

# Fort Collins Home Efficiency Program

## One Year Later

plus

# Loveland Water and Power's Home Energy Audit Program

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# Home Efficiency Program

**Make Efficient Choices.  
Discover Your Home's Potential.**

**Home Efficiency  
Audits.  
Improvements.  
Rebates.**



**City of  
Fort Collins**  
Utilities

Fort Collins Conserves. A Year-Round Activity.

## Audits.

### Find out how your home can work for you.

Fort Collins Utilities' home efficiency audits identify ways to conserve energy and add comfort to your home. The affordable audits (\$60) include an inspection and tests by qualified auditors, who use blower doors to measure air leakage and infrared cameras to reveal areas of air infiltration and missing insulation. Combustion safety tests also are included.

To be eligible, you must be a Utilities electric customer and occupy a single-family home or townhouse. Multi-family homes are not included.

### Sign up for an efficiency audit.

#### Just follow these steps:

- Call to schedule an audit, (970) 221-6700 or TDD (970) 224-6003.
- Receive recommendations following your audit.
- Check out our available rebates online and select improvements.
- Select a participating contractor.
- Have your contractor complete the improvements and submit the rebate application. Your completed project may be independently inspected.
- Expect a rebate check in six to eight weeks.

## Improvements.

### Select improvements.

Following the audit, you'll be given a report prioritizing the recommended efficiency improvements with available rebates. You select which improvements to complete.

Your auditor and Utilities staff are available to answer questions about the report and improvement recommendations.

### Choose a participating contractor.

Participating contractors in a variety of specialties are listed online at [fcgov.com/HomeEfficiency](http://fcgov.com/HomeEfficiency). To be eligible for rebates, you must have completed an efficiency audit and work with a participating contractor, selected for a commitment to meet Utilities' installation standards and quality assurance requirements.

### Quality assurance.

After your participating contractor submits your rebate application, Utilities may request an inspection by an independent third party to verify the work meets installation standards.

## Rebates.

### Check out our available rebates.

- Insulation and air sealing
- Furnaces and boilers
- Windows
- Air conditioning
- Water heaters
- Evaporative coolers
- Fan motor replacement
- Heat pumps
- Mechanical ventilation
- Whole-house fans
- Duct sealing

You may be eligible for additional financial incentives. Fort Collins Utilities offers a variety of energy and water efficient appliance rebates. Federal tax incentives also are available.

Find rebate details at [fcgov.com/HomeEfficiency](http://fcgov.com/HomeEfficiency).



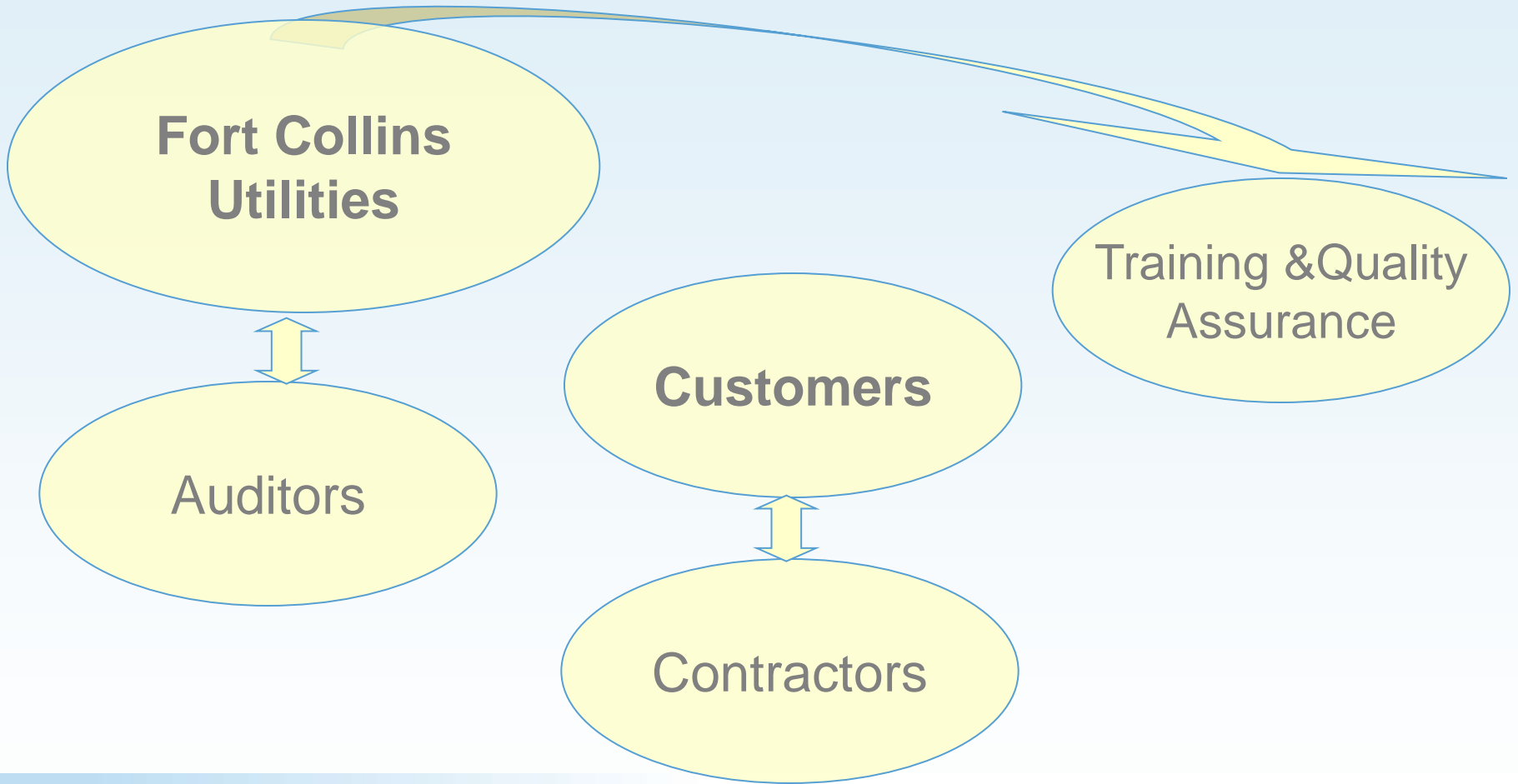
**City of  
Fort Collins**

# Objective and principles

- Objective: quality efficiency improvements in existing homes
- Principles for design
  - Building science
  - Best practices
  - Workforce and market development
  - Don't avoid thorny issues
  - Scalable to reach big numbers over time



# Who works for whom?



# Program Elements

- Low cost audit
- Rebates
- Contractor network

# Big Deal!

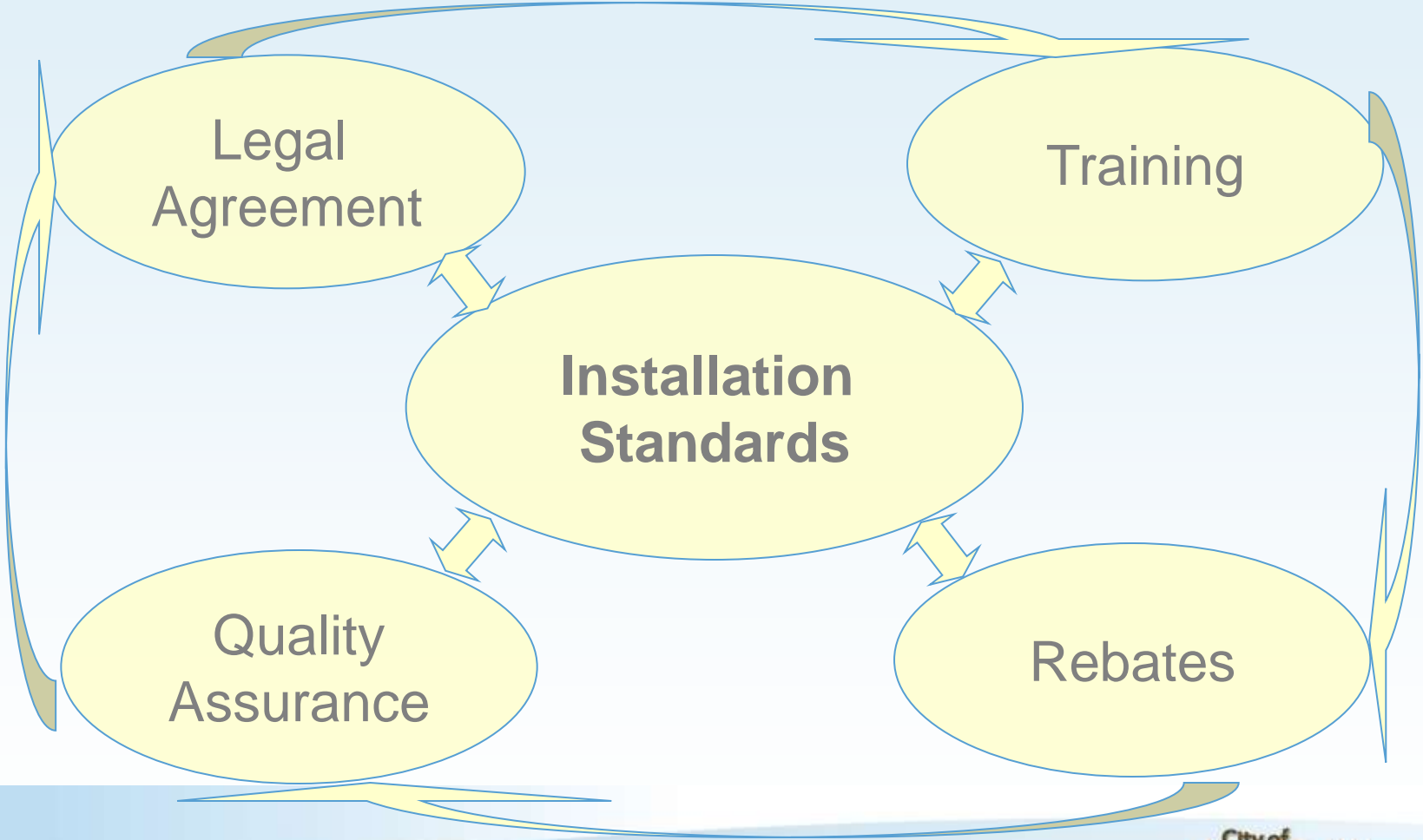
# Program Elements

What's different?

- Very comprehensive audit (inspection, blower door, IR, combustion safety testing)
- Rebates cover all aspects of the home (insulation, air sealing, heating, cooling, ventilation)
- **INSTALLATION STANDARDS!!!!!!**
- Quality assurance

Efficiency Measure	Existing Conditions	Installation Standards	Post-installation Tests
Attic Knee Wall	<ul style="list-style-type: none"> <li>• Uninsulated or insulated to R-11 or less</li> </ul>	<ul style="list-style-type: none"> <li>• If uninsulated, add a minimum R-19 spray foam, foam board or vinyl faced fiberglass blanket:               <ul style="list-style-type: none"> <li>- Seal all edges and seams of insulation</li> </ul> </li> <li>• If already insulated, add a minimum R-11 spray foam, foam board or vinyl faced fiberglass blanket over existing insulation:               <ul style="list-style-type: none"> <li>- Seal all edges and seams of insulation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Complete Post-Installation Combustion Safety Test procedures and record results on Rebate Application Form.</li> <li>• Blower door test for post improvement house tightness (see air sealing section).</li> </ul>

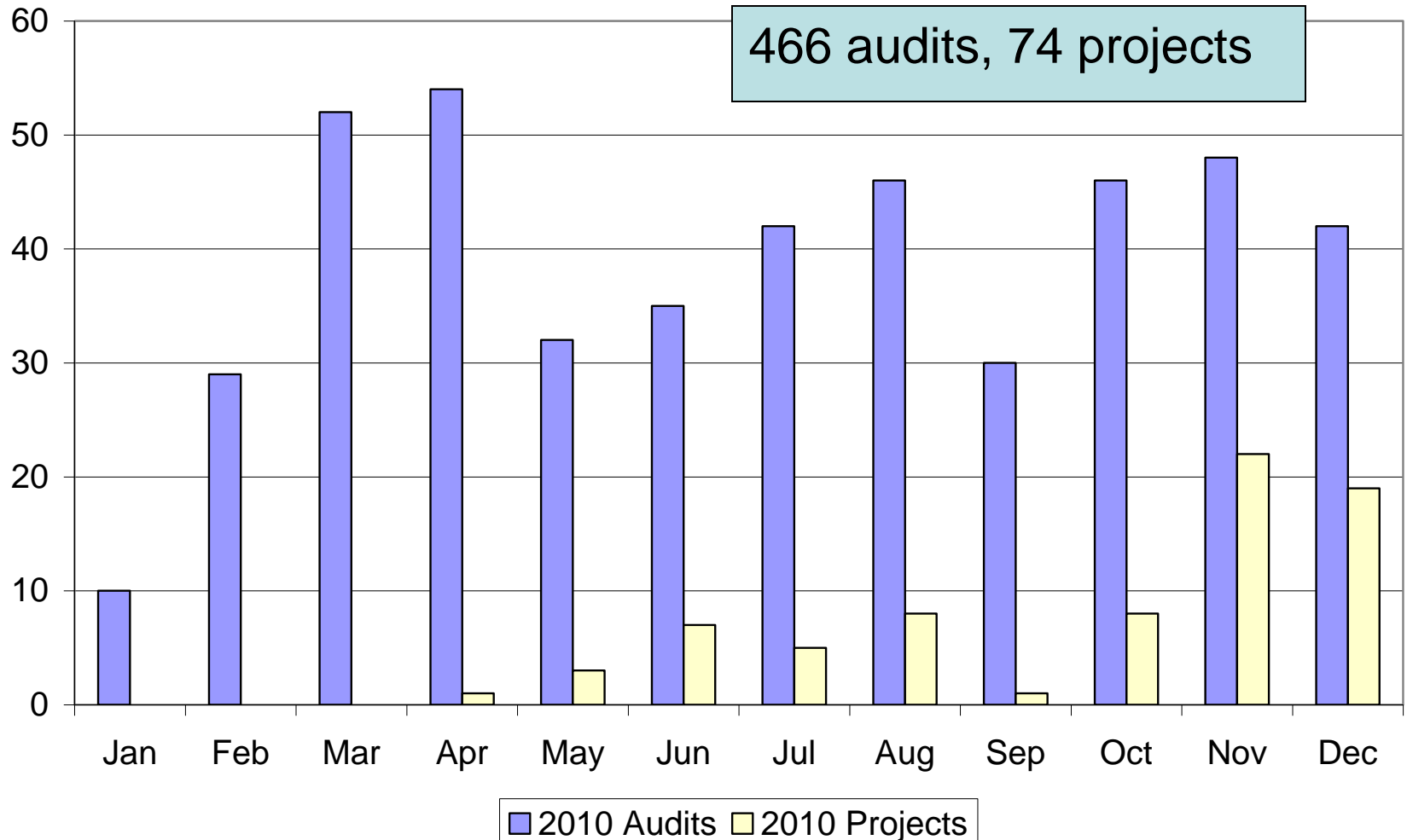
# Standards Driven Everything





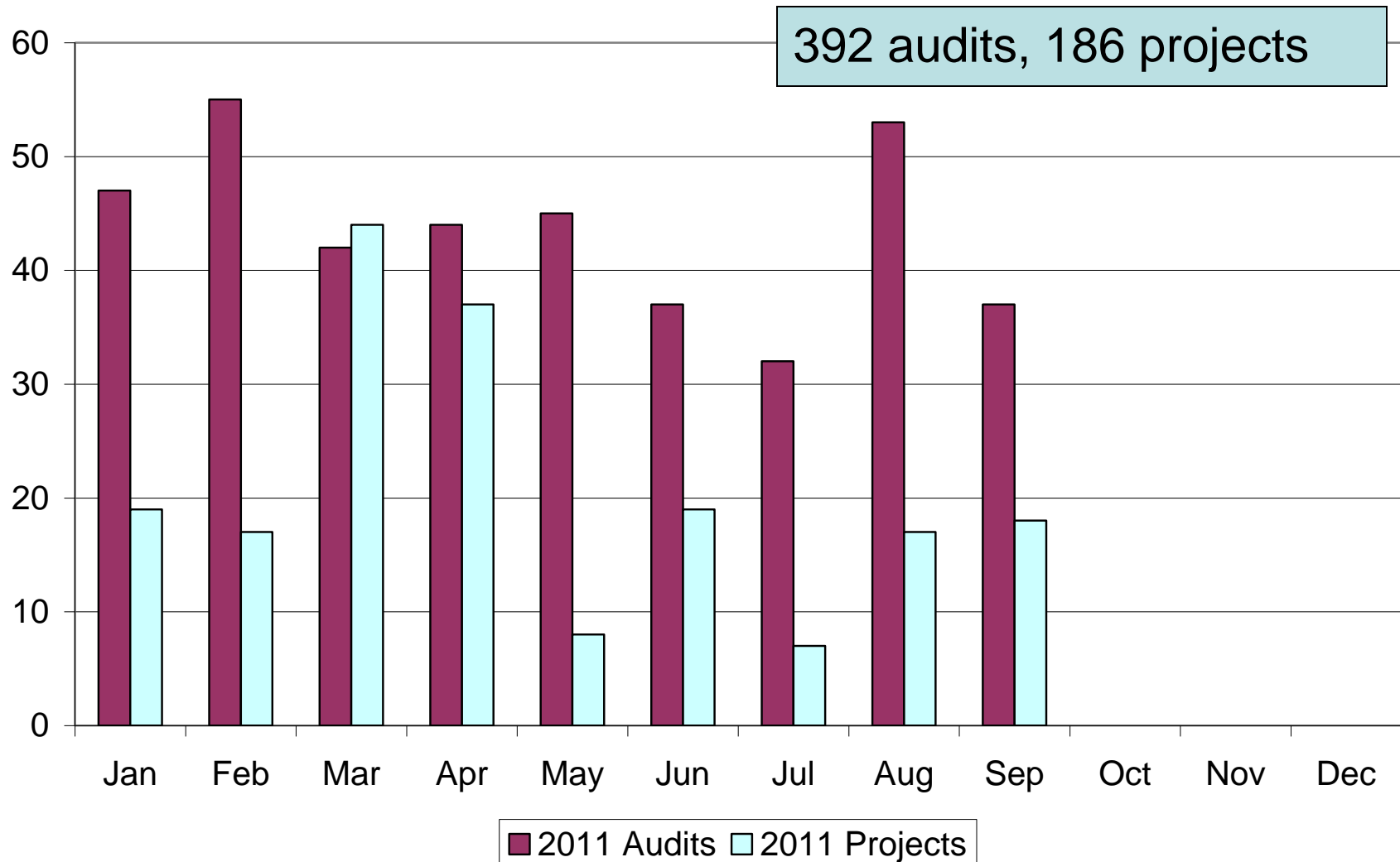
# Results – 2010

## FC Home Audits and Projects - 2010



# Results – 2011

## FC Home Audits and Projects 2011



# Results - Projects

- 2011 YTD = 186 homes improved (347 measures)
  - 55% = Insulation/Air Sealing
  - 42% = HVAC
  - 3% = Windows
  - 9 projects with both shell and HVAC measures simultaneously
- Average time from audit to project – 83 days
- Average rebate - \$564
- Average project cost ~ \$5,000
- 15-20% fail combustion test under worst case, 1-2% fail under natural conditions



# Results - Contractors

- Participating Contractors – 38 companies
  - HVAC
    - 20 companies
    - 31 individuals trained
  - Insulation/Air Sealing
    - 13 companies
    - 29 individuals trained
  - Windows
    - 16 companies
    - 23 individuals trained



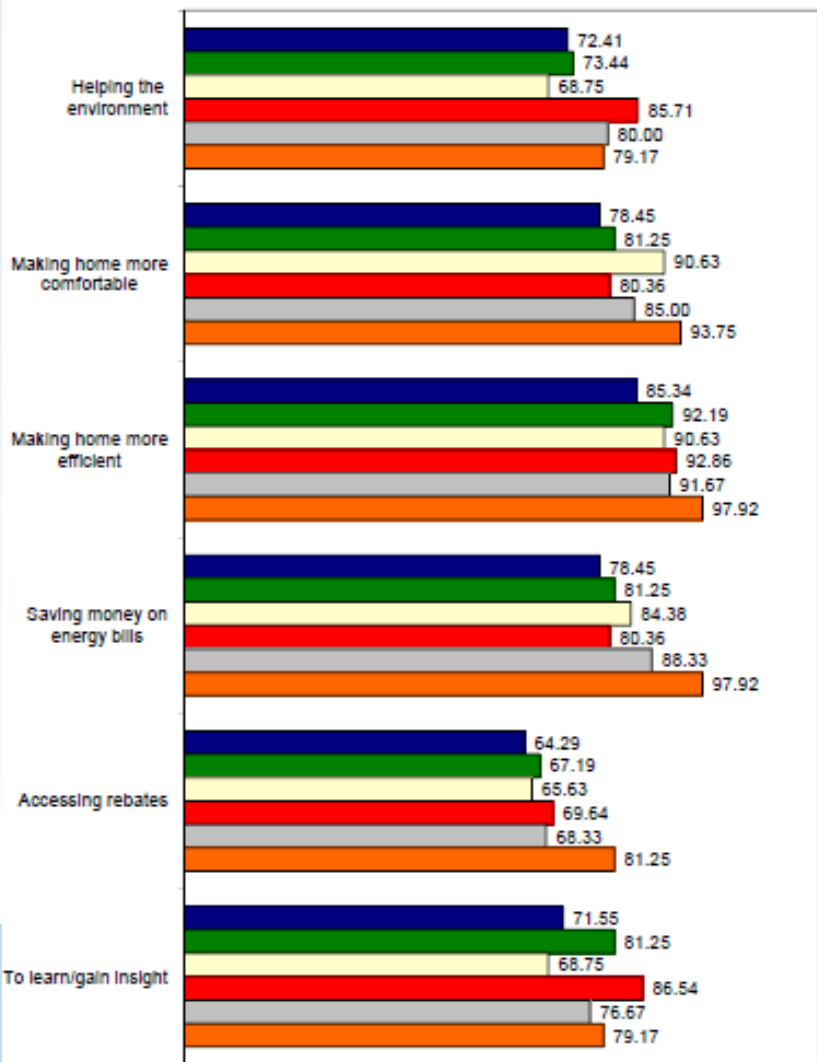
# Results - Savings

Measure	Total energy Savings (%)	annual elec savings (kWh)	annual elec savings (%)	annual gas savings (therms)	annual gas savings (%)
replacement gas furnace	19.5%	451	7.5%	129	24%
replacement gas furnace	19.4%	9	<1%	176	25%
insulation & air sealing	13.3%	6391	17%	0	0%
tankless water heater	8.6%	0	0%	105	12%
insulation & air sealing	5.2%	28	<1%	60	7%
insulation & air sealing	34.9%	0	0%	313	48%
insulation & air sealing	12.3%	45	<1%	233	14%
furnace and AC	20.3%	291	2.5%	333	26%
Average	16.7%		5.4%		19.5%

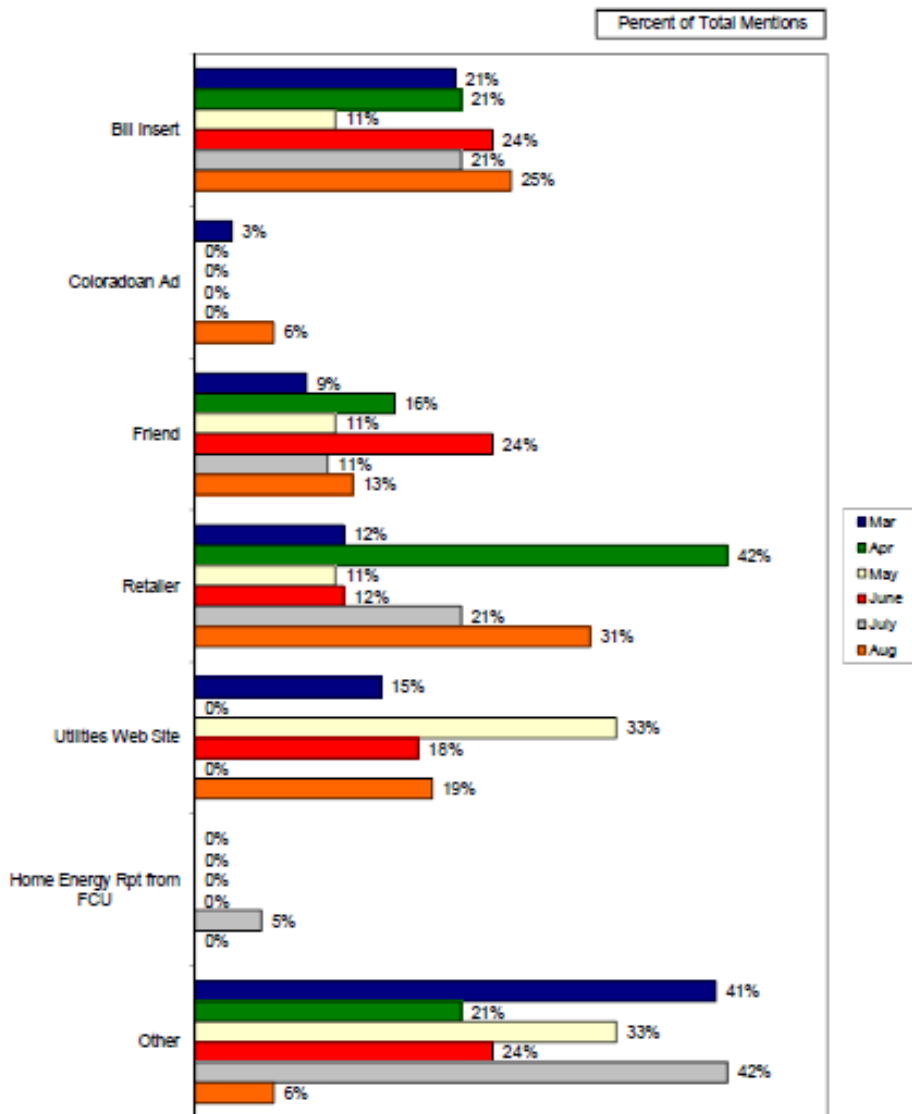
- DRAFT: preliminary modeling using Optimiser on specific completed projects

# Results - Customers

Q3 - How influential each item was in your decision to move forward with the Audit?  
6 Month CII Comparison



Q2 - How did you hear about the audits available from the Home Efficiency Program?  
6 Month Response Comparison



# What we've learned

- Maintaining a contractor network is hard work
- Estimating and verifying savings is difficult
- Need a wide range of marketing efforts
- Audit reports need address both customer and contractors
- With clear standards, less coaching is needed
- Customers are ready to act!

## Discover Your Home's Potential.

Reduce energy and water costs and increase the comfort of your home with Fort Collins Utilities' low-cost Home Efficiency Audits:

- focus on energy and water efficiency;
- home-specific improvement recommendations;
- approved contractors;
- rebates for select efficiency improvements; and
- individualized coaching.



# What's next

- Gas data tracking
- Batch processing of project savings calcs
- Segmentation for outreach
- Financing program

Home Efficiency Program

Take the next step on the path to even greater savings.



Start here. Discover your home's potential with a \$60 home energy audit.

-  **Schedule an audit** by a certified professional.
-  **Learn ways to improve** the efficiency of your home.
-  **Make improvements** with the help of a participating contractor.
-  **Earn rebates**, stay comfortable, and be an efficient neighbor.

To learn more call (970) 221-6700 or visit [www.fcgov.com/HomeEfficiency](http://www.fcgov.com/HomeEfficiency).



# Collaboration

- It takes a village
  - Staff
    - Program Coordinator, Kaye Mathea
    - Technical Details, Kim DeVoe
  - Audits, Energy Logic
  - Training and Quality Assurance, Lightly Treading
  - Contractors, 38 and counting
- Loveland, up next

# **Home Energy Audit Program**

Loveland Water and  
Power  
Gretchen Stanford  
October 13, 2011

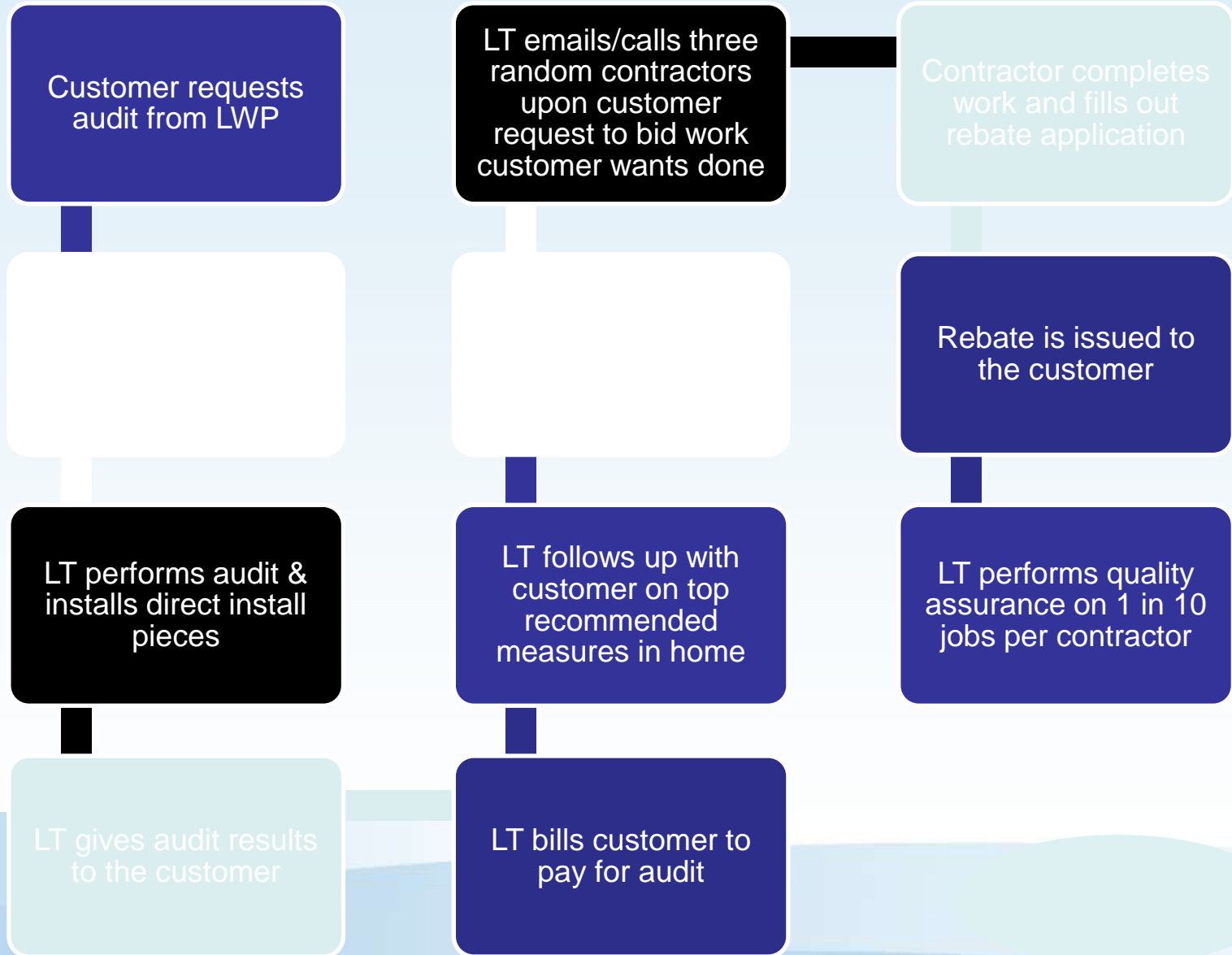
## HEAP Goals



# SUCCESS

- Increase customer awareness on energy use in their home
- Provide our customers with the tools to reduce energy consumption
- Increase awareness of other programs offered by LWP
- Provide a customer service focused audit program
- Provide a program of importance based on the residential survey results
- To provide ultimate energy savings for our customers by providing industry standards and quality assurance on contractor work
- Stretch goal of 100 audits in 3 months! 😊

# Steps of HEAP





## Similarities to Fort Collins Program

- Same training requirements for Contractors
- Contractor will complete the same rebate forms you are already using
- Lightly Treading's quality assurance process is the same
  - New contractor – first five mentored, next five inspected
  - Existing contractor – one in ten jobs

## Differences to Fort Collins Program

- Using the Select HVAC contractors and standards from PRPA program
- Concierge Service will contact Contractors for the customer – it is the Contractors responsibility to contact the customer to bid the project
- Standards are slightly different

## HEAP Efficiency Rebate Eligibility

- Be a Loveland Water and Power residential electric customer.
- Have LWP's Home Energy Audit Program audit completed on your home *prior to making* improvements.
- Have the work completed by a participating contractor. Homeowner installations do not qualify for rebates.
- Occupy a single-family detached home or an attached townhouse (up to a four-plex). Multifamily homes are not included.
- Must have operational mechanical cooling or primary electric heating to qualify for building envelope improvements.

# HEAP Efficiency Rebate

Qualifying Measure	Up to \$500 Rebate per home
Air sealing	Requires operational cooling equipment or electric heat
Insulation	
Windows and film	
Duct sealing	
Central A/C – new and replacement	<u>Does not</u> require operational cooling equipment or electric heat
Evaporative cooler	
Whole house fan	
Electric heat pump water heater	
Mechanical ventilation	
Gas furnaces & water heaters	Does not qualify



## HEAP Efficiency Rebate Requirements

Qualifying Measure	Loveland	Fort Collins
Air sealing	* Minimum 10% leakage reduction; *Operational mechanical cooling or primary electric heat	*Minimum 25% leakage reduction with three tiers, *No operational cooling requirement
Attic Insulation (flat ceiling)	* Must have R30 value or less of existing insulation; *Operational mechanical cooling or electric heat	*No minimum R value level; *No operational cooling requirement
Gas furnaces & water heaters	No rebate	Rebate available per FCU specifications
Electric heat pump water heater	Must replace existing electric water heater	No rebate
Central A/C – new and replacement	Must be installed by SELECT HVAC contractor	Must be installed by participating HVAC contractor



# Marketing Efforts

- Press Releases
- Brochures
- City Update
- Events
- Targeted marketing using direct mailings – pilot with Symbiotic Engineering
- Social media, website

facebook

twitter

REAP the benefits of  
**HEAP!**  
UP TO \$500 IN REBATES

in partnership with  
City of Fort Collins  
Sustainable Loveland

To find out more:  
Contact: 970-962-3000  
Visit: [www.cityofloveland.org/audits](http://www.cityofloveland.org/audits)  
Email: [sustainloveland@clloveland.co.us](mailto:sustainloveland@clloveland.co.us)

The Home Energy Audit Program  
offered by  
Symbiotic Engineering

COMING OCTOBER 1, 2011

LOVELAND HOME ENERGY AUDIT PROGRAM

UP TO \$500 IN REBATES

\$70 'WHOLE HOUSE AUDIT' INCLUDING BLOWER DOOR, INFRARED CAMERA SCAN, FREE INSTALLATION OF CFL'S, LED'S, LOWFLOW SHOWER HEADS AND MORE!

LOVELAND, COLORADO

CALL 970-962-3000 OR EMAIL SUSTAINLOVELAND@CLOVELAND.CO.US TO JOIN THE WAIT LIST

## Required Training for Contractors

Provided by Lightly Treading in conjunction with Fort Collins Utilities & Loveland Water and Power

2011

Required Training	Date	Cost per Student
Insulation/ Air Sealing	October 12- 13	\$100.00
Windows	November 10	\$75.00
HVAC	January 11- 12	\$150.00

2012

- 4 orientation meetings
- 4 quarterly Contractor meetings – **highly encouraged to attend!**
- 2 insulation/air sealing trainings
- 2 windows trainings
- 2 HVAC trainings

- Trainings – for supervisors or lead people that will be overseeing and signing off on paperwork.
- Required to call Kaye or Lindsey to sign up for the class.

[www.fcgov.com/homeefficiency](http://www.fcgov.com/homeefficiency)

[www.cityofloveland/audits](http://www.cityofloveland/audits)