East Sub to Crossroads Sub on Railroad	1,379,732	594,650	785,082	43.10%
Horseshoe Sub along Hwy 287 to 29th St.	1,338,299	65	1,338,234	0.00%
Airport Sub North to Crossroads and South to Kendall Pkwy	683,260	4,343	678,917	0.64%
Callisto (vault 2716) East along 5th, North on Boyd Lake to railroad xing	570,000	-	570,000	0.00%
SW219 on old railroad North on VanBuren, East on 22nd to SW126	670,250	3,189	667,061	0.48%
Crossroads Substation - purchase new transformer	600,000	-	600,000	0.00%
Crossroads Substation - new switgear & transformer install	512,900	-	512,900	0.00%
Stormwater Capital				
29th and Monroe Outfall (Dry Creek)	1,000,000	-	1,000,000	0.00%
MeHaffey Park Regional Detention Pond	556,273	10,349	545,924	1.86%
Streets Transportation Program				
2013 Street Rehabilitation	4,441,844	119,964	4,321,880	2.70%
Fiber Optic Network to Signals and Other Facilities	1,071,125	28,036	1,043,089	2.62%
All Other				
Facilities Maintenance Capital Projects	500,000	59,426	440,574	11.89%
Open Lands Acquisition	2,520,800	277,189	2,243,611	11.00%
Fire Station 2 Relocation	3,534,480	43,998	3,490,482	1.24%
Service Center Phase III	11,235,080	386,515	10,848,565	3.44%
Vehicle Wash	\$1,200,000	\$ -	\$1,200,000	0.00%



Sales & Use Tax

	2011	2012	2013	2013 Budget	+ / - Budget
Jan	\$ 3,799,760	\$ 4,039,678	\$ 4,345,836	\$ 4,136,490	5.1%
Feb	2,465,447	2,649,229	2,906,780	2,528,010	15.0%
Mar	2,517,162	2,618,052	3,033,347	3,028,120	0.2%
Apr	3,022,770	3,215,437	3,397,074	3,286,040	3.4%
May	2,769,526	2,966,032		2,991,970	
Jun	2,800,184	3,136,014		3,127,370	
Jul	3,129,254	3,480,123		3,495,310	
Aug	2,961,686	3,171,055		3,154,400	
Sep	3,008,637	3,225,155		3,211,640	
Oct	2,944,433	3,421,098		3,327,150	
Nov	2,853,360	3,092,095		3,091,770	
Dec	2,933,671	3,142,793		3,141,380	
	\$35,205,889	\$38,156,762	\$13,683,036	\$38,519,650	
YTD	\$11,805,139	\$12,522,396	\$13,683,036	\$12,978,660	5.4%

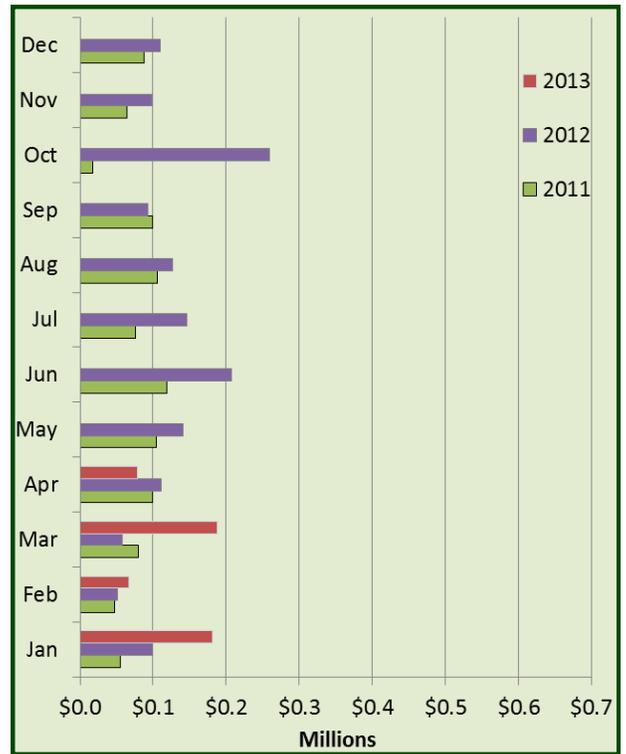


Retail Sales Tax

	2011	2012	2013	2013 Budget	+ / - Budget
Jan	\$ 3,613,881	\$ 3,733,309	3,995,194	\$ 3,909,960	2.2%
Feb	2,249,749	2,390,409	2,619,453	2,285,380	14.6%
Mar	2,299,237	2,403,380	2,622,808	2,715,660	-3.4%
Apr	2,702,024	2,905,558	3,109,701	3,008,620	3.4%
May	2,462,213	2,614,500		2,710,640	
Jun	2,536,541	2,711,906		2,878,350	
Jul	2,882,075	3,105,564		3,210,310	
Aug	2,667,674	2,823,319		2,866,890	
Sep	2,710,738	2,909,008		2,909,990	
Oct	2,746,866	2,991,033		3,035,070	
Nov	2,610,980	2,757,932		2,824,870	
Dec	2,647,162	2,841,959		2,863,910	
	\$32,129,139	\$34,187,876	\$12,347,157	\$35,219,650	
YTD	\$ 10,864,891	\$ 11,432,656	\$12,347,157	\$11,919,620	3.6%

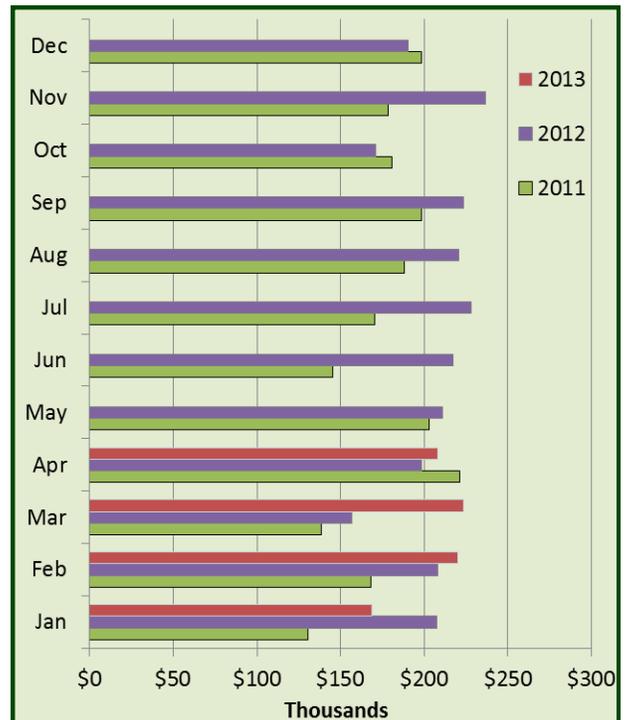
Building Materials Use Tax

	2011	2012	2013	2013 Budget	+ / - Budget
Jan	\$ 55,542	\$ 99,108	\$181,907	\$ 85,270	113.3%
Feb	47,621	50,703	67,440	83,620	-19.3%
Mar	79,590	57,845	187,222	164,570	13.8%
Apr	99,569	111,197	79,229	110,120	-28.1%
May	104,373	140,470		104,700	
Jun	118,318	207,024		100,770	
Jul	76,488	146,570		108,080	
Aug	105,871	127,261		104,580	
Sep	99,544	92,415		117,480	
Oct	17,021	259,279		96,490	
Nov	64,211	97,778		100,250	
Dec	88,033	110,414		124,070	
	\$956,181	\$1,500,063	\$515,798	\$1,300,000	
YTD	\$282,322	\$ 318,853	\$515,798	\$ 443,580	16.3%



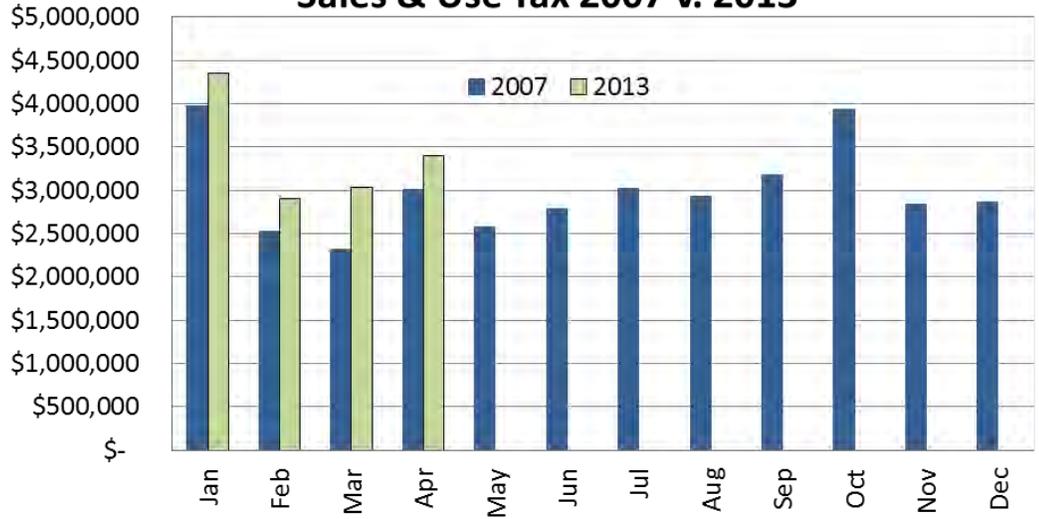
Motor Vehicle Use Tax

	2011	2012	2013	2013 Budget	+ / - Budget
Jan	\$ 130,337	\$ 207,261	\$ 168,734	\$ 141,260	19.4%
Feb	168,077	208,117	219,886	159,010	38.3%
Mar	138,335	156,828	223,317	147,890	51.0%
Apr	221,177	198,682	208,144	167,300	24.4%
May	202,940	211,062		176,630	
Jun	145,325	217,084		148,250	
Jul	170,691	227,989		176,920	
Aug	188,141	220,475		182,930	
Sep	198,355	223,732		184,170	
Oct	180,546	170,786		195,590	
Nov	178,169	236,385		166,650	
Dec	198,476	190,420		153,400	
	\$2,120,569	\$2,468,822	\$ 820,081	\$2,000,000	
YTD	\$ 657,926	\$ 770,888	\$ 820,081	\$ 615,460	33.2%



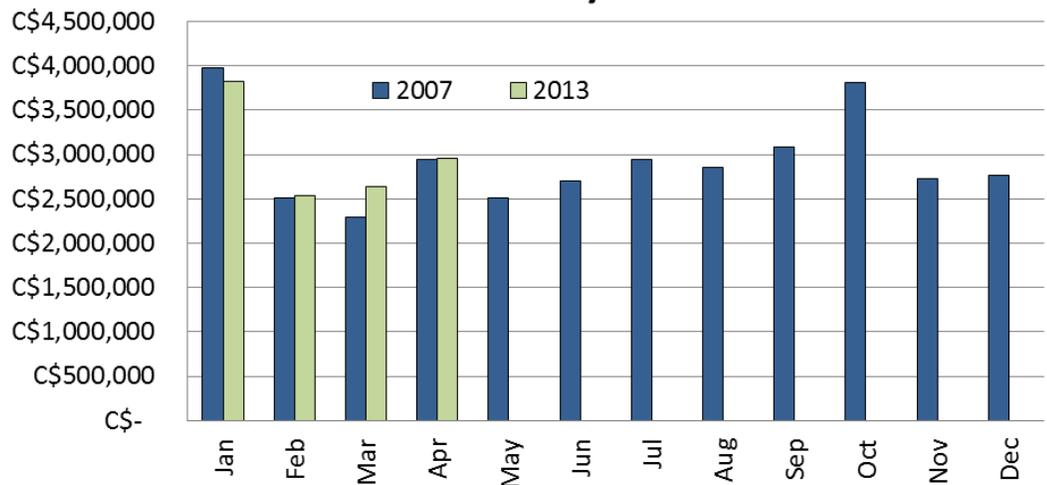
	2007	2013
Jan	\$ 3,972,513	\$ 4,345,836
Feb	2,520,486	2,906,780
Mar	2,319,579	3,033,347
Apr	3,003,780	3,397,074
May	2,581,830	
Jun	2,781,786	
Jul	3,022,815	
Aug	2,931,667	
Sep	3,176,883	
Oct	3,936,330	
Nov	2,835,420	
Dec	2,869,916	
	\$35,953,006	\$13,683,037

Sales & Use Tax 2007 v. 2013

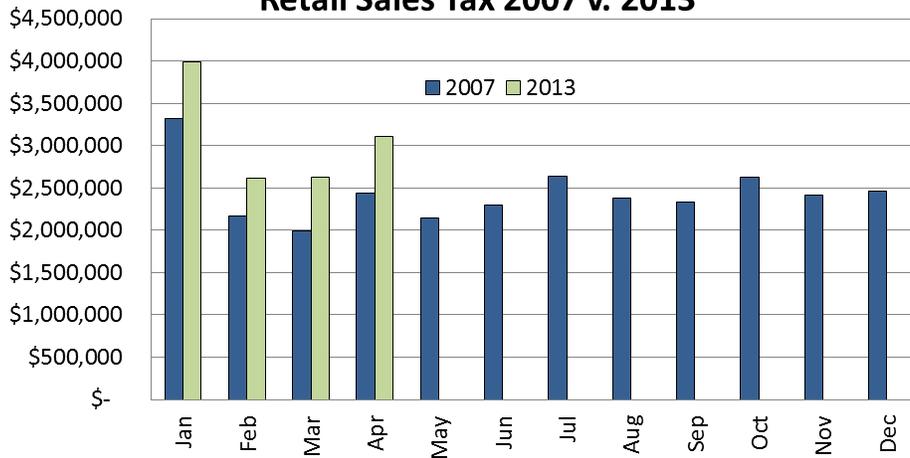


	2007	2013
Jan	\$ 3,972,513	\$ 3,819,987
Feb	2,507,072	2,534,302
Mar	2,286,415	2,637,754
Apr	2,941,724	2,957,121
May	2,513,134	
Jun	2,702,532	
Jul	2,937,441	
Aug	2,854,102	
Sep	3,084,330	
Oct	3,813,494	
Nov	2,730,719	
Dec	2,765,797	
	\$35,109,275	\$11,949,164

Sales & Use Tax 2007 v. 2013 in Constant January 2007 Dollars



Retail Sales Tax 2007 v. 2013



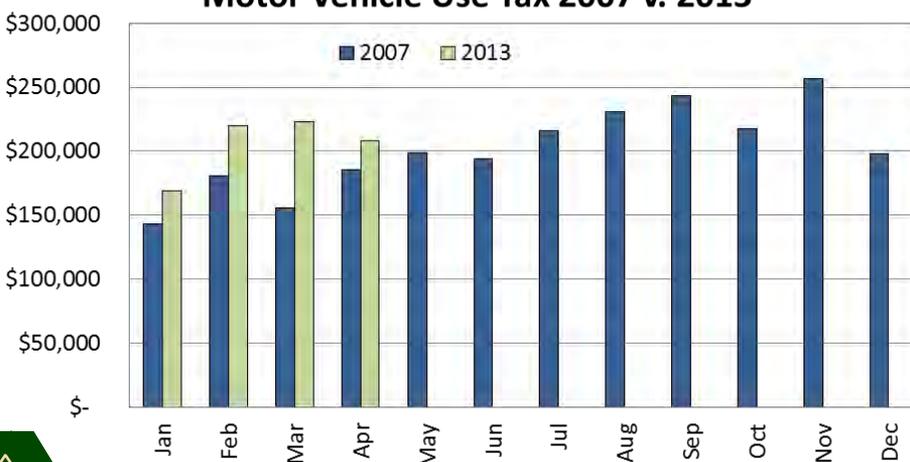
	2007	2013
Jan	\$ 3,324,067	\$ 3,995,194
Feb	2,167,873	2,619,453
Mar	1,994,635	2,622,808
Apr	2,437,958	3,109,701
May	2,146,685	
Jun	2,300,533	
Jul	2,640,223	
Aug	2,376,534	
Sep	2,332,844	
Oct	2,632,667	
Nov	2,419,051	
Dec	2,464,559	
	\$29,237,629	\$12,347,157

Building Material Use Tax 2007 v. 2013



	2007	2013
Jan	\$ 505,441	\$ 181,907
Feb	171,835	67,440
Mar	169,579	187,222
Apr	380,285	79,229
May	236,140	
Jun	287,300	
Jul	166,446	
Aug	324,125	
Sep	600,704	
Oct	1,086,325	
Nov	159,382	
Dec	207,723	
	\$ 4,295,285	\$ 515,799

Motor Vehicle Use Tax 2007 v. 2013



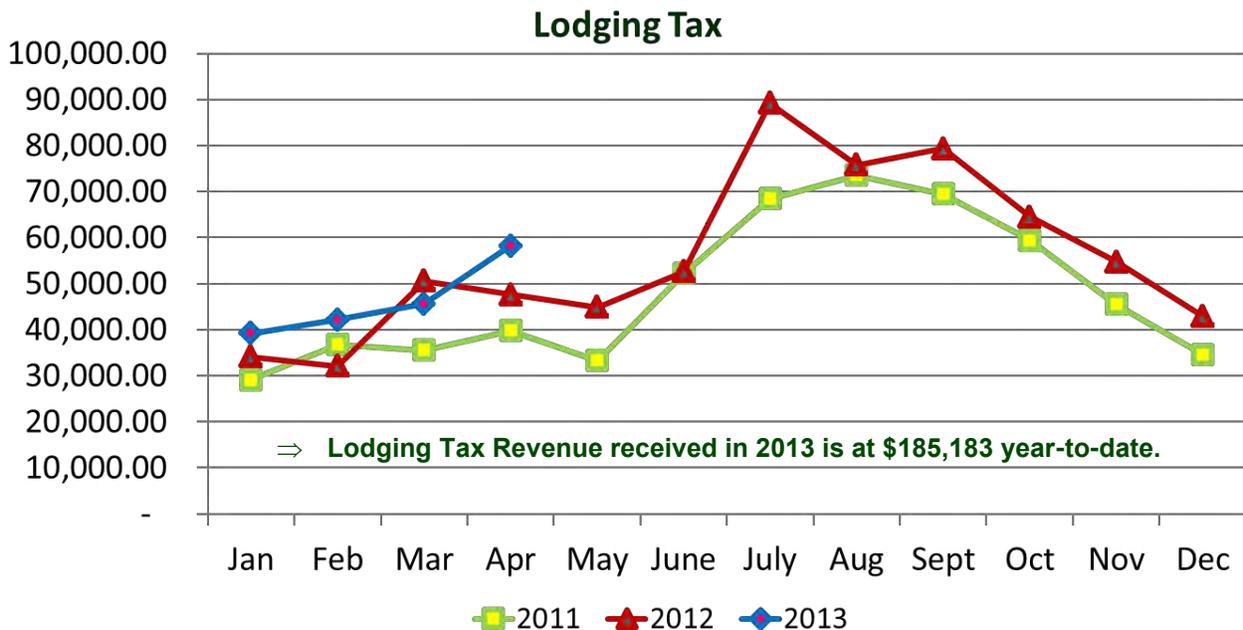
	2007	2013
Jan	\$ 143,005	\$ 168,734
Feb	180,778	219,886
Mar	155,365	223,317
Apr	185,537	208,144
May	199,005	
Jun	193,953	
Jul	216,146	
Aug	231,008	
Sep	243,336	
Oct	217,338	
Nov	256,987	
Dec	197,634	
	\$ 2,420,092	\$ 820,081

Sales Tax Collections

Description	YTD 2013	YTD 2012	\$ Change	% Change	% of Total	Total %
Department Stores & General Merchandise	\$ 2,754,131	\$ 2,620,758	\$ 133,373	5.1%	22.3%	22.3%
Restaurants & Bars	1,493,268	1,378,241	115,028	8.3%	12.1%	34.4%
Grocery Stores & Specialty Foods	1,319,007	1,202,728	116,279	9.7%	10.7%	45.1%
Clothing & Clothing Accessories Stores	892,188	825,820	66,369	8.0%	7.2%	52.3%
Motor Vehicle Dealers, Auto Parts & Leasing	783,795	685,931	97,864	14.3%	6.3%	58.7%
Sporting Goods, Hobby, Book & Music Stores	759,758	592,159	167,599	28.3%	6.2%	64.8%
Utilities	720,923	721,953	(1,029)	-0.1%	5.8%	70.6%
Building Material & Lawn & Garden Supplies	681,601	616,398	65,203	10.6%	5.5%	76.2%
Broadcasting & Telecommunications (1)	445,845	453,364	(7,519)	-1.7%	3.6%	79.8%
Used Merchandise Stores	404,011	367,511	36,500	9.9%	3.3%	83.1%
Beer, Wine & Liquor Stores	279,004	248,887	30,117	12.1%	2.3%	85.3%
Consumer Goods & Commercial Equipment Rental	232,660	190,204	42,455	22.3%	1.9%	87.2%
Hotels, Motels & Other Accommodations	228,078	211,874	16,204	7.6%	1.8%	89.0%
Health & Personal Care Stores	222,019	205,414	16,604	8.1%	1.8%	90.8%
Electronic Shopping & Mail-Order Houses	194,598	172,413	22,185	12.9%	1.6%	92.4%
Furniture & Home Furnishing Stores	163,684	155,716	7,968	5.1%	1.3%	93.7%
Electronics & Appliance Stores (2)	149,832	211,098	(61,266)	-29.0%	1.2%	95.0%
Office Supplies, Stationery & Gift Stores	121,000	117,146	3,853	3.3%	1.0%	95.9%
Gasoline Stations with Convenience Stores	81,962	76,551	5,411	7.1%	0.7%	96.6%
All Other Categories	419,793	379,005	40,788	10.8%	3.4%	100.0%
Total	\$12,347,157	\$11,433,171	\$ 913,986	8.0%	100.0%	

(1) Appears to be driven by the major wireless carriers, showing a \$13,900 decline through April.

(2) This sector shows a significant decline through April; staff will continue to monitor this trend.

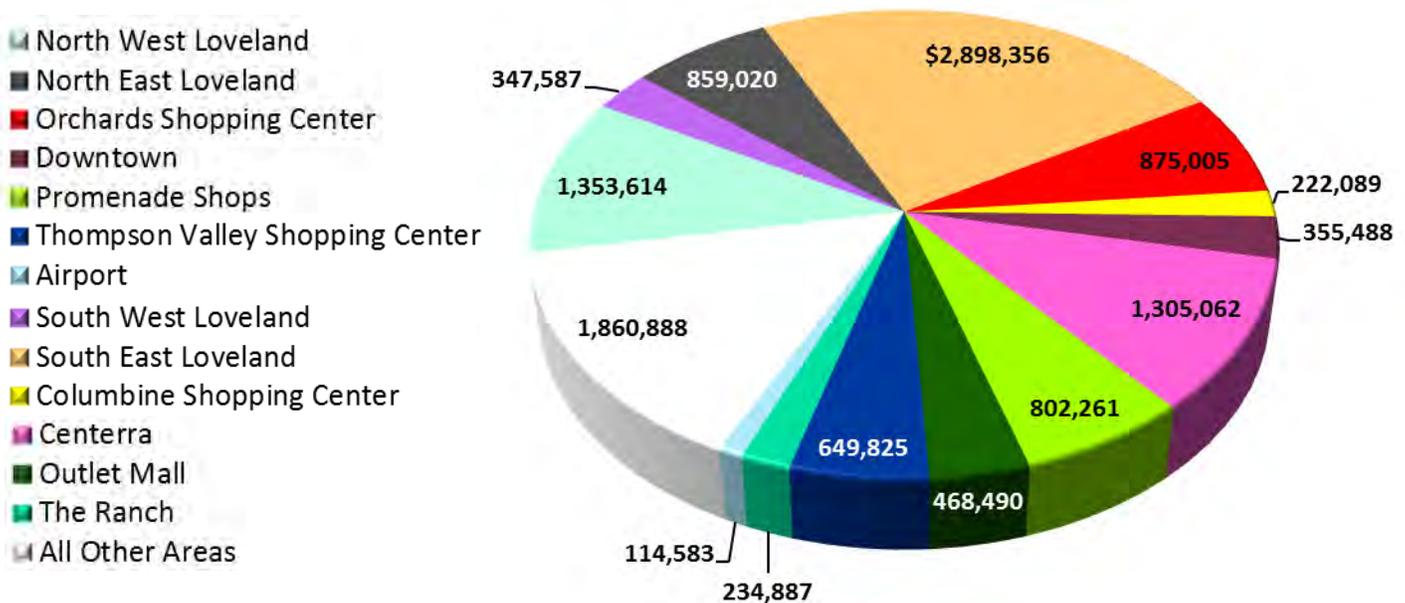


Geographical Area	YTD 2013	YTD 2012	Change
South East Loveland	\$2,898,356	\$2,710,288	6.9%
North West Loveland	1,353,614	1,263,104	7.2%
Centerra	1,305,062	1,114,631	17.1%
Orchards Shopping Center	875,005	750,581	16.6%
North East Loveland	859,020	785,457	9.4%
Promenade Shops (1)	802,261	835,816	-4.0%
Thompson Valley Shopping Center	649,825	597,693	8.7%
Outlet Mall	468,490	443,442	5.6%
Downtown (2)	355,488	323,688	9.8%
South West Loveland	347,587	337,940	2.9%
The Ranch	234,887	221,777	5.9%
Columbine Shopping Center	222,089	211,272	5.1%
Airport	114,583	111,548	2.7%
All Other Areas (3)	1,860,888	1,725,418	7.9%
Total	\$12,347,157	\$11,432,655	8.0%

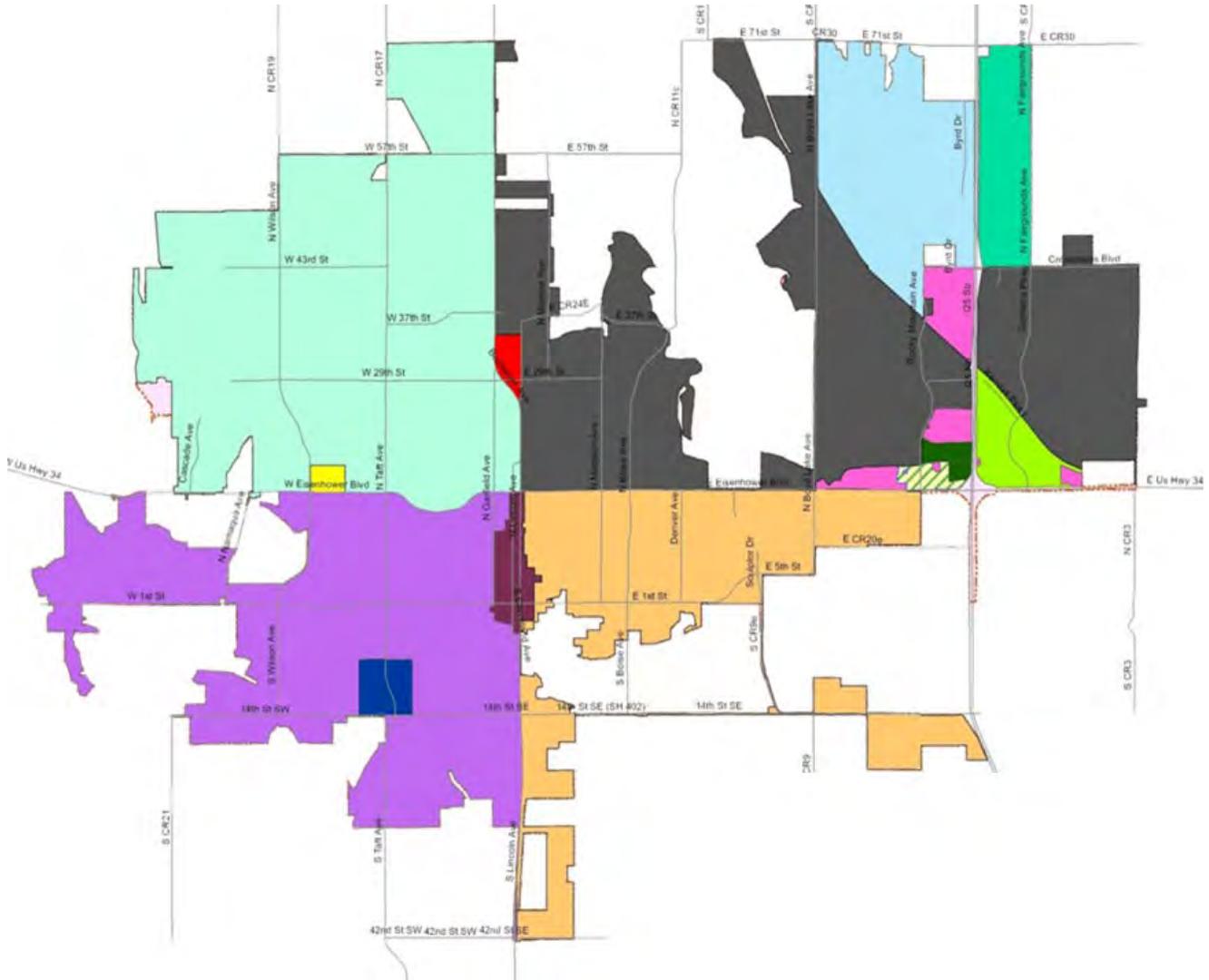
(1) Sales at this retail center is affected by the decline in Electronics and Appliances (noted on page 10). Factoring out this sector, overall sales are up nearly 1%.

(2) There has been an increase in tax licenses issued in the Downtown area, and established retailers' sales are trending up.

(3) Refers to sales tax remitted by vendors who are located outside of the City but make sales to customers within Loveland.



Map →



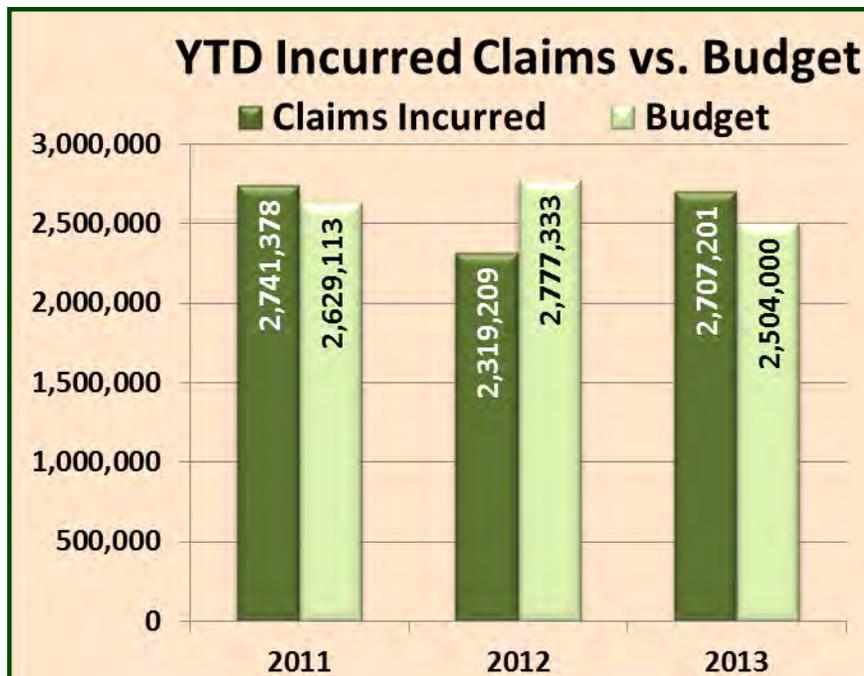
For a larger view of this map, please visit:

- ⇒ www.cityofloveland.org
- ⇒ Departments
- ⇒ Finance
- ⇒ Administration
- ⇒ Financial Reports
- ⇒ View Monthly Financial Reports
- ⇒ “Click here” below monthly SnapShot links

click + magnifier to zoom

Claims Incurred		OAP	HRA	Total	Budget	\$ Over / (Under) Budget	% Over / (Under) Budget
2013	April	486,418	115,445	601,863	626,000	(24,137)	-3.9%
	YTD	2,091,184	616,017	2,707,201	2,504,000	203,201	8.1%
2012	April	268,379	87,241	355,620	694,333	(338,713)	-48.8%
	YTD	1,968,452	350,757	2,319,209	2,777,333	(458,124)	-16.5%
Change	April	218,039	28,204	246,243			
	% April	81.2%	32.3%	69.2%			
	YTD	122,732	265,260	387,992			
	% YTD	6.2%	75.6%	16.7%			

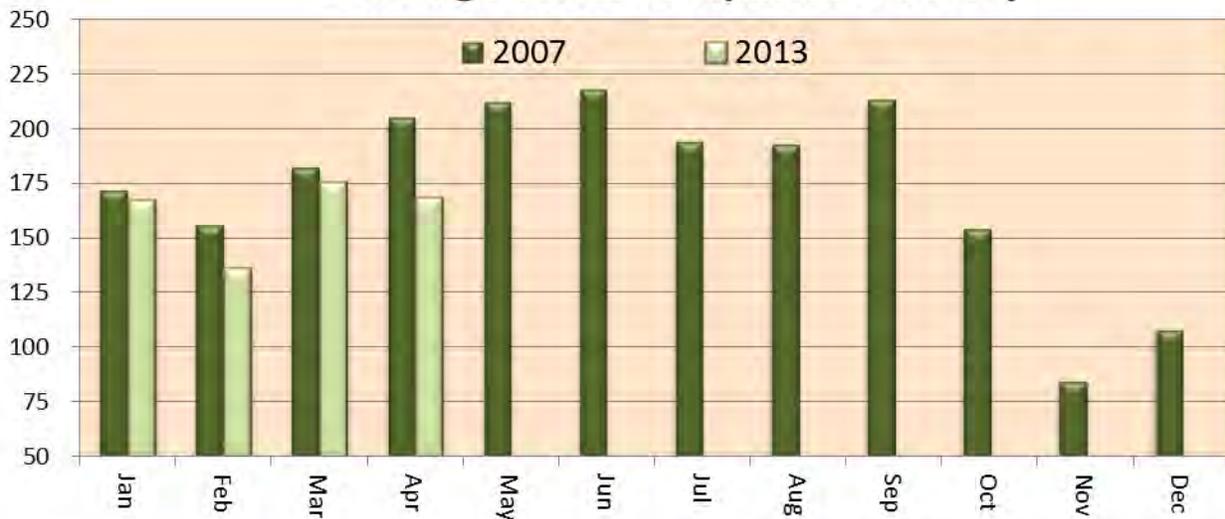
⇒ OAP—Open Access Plan ⇒ HRA—Health Reimbursement Arrangement



Comparison of YTD Claims Over \$25k				
April	2010	2011	2012	2013
# of claims	15	17	15	18
YTD Cost of high claims	\$1,791,424	\$952,380	\$688,644	\$877,603

⇒ 2013 # of StopLoss claims: 0
(claims over \$150k paid by StopLoss Carrier)

Building Permit Comparison History



Measures	Apr. 2011	Apr. 2012	Apr. 2013	2011 YTD	2012 YTD	2013 YTD
# of Building Permits	153	187	168	542	672	646
Building Permit Valuations	\$ 9,452,211	\$ 16,667,859	\$ 6,480,107	\$ 25,304,267	\$ 39,585,367	\$ 50,604,089
# of Certified Occupancies	26	40	29	76	97	106
Net # of Sales Tax Licenses	31	30	7	21	(88)	(360)
New Residential Electric Meter Sets	9	9	10	159	48	82
# of Utility Bills Sent	35,435	35,989	36,514	141,762	143,822	145,857
Rounds of Golf	8,597	9,364	5,775	19,348	20,705	13,409
\$ Average Health Claim Costs/Emp.	\$ 1,042.94	\$ 563.58	\$ 924.52	\$ 1,093.39	\$ 916.14	\$ 1,046.67
KWH Demand (kH)	77,453	83,546	87,516	373,070	361,262	370,054
KWH Purchased (kwh)	54,695,381	54,839,250	56,054,585	228,035,012	231,765,497	233,432,527
Gallons of Water Sold	161,197,613	206,084,231	118,184,130	579,082,439	629,316,099	546,233,237
# of Workers' Comp Claims 2013	5	8	4	35	37	30
\$ of Workers' Comp Claims Paid 2013	\$ 5,348.00	\$ 56,436.00	\$ 13,964.00	\$ 16,311.00	\$ 228,991.86	\$ 89,156.95
# of Total Open Claims	13	16	9	<i>Not Cumulative</i>		
\$ of Total Open Claims	102,355	222,724	259,710	<i>Not Cumulative</i>		
\$ of Lodging Tax Collected	\$ 39,773.43	\$ 47,687.32	\$ 58,195.19	\$ 141,206.10	\$ 164,507.86	\$ 185,183.19

For more information regarding this report contact:

Brent Worthington, Finance Director

970.962.2300 or

brent.worthington@cityofloveland.org

**Financial Sustainability
Strategies Can Be
Found At:**

CityofLoveland.org

- ⇒ **Departments**
- ⇒ **Finance**
- ⇒ **Administration**
- ⇒ **Financial Reports**
- ⇒ **Financial
Sustainability
Strategies**

The City of Loveland is committed to providing an equal opportunity for citizens and does not discriminate on the basis of disability, race, color, national origin, religion, sexual orientation or gender. The City will make reasonable accommodations for citizens in accordance with the Americans with Disabilities Act. For more information, please contact the City's ADA Coordinator at bettie.greenberg@cityofloveland.org or 970-962-3319





Snapshot

April
2013

Brent Worthington
Finance Director

Presented
June 4, 2013

April 2013 Snapshot

- Citywide Revenue
 - \$72.9 million, excluding transfers
 - 3.2% above budget projections

- Citywide Expenditures
 - \$58.7 million, excluding transfers
 - 25.8% below budget projections

- Citywide revenues exceed expenditures by \$14.2 million.

April 2013 Snapshot

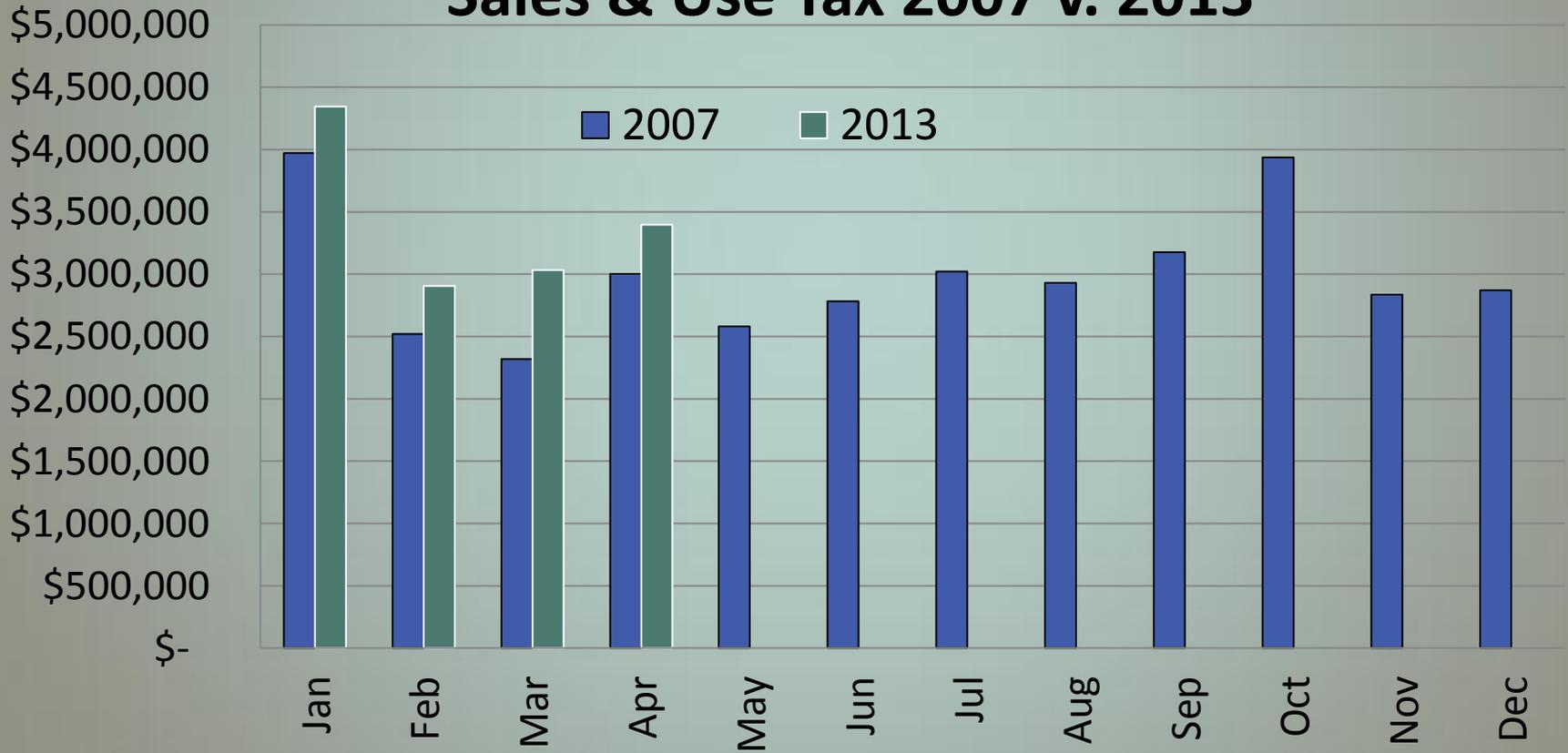
- General Fund Revenue
 - \$25.0 million YTD, excluding transfers
 - 6.4% above YTD Budget
 - 11.1% above same period last year

- Sales and Use Tax Revenue
 - \$13.7 million YTD
 - 5.4% above budget projections
 - 9.3% above same period as last year

- Sales Tax only
 - \$12.3 million YTD
 - 3.6% above budget projections
 - 8.0% above same period last year

April 2013 Snapshot

Sales & Use Tax 2007 v. 2013



April 2013 Snapshot

Sales & Use Tax 2007 v. 2013 in Constant January 2007 Dollars



April 2013 Snapshot

- General Fund Expenditures
 - \$17.7 million YTD, excluding transfers
 - 9.8% below budget projections

- General Fund Revenues Exceed Expenditures by \$4.9 million

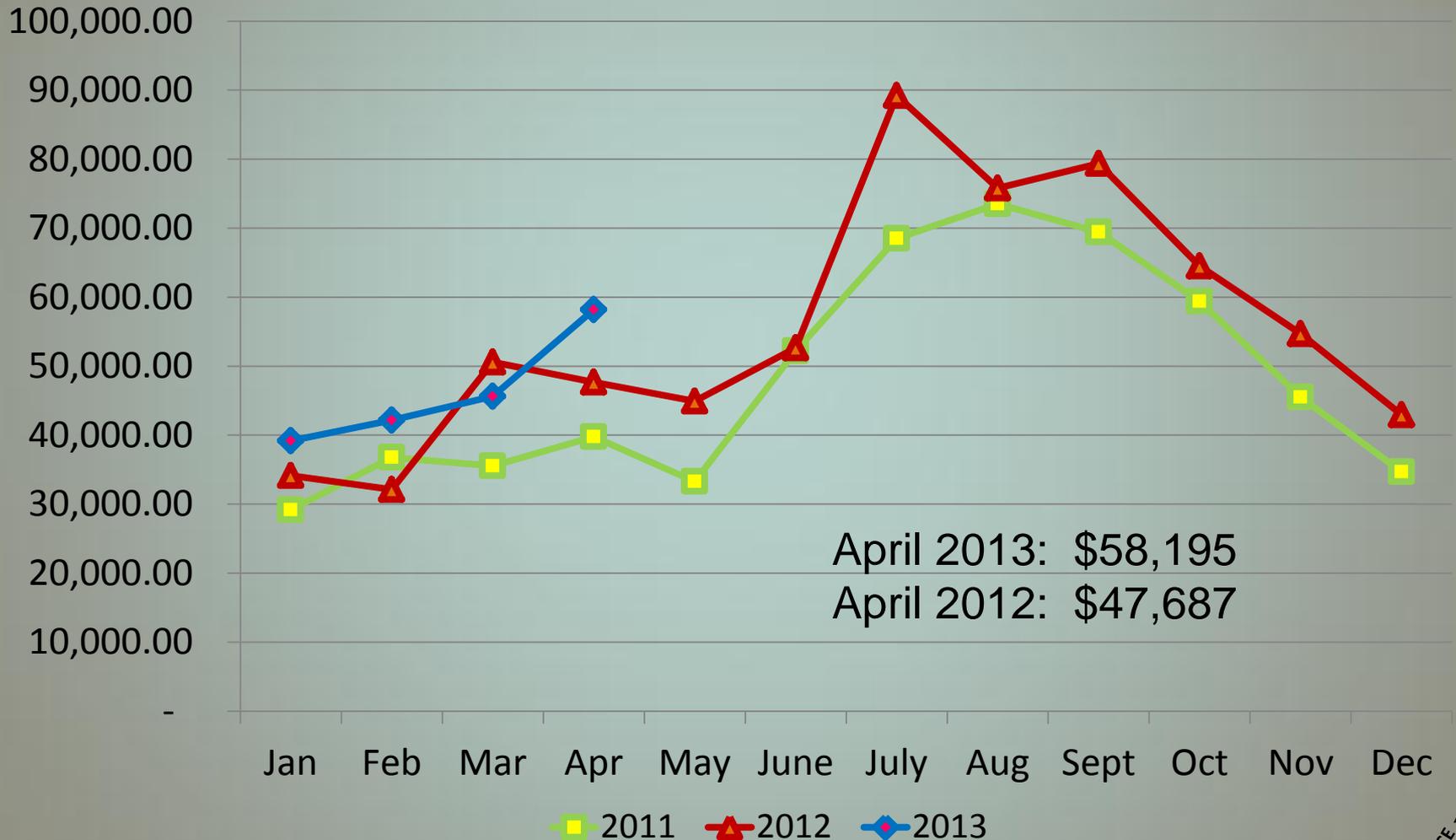
- Health Claims
 - April Claims \$601,863
 - 3.9% below April budget projections
 - 2013 YTD increased from \$2.3 mil to \$2.7 mil from same time as last year (16.7%)

April 2013 Snapshot

- Other highlights
 - Lodging tax YTD is \$185,183 (12.6% higher than 2012 YTD).

Lodging Tax Comparison

Lodging Tax





April 2013 Snapshot

Questions?

Brent Worthington
Finance Director

Presented
June 4, 2013



CITY OF LOVELAND
CITY MANAGER'S OFFICE

Civic Center • 500 East Third • Loveland, Colorado 80537
(970) 962-2303 • FAX (970) 962-2900 • TDD (970) 962-2620

AGENDA ITEM: 13
MEETING DATE: 6/4/2013
TO: City Council
FROM: Alan Krcmarik, Executive Fiscal Advisor
PRESENTER: Alan Krcmarik

TITLE:

Investment Report for April 2013

RECOMMENDED CITY COUNCIL ACTION:

This is an information only item. No Council action is required.

DESCRIPTION:

The budget estimate for investment earnings for 2013 is \$2,760,560. Through April, the amount posted to the investment account is \$641,255 including realized gains. Actual year-to-date earnings are lower than the budget projection by \$244,174. Based on the monthly statement, the estimated annualized 1.04% yield on the securities held by US Bank was down from last month and under the annual target rate of 1.20% for 2013. Reinvestment rates have been near record low levels, much lower than the budget projection.

SUMMARY:

At the end of April the City's portfolio had an estimated market value of \$219.1 million, about \$2.3 million more than a month ago. Of this amount, US Bank held (including accrued interest) \$187.0 million in trust accounts; other funds are held in local government investment pools, in operating accounts at Wells Fargo Bank, and a few miscellaneous accounts. Interest rates trended significantly lower in 2012 and despite an upward move in December and January, they are projected to remain low for years. Investments are in US Treasury Notes, high-rated US Agency Bonds, high-rated corporate bonds, money market accounts, and local government investment pools. The City's investment strategy emphasizes safety of principal, then sufficient liquidity to meet cash needs, and finally, return on investment. Each percent of earnings on the portfolio equates to about \$2.1 million annually.

REVIEWED BY CITY MANAGER:

William A. Cavill

LIST OF ATTACHMENTS:

Investment Focus April 2013



Investment Focus

Monthly Investment Report

April 2013

What's in here?

Focal Points	1
Gain / Loss	
Rate Trends	2
Cash Statement	3
Portfolio size	4
Investment types	
Transactions /	5
Maturity	
Future Scan	6

Focal Points

- * **2013 targets for the City's portfolio: 1) the interest rate target is 1.2%; 2) the earnings goal = \$2,760,420.**
- * **City investments are in high quality, low risk securities, in compliance with state law and the adopted investment policy.**
- * **Revenue posted to accounts = \$641,255 – 27.9% under target. So far this year, the portfolio has \$50,650 in realized gains.**
- * **Each 1% of the total portfolio amounts to about \$2.2 million.**
- * **The month end market value shows the unrealized loss was lower, estimated to be \$128,140 at the end of April.**

Colorado Jobs Growing

“Over the year, nonfarm payroll jobs increased 63,200. Private sector payroll jobs increased 60,600 and government increased 2,600. The largest private sector job gains were in professional and business services, leisure and hospitality. The non-adjusted unemployment rate was 6.8%.

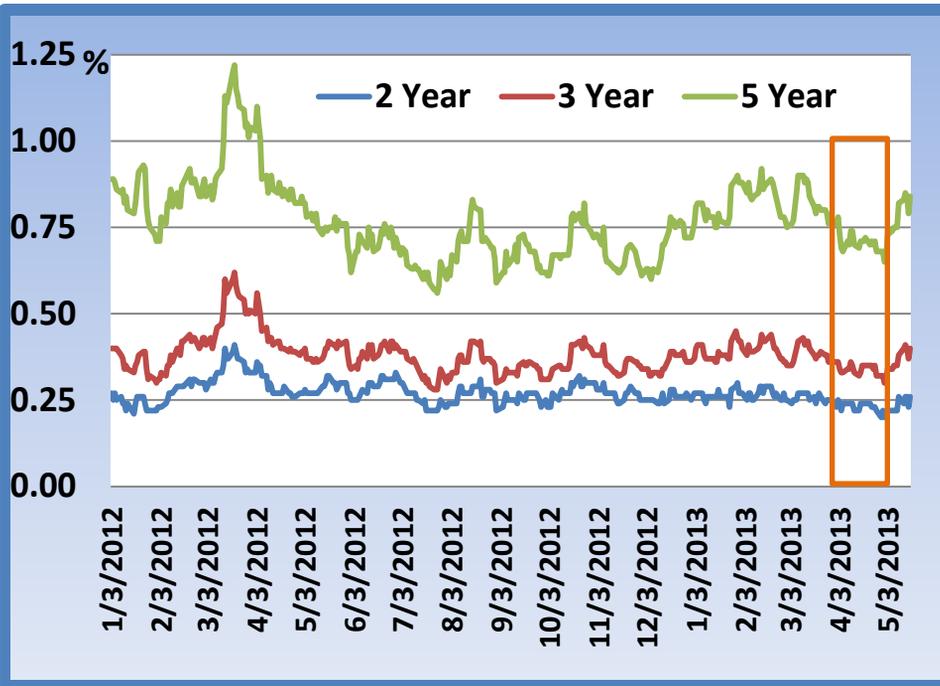
Fort Collins-Loveland SMSA even better

The Fort Collins/ Loveland MSA saw the non-seasonally adjusted unemployment rate drop to 5.5% in April 2013 from 6.0% in March 2013. The April, 2013 non-seasonally adjusted unemployment rate is nearly 1% lower than it was in April of 2012.

Type of Investment	Purchase Price	Market Value	Unrealized Gain or Loss
Checking Accounts	\$ 9,604,090	\$9,604,090	--
Investment Pools	22,581,935	22,581,935	--
Money Markets	<u>22,027,463</u>	<u>22,027,463</u>	--
Subtotal	\$ 54,213,487	\$ 54,213,487	--
Notes and Bonds	<u>165,056,563</u>	<u>164,928,422</u>	\$ (128,140)
Total Portfolio	\$ 219,270,050	\$ 219,141,910	\$ (128,140)
Data Sources	(Morgan Stanley)	(US Bank)	

Due to rounding, column and row totals may not add exactly.

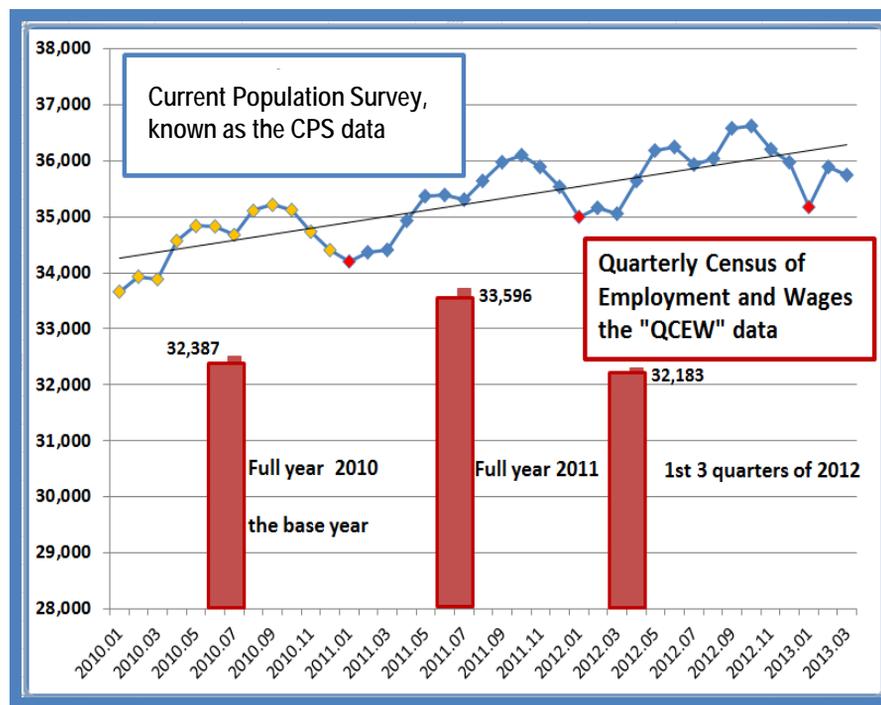
Treasury rate trends / Jobs data background



Interest rates on U.S. Treasuries fell during April. The 2-year was 3 basis points lower, the 3-year down 4 basis points, and the 5-year down 9 basis points when compared to the end of March. This rate shift increased the value of securities in the portfolio.

The **Bureau of Labor Statistics** provides two types of employment data: The Current Population Survey (“CPS”) which is based on a monthly telephone survey of households and the Quarterly Census of Employment and Wages (“QCEW”) which is based on detailed wage information provided by businesses for unemployment purposes.

The CPS percent unemployed data for Loveland and other cities, Larimer County and other counties, and the State are provided each month in this report. Shifts in the unemployment levels are important indicators for the economy recovery. The data also allows for comparisons.



The QCEW number of jobs data is used by the Economic Development Department to measure growth in the “Creative Services Sector.” The base year was 2010. In 2011, the total job growth in Loveland was 1,209. Through the first 3/4ths of 2012, the count is lower. Economists at the State say that this will change when the full year data is available. The Creative Sector job count was up by 866.

Cash Position Summary

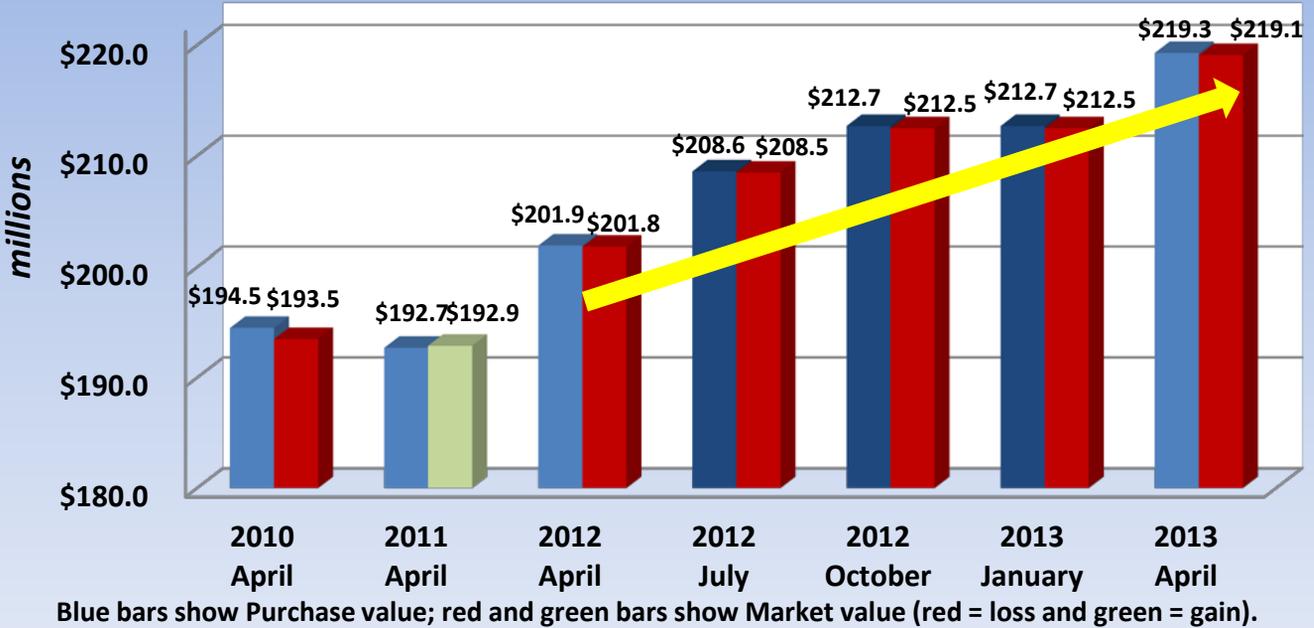
Cash & Reserves (unaudited)

		2013 Beginning	YTD Activity	Month End Total
Restricted Reserves		Due to rounding, column and row totals may not add exactly.		
1	Capital Expansion Fees	\$ 35,226,830	\$ 2,945,682	\$ 38,172,513
2	Water System Impact Fees	8,945,821	(313,608)	8,632,213
3	Raw Water Revenue – Windy Gap	20,940,043	805,343	21,790,386
4	Wastewater System Imp. Fees	5,131,782	395,810	5,527,592
5	Storm Drain System Imp. Fees	1,469,674	60,357	1,530,030
6	Power Plant Investment Fees	8,211,002	744,345	8,955,347
7	Cemetery Perpetual Care	2,629,094	32,477	2,661,571
8	Other Restricted	30,489,353	2,308,025	32,797,378
9	Total Restricted	\$ 113,043,599	\$ 7,023,431	\$ 120,067,031
Committed/ Assigned				
10	General Fund	\$ 11,224,908	\$ 789	\$ 11,225,697
11	Enterprise Funds	4,998,736	(377,029)	4,621,707
12	Internal Service Funds	19,553,388	1,308,236	20,933,624
13	Total Reserves	\$ 35,777,032	\$ 1,003,996	\$ 36,781,028
14	Total Restricted and Reserved	\$ 148,820,632	\$ 8,027,427	\$ 156,848,059
Unassigned Balance				
15	General Fund	\$ 23,685,948	\$ 2,561,028	\$ 26,246,976
16	Airport	1,384,130	(347,312)	1,036,818
17	Internal Service – Vehicle Maint	245,629	(43,618)	202,012
18	Enterprise Funds	37,097,373	(2,130,596)	34,966,777
19	Total Unrestricted	\$ 62,413,080	\$ 39,503	\$ 62,452,583
20	TOTAL CASH	\$ 211,233,712	\$ 8,066,930	\$ 219,300,642

Monthly Investment Report

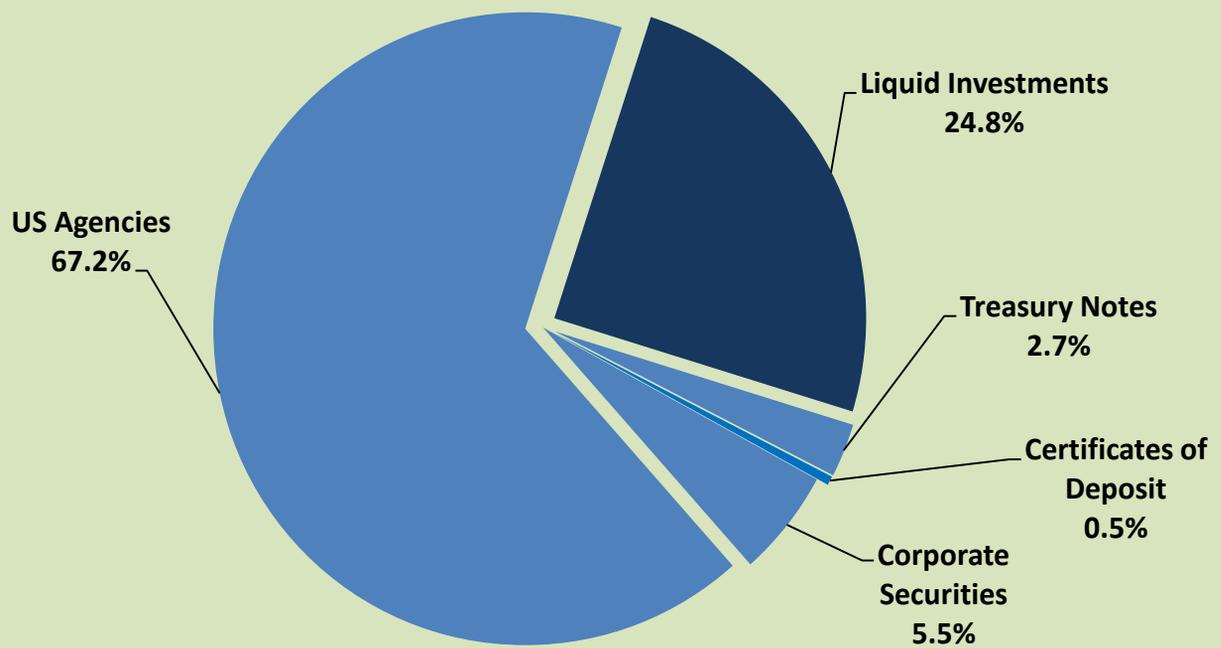
Portfolio Size / Types of Investments

Portfolio Size since April 2010



Portfolio by Type of Investment

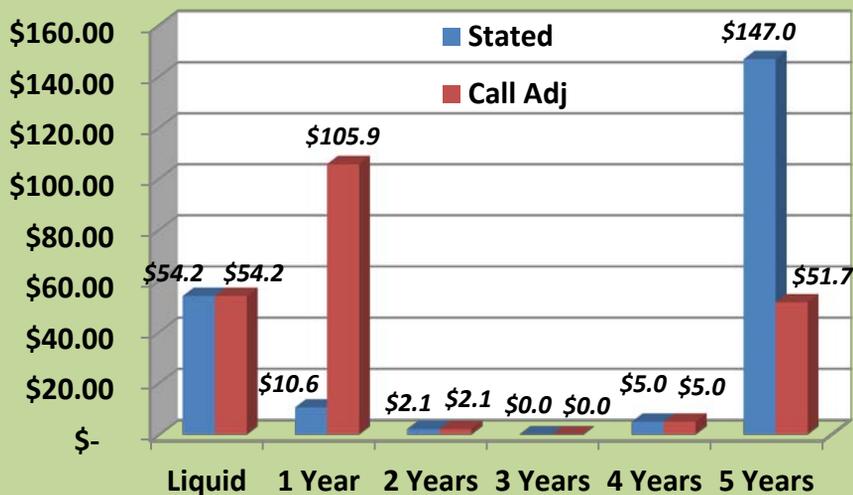
April 2013 – Market Value of \$219.1 million



Transactions / Portfolio by Maturity

	Maturity Date	Face Value	Purchase \$	Stated Rate
<u>Purchases</u>				
Federal Home Loan Bank	04/16/2018	\$ 5,000,000	\$ 4,995,000.00	1.000%
Federal National Mort. Assn.	04/11/2018	5,000,000	5,000,000.00	1.100%
Citi Bank Salt Lake City	04/11/2018	<u>250,000</u>	<u>250,000.00</u>	1.200%
		\$ 10,250,000	\$ 10,245,000.00	
<u>Matured</u>				
none this month				
<u>Called</u>			<u>Call Value \$</u>	
Federal Farm Credit Bank	07/17/2017	\$ 5,000,000	\$ 5,000,000.00	1.000%
Federal Farm Credit Bank	04/04/2017	<u>5,000,000</u>	<u>5,000,000.00</u>	1.360%
		\$ 10,000,000	\$ 10,000,000.00	
<u>Sales</u>			<u>Gain \$</u>	
none this month				

Portfolio by Estimated Maturity Term
(in millions - Total = \$219.1 at the end of April)



The target rate for 2013 is 1.2%. Rates are now up slightly ahead of near record lows. For March, the portfolio proceeds were below the earnings target level for 2013.

To support earnings, or to reposition the portfolio, bonds may be sold. So far this year, gains of \$50,650 have been realized through sales.

The blue bars show the stated term; red bars show the calls. Many of the five year bonds will be called early.



Future Scan: The FED stays the course, recovery still weak

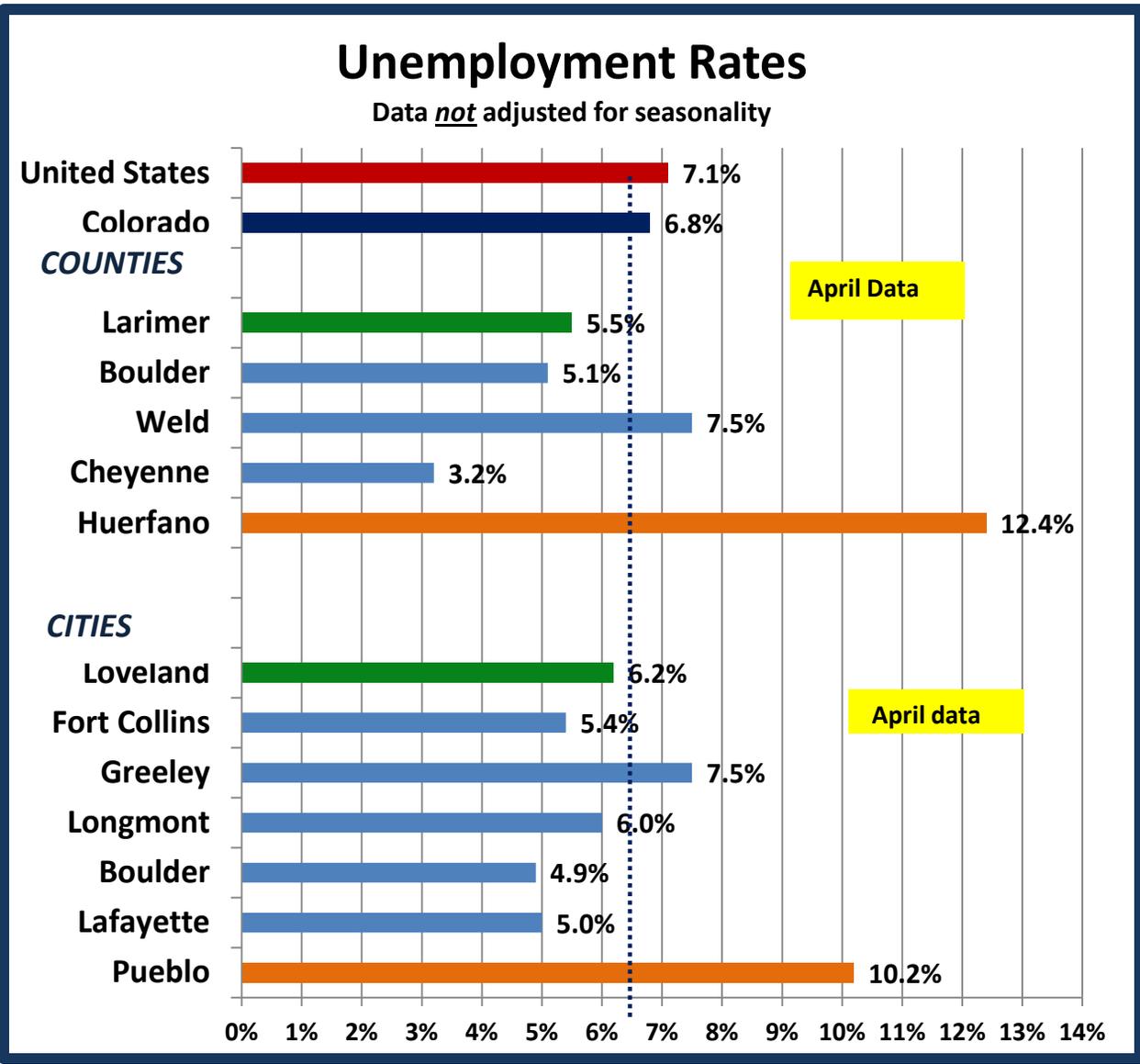
- ❖ Ben S. Bernanke, Chairman of the **Federal Open Market Committee** (“**FOMC**” or “**Fed**” or “**Committee**”) testified to Congress saying “Despite recent improvement in the job market, the Federal Reserve needs to continue its stimulus efforts to avoid endangering the recovery.”
 - “[A] premature tightening of monetary policy could lead interest rates to rise temporarily but also would carry a substantial risk of slowing or ending the economic recovery.” Mr. Bernanke said the Fed could prepare to “take a step down” in the next few meetings if the outlook for the labor market improved. “
 - “A number of participants expressed willingness to adjust the flow of purchases downward as early as the June meeting if the economic information received by that time showed evidence of sufficiently strong and sustained growth,” the minutes of the meeting stated. However, views differed on just what that evidence would be and whether a tapering was indeed likely. “
 - “He noted that the federal government’s fiscal policy had become “significantly more restrictive,” even as the Fed had pursued a looser monetary policy. The expiration of the payroll tax reduction in January and tax increases, as well as automatic spending cuts imposed by Congress and lower military spending, will collectively “exert a substantial drag on the economy this year.”
(Source: *The New York Times* online edition, Nelson D. Schwartz, May 22, 2013.)
- ❖ **Morgan Stanley Investment Backdrop: It’s Fundamental**
 - “[T]he US economy appears to be headed for a soft patch in the second quarter, as the height of the sequester is felt. MS economists are tracking Q2 real GDP at +1.2% versus the Q1 reading of +2.5%.”
 - “[T]he current tax season produced better than expected revenue results.” The forecast for the FY2013 deficit is 4.8% of GDP, or about \$314 billion less than FY2012.
 - “We believe the longer-dated Treasury rally has come to an end and we recommend exiting long position from a tactical perspective.” The advice to buy 3-5 year Treasuries and 3-7 year corporates still holds.
 - “[W]e also believe the market is seeing the bad news through rose-colored lenses. The worse the current macro backdrop is the more likely the Fed and other central banks will continue pumping liquidity into the system.” (Source: Morgan Stanley *Basis Point Fixed Income Strategy*, Kevin Flanagan & Jon Mackay, May 7, 2013.)
- ❖ The April 2013 Colorado Employment Situation was released on May 17, 2013. Using non-seasonally adjusted employment data, **Colorado’s unemployment rate** for April was estimated to be 6.8% compared to the national unemployment rate of 7.1%. Larimer County was at 5.5%. Boulder County dipped to 5.1% and Weld County was at 7.5%. Data for cities were down from a month ago. Loveland’s unemployment rate is estimated to be 6.2%, lower than March’s 6.9%, and down from 7.3% one year ago. Monthly data shows Fort Collins at 5.4%, Boulder at 4.9%, and Greeley down to 7.5%.
- ❖ **Recession Outlook:** Manufacturing jobs growth stalls out; the latest report shows year-over-year growth falling to a 30-month low. (Source: *Economic Cycle Research Institute*, May 6, 2013.) Data for the Big Four indicators have flattened out in recent months, eking out just an average growth of 0.1% per month. (Source: Doug Short in *Advisor Perspectives* May 16, 2013.)

For more information regarding this report, please contact:

[Alan Krcmarik, Executive Fiscal Advisor 970.962.2625 or Alan.Krcmarik@cityofloveland.org](mailto:Alan.Krcmarik@cityofloveland.org)

Updated Colorado Labor Data

- ❑ Loveland’s workforce **expanded** in **April**, down 601 jobs from March.
- ❑ Compared to one year ago in April, there are 741 **more** jobs.



Comparisons of the Bureau of Labor Statistics Data Sets about Employment, Unemployment, and Wages

Current Population Survey

Basis: The Current Population Survey is published monthly by the bureau of Labor Statistics. The CPS data are estimated from a survey of U.S. households. For persons with multiple jobs, only one job is counted. The count is based on the place of residence. Self-employed and unpaid family workers (15 or more hours) are counted as employed. Persons under the age of 16 are not included.

Source of the Data: Households are contacted monthly by telephone and respond to a short survey. BLS staff count employed person, persons in the labor force, unemployed persons, and calculates a percentage rate of unemployed persons. The survey also determines persons not in the work force.

Effective date of the data: The surveys are done each month. The date is based on the day the survey is completed. People on extended leaves of absence (both paid and unpaid) are considered employed.

System of Classification: None.

Date Released: Federal level data on the first Friday of each month with a few exceptions to the second Friday of the month. State data sets are usually available by the third Friday of the month, with exceptions of later releases for each month of the first quarter of each year which are delayed due to re-benchmarking of the data. The CPS data is compared to the QCEW data to identify consistency issues. Adjustments are made every year and the adjustments can be significant after the ten year Census.

Wages / Average wages: The CPS does not collect wage data.

Disclosure Restrictions: The BLS does not provide the survey data for further analysis.

Quarterly Census of Employment and Wages

Basis: A complete and final count of employment and wages for workers covered by Unemployment Insurance programs. Information is provided by the Bureau of Labor Statistics. Unpaid workers are excluded. For persons with multiple jobs, each job is counted. Self-employed and unpaid family workers are not counted. Persons are counted if they have covered employment regardless of age.

Source of Data: Reports from both private- and public sector employers. Data is based on the location of the business.

Effective date of the data: Employment is determined by the number of people that during the pay period that covers the 12th day of the month.

System of Job Classification: By the North American Industry Classification System (NAICS)

Data Released: Every quarter, about 6 months after the end. 2012 Data for the 4th Quarter and Annual Totals is scheduled for release on May 29, 2013. Data for the City of Loveland has to be extracted from the statewide data.

Wages: Total wages is determined from the reports provided by the employers. State laws require inclusion of bonuses, stock options, severance pay, cash value of meals, tips, lodging, and gratuities. They are trying to measure total compensation. Some states include payments into deferred compensation and defined benefit pension plans.

Average wages: The total annual wages are divided by the average annual employment.

Disclosure Restrictions: Data are reported under a promise of confidentiality are not published in an identifiable way and are used only for specified statistical purposes. To be able to conduct analysis and provide information about employment by employers located in Loveland, the City staff was required to sign a data use and confidentiality agreement with the state.