



**CITY OF BOULDER
ENVIRONMENTAL ADVISORY BOARD MEETING AGENDA**

DATE: August 5, 2015

TIME: 6 pm

PLACE: 1777 Broadway, West Conference Room

- 1. CALL TO ORDER**
- 2. APPROVAL OF MINUTES**
 - A. The [July 1, 2015](#) Environmental Advisory Board meeting minutes are scheduled for approval.
- 3. PUBLIC PARTICIPATION**
- 4. PUBLIC HEARING ITEMS**
- 5. DISCUSSION ITEMS**
 - A. Mid-Year Check-In (Brett KenCairn)
 - B. [Building Performance Ordinance](#) (Kendra Tupper)
- 6. OLD BUSINESS/UPDATES**
 - A. Emerald Ash Borer Update (Presentation by Kathleen Alexander)
 - B. [Bear-Proof Receptacle Ordinance Update](#) (Written by Valerie Matheson)
 - C. [Boulder Energy Challenge Update](#) (Written by Jamie Harkins)
- 7. MATTERS FROM THE ENVIRONMENTAL ADVISORY BOARD, CITY MANAGER, AND CITY ATTORNEY**
- 8. DEBRIEF MEETING/CALENDAR CHECK**
- 9. ADJOURNMENT**

**CITY OF BOULDER ENVIRONMENTAL ADVISORY BOARD
MEETING GUIDELINES**

CALL TO ORDER

The board must have a quorum (three members present) before the meeting can be called to order.

AGENDA

The board may rearrange the order of the agenda or delete items for good cause. The board may not add items requiring public notice.

PUBLIC PARTICIPATION

The public is welcome to address the board (three minutes* maximum per speaker) during the Public Participation portion of the meeting regarding any item not scheduled for a public hearing. The only items scheduled for a public hearing are those listed under the category PUBLIC HEARING ITEMS on the agenda. Any exhibits introduced into the record at this time must be provided in quantities of eight to the Board Secretary for distribution to the board and admission into the record.

DISCUSSION AND STUDY SESSION ITEMS

Discussion and study session items do not require motions of approval or recommendation.

PUBLIC HEARING ITEMS

A Public Hearing item requires a motion and a vote. The general format for hearing of an action item is as follows:

1. Presentations

- Staff presentation (15 minutes maximum*) Any exhibits introduced into the record at this time must be provided in quantities of eight to the Board Secretary for distribution to the board and admission into the record.
- Environmental Advisory Board questioning of staff for information only.

2. Public Hearing

Each speaker will be allowed an oral presentation (three minutes maximum*). All speakers wishing to pool their time must be present, and time allotted will be determined by the Chair. Two minutes will be added to the pooled speaker for each such speaker's allotted time up to a maximum of 10 minutes total.

- Time remaining is presented by a green blinking light that means one minute remains, a yellow light means 30 seconds remain, and a red light and beep means time has expired.
- Speakers should introduce themselves, giving name and address. If officially representing a group please state that for the record as well.
- Speakers are requested not to repeat items addressed by previous speakers other than to express points of agreement or disagreement. Refrain from reading long documents, and summarize comments wherever possible. Long documents may be submitted and will become a part of the official record.
- Any exhibits introduced into the record at the hearing must be provided in quantities of eight to the Board Secretary for distribution to the board and admission into the record.
- Interested persons can send a letter to the Community Planning and Sustainability staff at 1739 Broadway, Boulder, CO 80302, two weeks before the Environmental Advisory Board meeting, to be included in the board packet. Correspondence received after this time will be distributed at the board meeting.

3. Board Action

Board motion. Motions may take any number of forms. Motions are generally used to approve (with or without conditions), deny, or continue agenda item to a later date (generally in order to obtain additional information).

- Board discussion. This is undertaken entirely by members of the board. Members of the public or city staff participate only if called upon by the Chair.
- Board action (the vote). An affirmative vote of at least three members of the board is required to pass a motion approving any action.

MATTERS FROM THE ENVIRONMENTAL ADVISORYBOARD, CITY MANAGER, AND CITY ATTORNEY

Any Environmental Advisory Board member, City Manager, or the City Attorney may introduce before the board matters which are not included in the formal agenda.

ADJOURNMENT

The board's goal is that regular meetings adjourn by 8 p.m. Agenda items will not be commenced after 8 p.m. except by majority vote of board members present.

*The Chair may lengthen or shorten the time allotted as appropriate. If the allotted time is exceeded, the Chair may request that the speaker conclude his or her comments.

**CITY OF BOULDER, COLORADO
BOARDS AND COMMISSIONS MEETING SUMMARY**

NAME OF BOARD/COMMISSION: Environmental Advisory Board

DATE OF MEETING: July 1, 2015

NAME/TELEPHONE OF PERSON PREPARING SUMMARY: Sandy Briggs/303-441-1931.

NAMES OF MEMBERS, STAFF AND INVITED GUESTS PRESENT:

Environmental Advisory Board Members Present: Steve Morgan, Brad Queen, Karen Crofton, Morgan Lommele and Tim Hillman (via phone).

Staff Members Present: Brett KenCairn and Sandy Briggs.

MEETING SUMMARY:

❖ EAB Rules & Roles

- **B. Queen** stressed transparency in communication as paramount and requested more specificity with the questions posed to the board for consideration. He also suggested the questions be framed as to how they relate to city objectives and why they are being asked of the Environmental Advisory Board.
- **K. Crofton** identified the distinction between necessary general updates being sufficient to simply “check the box” in some situations versus the need to review more detailed and specific information that is relevant to the discussion at hand. She added that specificity with questions can keep tangential points to a minimum.
- **T. Hillman** stated that being asked to “check the check box” as a board is appropriate at times but whenever direct feedback on something is needed it’s good to focus more and target specific areas for discussion.

❖ Climate Commitment

- The board suggests focusing on achievable, shorter term goals upon which longer term goals can be built. Some members find the emphasis on 2050 goals isn’t going to be sufficient while others conditionally accept the longer term goal.
- The board finds that achieving tactical goals will be more effective by emphasizing opportunity rather than the risk posed by climate change.
- The board feels the communication package as now written is not intuitive enough and may not resonate well with the public. It was suggested removing the value statements entirely from the three terms - energy, resources and ecosystems - could make more sense and be more effective in engaging people to think and decide for themselves what it means individually and personally to them. And using simple graphics to illustrate these three focus areas could be effective, as well.
- The board agreed that while a consistent message is important across both the Council and public memos, community engagement should inspire action by tying desired results to specific actions and daily activities.
- Board members offered several suggestions for additional areas of energy reduction.
- **B. Queen** suggested further incorporation of candid descriptions in the communication

plan regarding the evolution of how the city got to where it is now in order to demonstrate how learning has occurred and progress has been made.

- **T. Hillman** suggested that interim goals can be assisted by City Council honing in on why the community needs to pay attention in a real, qualitative way and be measured by an increase in investment in certain areas. He also pointed out that ordinances and codes would need to grow and be created to support the overall strategy.

1. CALL TO ORDER

Environmental Advisory Board Chair **S. Morgan** declared a quorum and the meeting was called to order at 6:04 pm.

2. APPROVAL OF MINUTES

On a motion by **M. Lommele**, seconded by **B. Queen**, the Environmental Advisory Board voted 5-0 to approve the June 3, 2015 meeting minutes.

4. PUBLIC PARTICIPATION

None.

5. PUBLIC HEARING ITEMS

The board discussed the perceived and real differences between Public Hearing Items and Discussion Items. **B. KenCairn** will seek clarification regarding the protocol and report back to the board and staff at the next meeting.

6. DISCUSSION ITEMS

A. EAB Rules & Roles (Morgan/KenCairn)

S. Morgan clarified the role of the Environmental Advisory Board to be more as a board of management or directors with high-level advisory as opposed to policy-making capacity. Diverse group thinking is more beneficial than individual statements and while it may take time, the ideas the board provides are heard and have influence.

B. KenCairn stressed the importance of identifying how staff and the board can be most effective together. Since staff can tend towards the broader questions, it is helpful to be reminded that greater specificity and focus in requests for feedback guide board discussions in a direct sense. He added that there are appropriate times for staff to ask for general feedback from the board as community members without getting into too much detail.

B. Climate Commitment (KenCairn)

B. KenCairn updated the board regarding the status of the City Council Climate Commitment memo and the second document to follow that will focus on more relevant items to the average person. Both documents will present the emission reduction goal and suggest how it will be achieved.

He presented quantified information from a Colorado-specific analysis conducted by Western Water Assessment in 2014 regarding the current state of local climate change. He revealed that climate is changing much faster than most people realize and that climate problems are energy problems. He illustrated that there is an abundant amount of clean energy available that only needs a strategic plan for

capturing it and making its use financially possible.

The strategic framework for plan presentation includes three focus areas: a clean energy future, responsible resource use and restorative ecosystems.

He informed the board of recent grants awarded to the city to determine how entire energy system changes can be designed and how to leverage thermal decarbonization strategies that will reduce the dependence on fossil fuels.

City Council will be asked to ratify the goal of an 80% reduction in greenhouse gas emissions by 2050, not the strategy behind achieving it yet since substantive action will need to be motivated in the community first.

The board was asked for feedback regarding support of the goal in general, whether some key reduction areas are not represented, if the current three-pronged framework makes sense and how to further engage the community.

7. OLD BUSINESS/UPDATES

None.

8. MATTERS FROM THE ENVIRONMENTAL ADVISORY BOARD, CITY MANAGER AND CITY ATTORNEY

S. Morgan requested updates on the Bear-Proof Receptacle Ordinance and Boulder Energy Challenge Initiative. **S. Briggs** will coordinate with staff to obtain updates and add these items to the agenda and packet for the next meeting.

M. Lommele reminded the board that meetings are scheduled to end at 8 pm.

She also stated that she had not yet received her mailed municipalization flyer that was a subject of discussion during the last meeting and that she would appreciate more time for comment on items brought to the board such as this flyer.

9. DEBRIEF MEETING/CALENDAR CHECK

10. ADJOURNMENT

Environmental Advisory Board adjourned at 8:21 pm.

Approved:

Chair Date

MEMORANDUM

To: Environmental Advisory Board

From: Department of Community Planning and Sustainability
David Driskell, Executive Director
Susan Richstone, Deputy Director
Kendra Tupper, Energy Services Manager
Elizabeth Vasatka, Business Sustainability Coordinator

Date: August 5, 2015

Subject: Building Performance Ordinance

The purpose of this agenda item is to obtain the Environmental Advisory Board's feedback on the proposed Building Performance Ordinance (BPO) in advance of the first reading at a City Council Meeting scheduled for September 1, 2015. Specifically, staff is requesting EAB's input on the following:

1. Strategies to achieve high compliance rates for the year of rating and reporting;
2. Feedback on the proposed compliance schedule and the decision to make the lighting requirements a one-time upgrade, instead of every ten years;
3. Feedback on the proposed implementation plan;
4. A recommendation for council on the proposed Building Performance Ordinance.

The full memo will go to council is attached and staff looks forward to the discussion with the Board on Wednesday, August 5. Staff has not included draft versions of the actual ordinance or city manager rules, as the city attorneys are still working on these.

I. EXECUTIVE SUMMARY

The purpose of this memo is to introduce the first reading of a “Building Performance” Ordinance that would require commercial and industrial building owners in Boulder to annually rate and report¹ the energy of their buildings and also implement periodic energy efficiency measures. This is scheduled as an agenda item for the September 1, 2015 council meeting and follows the [May 12, 2015](#) study session. At this study session, council affirmed the goals of the proposed ordinance and provided feedback on the options presented.

The proposed Building Performance Ordinance (BPO) is based on the feedback provided by council in May. The proposed ordinance requires buildings owners to do the following:

1. Annually Rate and Report the energy use of their buildings
2. Perform Periodic Energy Assessments
3. Perform Periodic Retrocommissioning² (RCx) and implement cost effective RCx measures
4. Implement One Time Lighting Upgrades

The city plans to publically disclose building energy use and ratings after a two year grace period, to provide owners with time to improve their ratings or ESPM scores. Buildings will be exempt from public disclosure if releasing such information would pose a threat to site security or the protection of trade secrets (*the exact wording on this is still in development with the city attorney*). High performing, energy efficient buildings will still be required to rate and report, but will be exempt from the other efficiency requirements. Large industrial or manufacturing campus where multiple buildings are served by a central plant or single utility meter will be subject to custom requirements.

At the May 12 study session, the following concerns were raised by council, and will be further addressed throughout this memo:

- Data privacy issues – For industrial or manufacturing buildings with significant concerns regarding security and trade secrets, how can the city protect this information from public disclosure? How does the Colorado Open Records Act (CORA) come into play with this exemption?
- Split incentive issues - This proposed ordinance would require building owners to pay for capital improvements, but the business tenants would benefit from the utility bill savings, since most of

¹ Rating” (also known as benchmarking) is the process of measuring and comparing energy performance metrics (such as the normalized energy use of a building) to other similar buildings. “Reporting” is providing the energy use and associated metrics and ratings to the parties required by the proposed ordinance.

² Retrocommissioning (RCx) is a process that improves the efficiency of existing building operations by “tuning up” and calibrating existing functional systems to run as efficiently as possible through low- or no-cost improvements.

Boulder’s commercial leases are triple-nets.³ How can these costs be shared to alleviate this misalignment?

A City Manager Rule will be published for comment following final ordinance adoption, and it will include the implementation details for rating and reporting, energy assessments, retrocommissioning and lighting upgrades.

II. COMMUNITY SUSTAINABILITY ASSESSMENT AND IMPACTS

- **Economic:** After employees, utilities are typically the largest non-fixed expenditure of a business. These requirements provide a way for owners and tenants to understand energy use and identify cost-effective opportunities to cut energy waste and costs. These policies will redirect spending back in the local community, driving job creation and increased demand for energy efficiency services.

Based on the benchmarking data from other cities, staff has estimated the net economic benefit of improving energy performance across the commercial building stock. Based on average data from the city of Seattle, Boulder’s local economy could save the following in annual energy costs.⁴



- **Environmental:** The Building Performance Ordinance is an important step along the path to achieving Boulder’s proposed climate commitment goal of reducing greenhouse gas (GHG) emissions 80 percent by 2050 (compared to 2005). The city’s recently completed 2012 GHG inventory (please see the [July 30, 2015](#) study session memo) shows that private sector commercial and industrial buildings are responsible for 41 percent of Boulder’s total emissions.⁵

The proposed ordinance is projected to save between 70,000 and 100,000 metric tons of carbon dioxide equivalent emissions (MTCO₂e) per year, when fully implemented. This equates to a 4.5 to 6 percent reduction in Boulder’s total greenhouse gas emissions.

- **Social:** The intent of the Building Performance Ordinance requirements is to transform the market and increase the transparency of building energy data. These requirements will provide potential tenants and buyers with information to help them evaluate operational costs and will recognize and reward high efficiency buildings.

³ In a triple-net lease, tenants pay set monthly rent and estimated share of building operating expenses (including utility costs). At year’s end, tenants pay additional adjustment for true cost of operational expenses.

⁴ Based on quartile averages for energy use intensity

⁵ While institutional, or public sector, C&I buildings are responsible for 12 percent of emissions, a municipal ordinance would only cover private sector and city owned buildings.

III. OTHER IMPACTS

- **Fiscal:** Implementation support for this ordinance is covered by the Climate Action Plan (CAP) tax revenues. The estimated ongoing expenses for ordinance implementation, including staffing, are approximately \$330,000 per year. This is explained in more detail in the Budget Section of this memo. If the CAP Tax sunsets (currently set for March of 2018), the city will need to determine how this program will be funded and administered.
- **Staff time:** Ordinance implementation and assistance represent significant work plan items over the coming years, and have been incorporated into the existing work plans of city staff and contractors. Additionally, a vacant position funded in the CAP tax budget is being used to hire a new employee to administer the program and the new incentives associated with it.

IV. BACKGROUND

Please refer to the [May 12, 2015](#) study session memo for the following background information relevant to the Building Performance Ordinance:

- GHG emissions from commercial and industrial buildings in Boulder
- The city's history with energy efficiency and rating and reporting programs
- National context with information on the other cities and counties that have adopted similar requirements, as well as efforts at the federal government level
- Coordination with other city programs and requirements, including commercial building energy codes and outdoor lighting codes

i. Estimated Savings from Rating and Reporting

National studies have estimated that rating and reporting leads to an average annual energy savings of about 2.4 percent.⁶ Staff also compiled all available actual savings data from other cities that have had a rating and reporting requirement in effect for at least a few years.

⁶ In 2012, the U.S. Environmental Protection Agency (EPA) analyzed the energy performance of more than 35,000 buildings that received ENERGY STAR performance scores for 2008 through 2011 and found that these buildings attained average annual energy savings of 2.4percent (7 percent over a three-year period).
http://www.energystar.gov/ia/business/downloads/datatrends/DataTrends_Savings_20121002.pdf?8d81-8322

Table 1: Actual Rating and Reporting Savings from Other Cities

City	Actual Total savings to date	Reporting timeframe	# years	Actual % savings/year
Austin	n/a	2011-2013	2	n/a
Washington, DC	9.0%	2010-2013	3	3.0%
NYC	5.7%	2010-2013	3	1.9%
Philadelphia	n/a	2012-2013	1	n/a
Seattle	n/a	2010-2012	3	n/a
San Francisco (Municipal Buildings only)	7.4%	2009-2013	4	1.9%

It's important to note, that while thirteen other cities have passed rating and reporting requirements, only New York and Washington, DC have actual savings data for private sector buildings. This shows that it takes a minimum of two years to get these programs going, and likely four to five years before you have data to start indicating savings. Therefore, the city should plan for the fact that we likely won't have energy savings data for the first few years, and should measure success of the initial phases on metrics such as compliance rates and participation.

V. PUBLIC ENGAGEMENT AND FEEDBACK

Over the past year, staff has conducted a broad community stakeholder engagement process that has informed the development of options and recommendations for a potential ordinance. This process consisted of three phases:

Phase 1 – Working Group (October 2014 to January 2015): Over four months, staff convened and facilitated a working group of affected stakeholder (building owners, property managers, service providers, commercial brokers, etc) to help develop options for a commercial energy ordinance. This was an important process to identify aspects of the requirements that cause the most concern for the commercial building stakeholders. Please refer to the project's website (www.BoulderBuildingPerformance.com) for all presentations and meeting notes from this working group. Additionally, a summary of feedback and recommendations is included in the [May 12, 2015](#) study session memo.

Phase 2 – Broader Outreach to the Business Community (January to April 2015): Following the working group completion, staff presented to a number of business groups in the community including,

- Downtown Boulder Inc. - Feb. 4, 2015
- Boulder Tomorrow - Feb. 25, 2015
- The Boulder Group of the International Facility Management Association (IFMA) - April 2, 2015

- Boulder Chamber Community Affairs Council – April 9, 2015
- Commercial Brokers of Boulder - April 13, 2015

The city also hosted a one-hour webinar on March 18, 2015, for all affected building owners; this webinar was attended by approximately 55 participants and a recording was posted on the [project website](#) for future viewers.

Phase 3 – Specific Outreach Following May 12 Study Session (May to July 2015): Following the May Study Session, staff facilitated additional targeted outreach around two key issues.

- Large Industrial Campuses – For industrial or manufacturing buildings with significant concerns regarding security and trade secrets, how can the city protect this information from public disclosure? How does this work with the Colorado Open Records Act (CORA) come into play with this exemption? How can we modify the efficiency requirements to make sense for their unique sites?
 - a. Outreach: Since the study session, staff has engaged with Boulder’s four large industrial companies - IBM (International Business Machines), Medtronic (formerly Coviden), Corden Pharma, and Ball Aerospace) - to discuss their unique situations. Through multiple discussions and iterations, staff and the city attorneys have worked with these companies to develop a set of requirements that respects their need to protect site data for security and competitive advantage purposes, but still satisfies the intent of the ordinance. Please refer to the **“Summary of Ordinance Provisions”** section for more details.
- Split incentive issues - This proposed ordinance would require building owners to pay for capital improvements, but the business tenants would benefit from the utility bill savings, since most of Boulder’s commercial leases are triple-nets.⁷ How can these costs be shared to alleviate this misalignment?
 - a. Outreach: Since the study session, staff re-connected with the [Institute for Market Transformation](#) (IMT) and other cities that have passed similar ordinances. Staff then held a focus group discussion with some of Boulder’s largest property owners and their tenants. Please refer to the **“Analysis”** section for more details.

Through this engagement, there has been significant cooperation and dialogue with many owners, property managers, and service providers. However, members of the commercial building community have expressed concerns regarding data privacy and the amount of city regulations. In addition to having the most stringent energy codes in the country for new (and major remodels and additions) commercial buildings, the city has just adopted a Zero Waste Ordinance and a commercial linkage fee for new buildings – all which affect businesses and the commercial buildings community.

⁷ In a triple-net lease, tenants pay set monthly rent and estimated share of building operating expenses (including utility costs). At year’s end, tenants pay additional adjustment for true cost of operational expenses

VI. SUMMARY OF ORDINANCE PROVISIONS

The proposed Building Performance Ordinance will further establish Boulder as an energy efficiency leader throughout the country. It addresses the significant gap between where we are today and our city's goal of an 80 percent reduction in GHG emissions by 2050.

The proposed ordinance would require buildings owners to do the following:

- Annually Rate and Report: Rate the energy use of their buildings through the [ENERGY STAR Portfolio Manager](#) (ESPM) free online tool and report the usage and associated metrics to the city and tenants.
- Perform Periodic Energy Assessments⁸ (every ten years) to identify cost effective efficiency measures.
- Perform Periodic Retrocommissioning (RCx) (every ten years) and implement cost effective RCx measures within two years of the study. The scope for RCx will be reduced for buildings smaller than 50,000 square feet (sf).
- Implement One Time Lighting Upgrades to bring all interior and exterior lighting up to certain requirements of the current International Energy Conservation Code (IECC). At the May 12 Study Session, staff recommended that lighting upgrades occur every ten years. However, since then staff has done additional research and is now recommending that lighting upgrades are a one-time requirement because the newer lighting technologies have lifetimes (and depreciation schedules) around 20 years.

Large industrial or manufacturing campus where multiple buildings are served by a central plant or single utility meter will be subject to the following custom requirements:

- Annually Rate and Report: [*DRAFT requirement that is still be developed by the city attorney*] Report total campus energy use (broken out by fuel type) to a secure, third-party website that will aggregate the total energy use across all campuses. The city will then receive only the aggregate energy use (by fuel type).
- Participate in a Utility Process Efficiency Study or conduct an Energy Assessment (every ten years) to identify cost effective efficiency measures and Develop a Plan for achieving future energy savings.
- Implement Cost Effective Measures (those that will payback in less than one year) identified in the assessment, within two years of the completion of the study.

⁸ Equivalent to a Level 2 energy audit, as defined by the American Society for Heating, Refrigeration and Air-Conditioning Engineering (ASHRAE). This audit includes an energy end use breakdown for the building, and detailed cost and savings analysis for efficiency measures.

- Implement One Time Lighting Upgrades to bring all interior and exterior lighting up to certain requirements of the current International Energy Conservation Code (IECC).

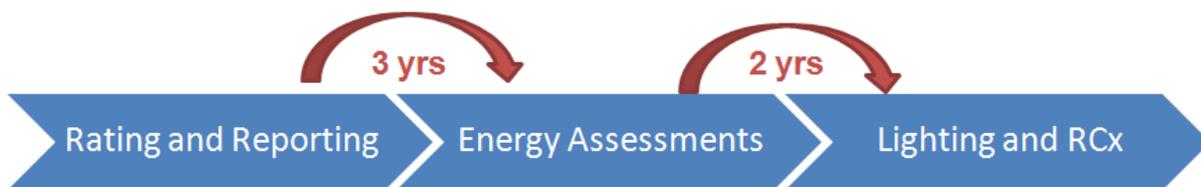
More specific details concerning what is required for implementation will be included in city manager rules, to be fully developed after the passage of the ordinance.

The city plans to publically disclose building energy use and ratings after a two year grace period, to provide owners with time to improve their ratings or ESPM scores. Buildings will be exempt from public disclosure if releasing such information would pose a threat to site security or the protection of trade secrets (this will apply to most large industrial campuses). The exact wording of this exemption is still being developed. High performing, energy efficient buildings will still be required to rate and report, but will be exempt from the other efficiency requirements. Buildings will be considered for the efficiency exemption if they meet any of the following criteria:

- Current ENERGY STAR certification;
- Current LEED (Leadership in Environmental Design) Building Operations and Maintenance certification;
- A demonstrated pattern of significant and consistent improvements in energy efficiency or greenhouse gas emissions;
- Others upon review and request.

i. Proposed Compliance Schedule

The Building Performance Ordinance features a phased compliance schedule to allow time for the city to get systems/processes working and for the private sector to plan for and absorb costs. Under the recommend compliance timeline, only large commercial and industrial (C&I) buildings (> 50,000 sf), newly constructed C&I buildings (>10,000 sf), and city- owned buildings (> 5,000 sf) would have to comply in 2016. Over time, smaller existing private sector buildings (> 20,000 sf) and efficiency requirements would be phased in. In general, energy assessments are required three years after the first rating and reporting deadline. Lighting upgrades and retrocommissioning (RCx) are required two years after the first required energy assessment.



The table below summarizes the recommended phasing strategy.

Table 2: Proposed Timeline for Ordinance Implementation

Existing Buildings > 50,000 sf New Buildings >10,000 sf City Buildings > 5,000 sf	Existing Buildings > 30,000 sf	Existing Buildings > 20,000 sf	Large Industrial Campuses*
<u>2016</u> : Require rating and reporting (R&R) <u>2019</u> : Energy Assessments <u>2021</u> : Lighting upgrades and RCx	<u>2018</u> : R&R <u>2021</u> : Energy Assessments <u>2023</u> : Lighting upgrades and RCx	<u>2020</u> : R&R <u>2023</u> : Energy Assessments <u>2025</u> : Lighting upgrades and RCx	<u>2016</u> : R&R <u>2019</u> : Energy Assessments and plan for achieving future savings <u>2021</u> : Implement cost effective measures identified in the assessment <u>2025</u> : Lighting upgrades
<p><i>* Multiple buildings served by a central plant or single utility meter</i></p>			

VII. ANALYSIS

At the May 12 study session, the following concerns were raised by council and have been analyzed further.

i. Data privacy issues (DRAFT)

For industrial or manufacturing buildings with significant concerns regarding security and trade secrets, the city must be able to protect this information from public disclosure, including requests that may come under the Colorado Open Records Act (CORA).

The city attorney is still working on this issue, but it is likely that any building owner that applies for the exemption from public disclosure must submit a document detailing why this disclosure would cause substantial harm to their competitive position. Concern that potential tenants might shy away from renting or buying buildings with poor energy performance will NOT qualify for this exemption.

To provide further protection for the city’s large industrial and manufacturing campuses that have security concerns in addition to threats to their competitive position, the city will only require them to report their total campus energy use to a secure, third party website which will then aggregate total energy use (by fuel) across all of the campus. The city will only receive the total aggregate energy use, which should still be protected under CORA’s competitive position exemption.

ii. Split incentive issues

This proposed ordinance would require building owners to pay for capital improvements, but the business tenants would benefit from the utility bill savings, since most of Boulder's commercial leases are triple-nets.⁹ How can these costs be shared to alleviate this misalignment?

Since the study session, staff re-connected with the [Institute for Market Transformation](#) (IMT) and other cities that have passed similar ordinances. Staff learned that most commercial leases treat energy assessments and efficiency as "operating expenses", which can be passed through to tenants. Further, the majority of commercial leases have a clause which allows costs for anything required by law to be passed through to tenants.¹⁰

Staff then held a focus group discussion with some of Boulder's largest property owners and their tenants. The general consensus was that it would be possible to pass these costs through to tenants over time. Owners asked that the city provide them with educational materials designed to help them discuss these requirements with their tenants, and this has been included in staff's implementation plan.

There are a few special cases where the tenants actually own and maintain the building equipment (i.e. strip malls where each tenant space has its own rooftop heating or cooling unit) and the owners don't have the ability to implement the efficiency requirements. The city will handle these cases through the exemption process and create a custom pathway where these tenants can comply by participating in the Partners for a Clean Environment (PACE) program, getting a free energy assessment and then implementing cost effective efficiency measures.

VIII. IMPLEMENTATION PLAN

The proposed ordinance would create new requirements and a new ongoing program in the city, resulting in a commensurate need for staffing resources to develop, implement and enforce the ordinance and program. In addition to developing and administering the program requirements, the city would need to manage any new incentives that are outside commercial EnergySmart, and set up future systems for outcome-based energy code enforcement (should the city move in that direction).

Assuming the ordinance is adopted in September 2015, the timeline for implementation through the end of 2016 is shown below.

⁹ In a triple-net lease, tenants pay set monthly rent and estimated share of building operating expenses (including utility costs). At year's end, tenants pay additional adjustment for true cost of operational expenses

¹⁰ This is how costs were shared for requirements stemming from the Americans for Disability Act (ADA) in 1990.

Table 3: Proposed Timeline for Ordinance Implementation

Key Effort	
Education and Outreach	On-going, but a targeted effort will occur from Nov 2015 – March 2016
Develop webpage for the requirements, housing support materials and webforms for exemption requests, etc	Sept – Nov 2015
Publish the list of buildings required to rate and report in 2016	
<ul style="list-style-type: none"> • Publish a draft list • Require building owners to “claim” their buildings through a webform, assign a point of contact, and update information • Publish the revised list 	Oct 2015 – Jan 2016
Develop support materials for building owners and tenants	
<ul style="list-style-type: none"> • How-To Guides • Handouts summarizing the requirements • Tool to help owners estimate the costs of various efficiency projects 	Aug 2015 – Jan 2016
New custom rebates offered under EnergySmart	Jan 1, 2016
Setup compliance tracking system and create business process for program administration	Jan – April 2016
First R&R compliance deadline for city owned buildings	April 1, 2016
Create an online certification course for Energy Assessors and Retrocommissioning Professionals	March - May 2016
First R&R compliance deadline for large private sector buildings	June 1, 2016
Setup framework for early adopter rebates for Energy Assessments	July – Aug 2016
Develop Rating and Reporting Case Studies	4 th Quarter 2016
Write the Annual Rating and Reporting Report	4 th Quarter 2016

i. Options for Cost Recovery

Many cities charge a filing fee to comply with their benchmarking and energy audit requirements. This is not recommended for the first two years, as our businesses already contribute to the CAP Tax, which will fund this program through 2017. When the CAP Tax expires (March 2018), the staff recommends that a modest filing fee (something around \$50 to \$150 per building) be instituted.

ii. Fines for Non-Compliance

The city explored a number of enforcement strategies to ensure high compliance rates. Best practices from other cities show that a combination of outreach and education, written and verbal reminders, coupled with monetary fines are the most successful. With these strategies, Seattle was able to achieve a 93 percent compliance rate in its first year of program implementation. The city will continue to invest in outreach and education efforts for the building community. In addition, the proposed ordinance

includes a fine of \$250 per day for violation. Three warnings, two written and one verbal, will be issued prior to any fines.

iii. Training and Support

Following the passage of the ordinance, the city would design and implement education and training programs to assist building owners with ordinance compliance. It will be important that the city provide support and resources, such as: a website, call center, green lease templates, in-person and online training of the ENERGY STAR Portfolio Manager Tool, and general assistance and support with understanding the rating and reporting and energy assessment information. The city will also coordinate with EnergySmart advisors and call center operators to ensure that they are able to answer questions related to the ordinance and its requirements.

iv. Support for Process-Load Dominated Buildings (Industrial and Manufacturing)

As part of the rating and reporting requirement, for buildings that are dominated by process loads (i.e. manufacturing buildings), the city would encourage owners to develop, track and report an additional metric of their choosing that makes the most sense for their business process. Under this path, this agreed upon metric would be disclosed publically (if applicable) instead of Site and Source energy use intensity (EUI,) which are not appropriate metrics for process-dominated facilities.

The [Colorado Industrial Energy Challenge](#) (CIEC) is a voluntary program managed by the Boulder based, Southwest Energy Efficiency Project (SWEET) and funded by the U.S. Department of Energy's (DOE) Advanced Manufacturing Office (AMO). The CIEC program challenges manufacturing companies to develop and set a five-year energy efficiency goal, provides networking and training opportunities, and offers public recognition from the Colorado Energy Office. The program is open to industrial facilities in Colorado with more than \$200,000 in annual energy costs. As part of this proposed ordinance, staff recommends that the City of Boulder provide \$10,000 per year to CIEC to offer these services to Boulder-based manufacturing companies that are below the annual energy cost threshold. These funds would allow CIEC to provide support services to ten Boulder based manufacturing companies each year.

v. Incentives

Staff is proposing new financial incentives for early adopters for any efficiency requirements approved by City Council. Existing resources would be reallocated within the CAP Tax fund to cover this, and to expand the city's Commercial EnergySmart rebate funds for custom rebates for efficiency measures that arise from required energy assessments and are not covered under the current list of prescriptive rebates.

Table 4: Proposed Rebates and Incentives

	Incentive	Annual Budget (2016 and 2017)
Early Adopter Incentive: Subsidizes the cost of the required periodic energy assessments	25% of cost (up to \$5,000 per building)	\$150,000/year (funded by reallocation of CAP Tax dollars)
EnergySmart Rebates for custom efficiency measures	\$ per metric ton of CO ₂ e saved ¹¹	\$200,000/year (funded by reallocating Commercial EnergySmart Funds and using carryover dollars)

vi. Partners for a Clean Environment (PACE) and Commercial EnergySmart

The [PACE \(Partners for a Clean Environment\)](#) program provides a one-stop shop for businesses and building owners to get free technical assistance, resources and financial incentives to implement sustainability best practices (energy, waste, water and employee transportation options). PACE/EnergySmart advisors currently provide free rating and reporting assistance at no charge, and this support will be available to any city of Boulder building owner subject to these proposed requirements.

Under PACE, [Commercial EnergySmart](#) is a suite of energy efficiency services to create awareness and to provide technical assistance (advisor service) and incentives to implement cost-effective energy efficiency improvements. Current Commercial EnergySmart rebates are prescriptive in nature, and applicable for equipment upgrades and replacements. To help support the more diverse and custom efficiency measures that will be identified through the required energy assessments, the City of Boulder is developing new, custom rebates that will be added in 2016. These custom rebates will be available for cost effective efficiency measures that don't fall into the existing prescriptive rebate categories, such as building controls and automation systems.

Also, the free energy assessments and advising services offered through PACE/EnergySmart will be utilized as an alternative pathway for compliance with the energy assessment and retrocommissioning requirements when applicable. An example of this would be a strip mall that is a single building larger than 50,000 sf, but is actually made up of small individual shops where the tenants own and maintain their own rooftop heating ventilation and air-conditioning (HVAC) units. These custom cases will be handled on an individual basis through the exemption process.

vii. Colorado Property Assessed Clean Energy (C-PACE) Financing

At the May 12 Study Session, there were questions regarding the status of Colorado PACE (C-PACE), or property assessed clean energy financing, in the city and county of Boulder. The Colorado Energy Office is now taking on the lead role of administering C-PACE financing for commercial properties across the state of Colorado, and on June 23, 2015, Boulder County became the first county in the State

¹¹ Estimates of metric tons of CO₂e saved will come from the energy assessment reports. Staff has released a request for proposals to develop the framework and process for custom rebates and to determine the rebate per metric ton saved.

to opt into this program. This means that any commercial, industrial, or multi-family property owners in Boulder can finance efficiency or renewable projects through their County property tax assessments.

C-PACE is an innovative financing mechanism that helps commercial, industrial and multi-family property owners access affordable, long-term financing for smart energy upgrades to their buildings. C-PACE allows building owners to finance qualifying energy efficiency and clean energy improvements through a voluntary assessment on their property tax bill. Property owners pay for the improvements over time through this additional charge on their property tax bill, and the repayment obligation transfers automatically to the next owner if the property is sold. Capital provided under the C-PACE program is secured by a lien on the property, so low-interest capital can be raised from the private sector.

While there is no official minimum on the loan amounts, investors are unlikely to invest in projects smaller than \$200,000. At this time, the city and county are exploring options to develop or modify a financing mechanism that would be feasible and available for smaller businesses/property owners and their projects.

IX. BUDGET

Ordinance implementation and assistance represent significant work plan items over the coming years, and have been incorporated into the existing work plans of city staff and contractors. Additionally, a vacant position funded in the CAP tax budget is being used to hire a new employee to administer the program and the new incentives associated with it.

Funds will be needed to for personnel, incentives, outreach and training materials, and other program administration needs. Staff is recommending that the CAP Tax be used to fund this program, for as long as the tax is active. In order to fund this program through CAP Tax, the city would have to reallocate existing resources and utilize carryover funds from previous years. If the CAP Tax expires (currently set for March of 2018), the city will need to determine how this program will be funded and administered. One possibility would be the new municipal electric utility (if formed), as this would be part of a comprehensive energy services plan.

The city anticipates that ongoing program costs will be about \$330,000 per year, including personnel costs. This budget is constrained by available CAP Tax funds – the city would like to increase the budget for new rebates in later years when the efficiency requirements are phased in, and staff will continue to explore additional avenues for funding.

Table 5: Proposed Budget for Ordinance Implementation

	2015	2016
Personnel	\$165,000	\$125,000
Ordinance outreach and training sessions	\$5,000	\$5,000
Early adopter rebates for Energy Assessments	-	\$150,000 ¹²
Development of how-to guides and other support materials for owners and tenants	\$30,000	\$7,000
Case Studies	-	\$5,000
Funding for CIEC to support Industrial buildings	-	\$10,000
Data analysis, quality control, and Annual Report	-	\$28,000
New custom rebates offered under EnergySmart	<i>Covered under the EnergySmart Budget within CAP</i>	
TOTAL	\$200,000	\$330,000

X. NEXT STEPS

A public hearing and second reading of this ordinance is tentatively scheduled for September 1, 2015.

¹² Funds may carry over to 2017 and 2018 as we approach the first compliance deadline.

MEMORANDUM

To: Environmental Advisory Board

From: **Community Planning and Sustainability Department**
David Driskell, Executive Director
Susan Richstone, Deputy Director
Lesli Ellis, Comprehensive Planning Manager
Valerie Matheson, Urban Wildlife Conservation Coordinator

Date: August 5, 2015

Subject: Update on the implementation of the Black Bear Protection Ordinance (Ordinance No. 7962)

A. PURPOSE

The purpose of this memo is to provide Environmental Advisory Board (EAB) with an update on the Black Bear Protection Ordinance (Ordinance No. 7962, adopted by council on March 18, 2014) implementation efforts for 2014 and to inform EAB of the efforts planned for 2015.

B. EXECUTIVE SUMMARY

This memo includes:

- Information on the phased approach to implementing Ordinance No. 7962,
- Information on 2014 urban bear activity in comparison to the past five years, and
- Information on waste disturbances by bears and waste cart monitoring.

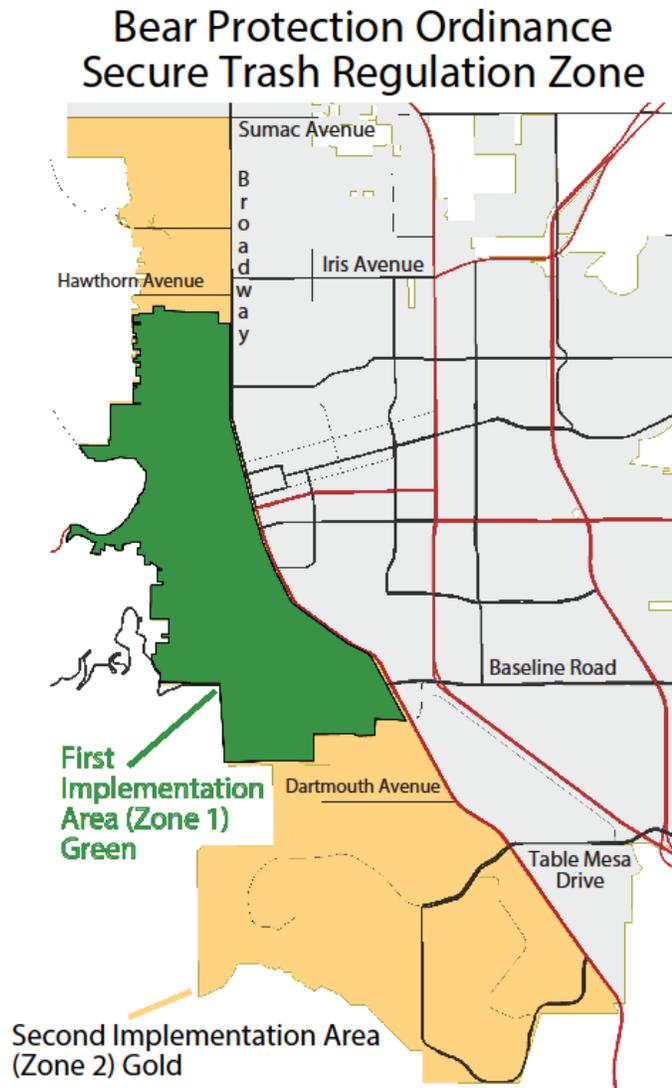
Ordinance No. 7962 requires trash and curbside compost containers to be secure from bears at all times within the Secure Trash Regulation Zone. Implementation efforts began in the spring of 2014 and include the following three phases:

- **Phase I-** single family residences with approximately 6,000 trash and compost carts in Zone I effective Oct. 1, 2014.
- **Phase II-** commercial and multifamily units comprised of an estimated 460 dumpsters in Zone I, and single family residences with an estimated 8,700 trash and compost carts in Zone II, 95% implemented by September 2015, enforcement to begin June 15, 2016.
- **Phase III-** commercial and multifamily units comprised of approximately 120 dumpsters in Zone II, and all city managed public waste containers in the entire Secure Trash Regulation Zone effective date to be determined.

Specific patterns identified in the 2014 urban bear report and monitoring data include:

- Bears had knocked over and strewn trash from fewer carts in 2014 (four carts) as compared to 2013 (116 carts) or 2012 (142 carts), and
- The proportion of bear reports north of the Secure Trash Regulation Zone (Sumac) were greater (13 reports) than previous years (eight reports total 2009 to 2013).

In addition to the staff monitoring and community reports suggesting there were fewer trash cart disturbances in 2014 compared to previous years, staff has received feedback from the community that alleys west of Broadway look substantially cleaner and have had less trash strewn.



BACKGROUND

Bear Protection Ordinance

On March 18, 2014 council adopted Ordinance No. 7962 requiring trash and curbside compost containers to be secure from bears at all times in most of the city west of Broadway (see March 18, 2014 City Council agenda item titled: Consideration of a motion to adopt on third reading Ordinance No. 7962

www.documents.bouldercolorado.gov/weblink8/0/fol/446/Row1.aspxlink).

Implementation of the ordinance included the following elements:

- A phased approach beginning with alleys where waste containers are stored 24 hours a day, 7 days a week, and experience the most visible trash disturbances by bears;
- Hiring two additional Code Enforcement staff to support the new ordinance in addition to enforcing existing quality of life ordinances; and
- Monitoring the effectiveness of the ordinance, changes in enforcement, violations, and bear behavior.

Phased implementation

Due to the large area included in the ordinance, and thousands of trash and compost containers that need to be changed or modified, the ordinance is being implemented and enforced in a phased approach. The phased approach identifies two sub-areas, or zones within the entire Bear Secure Trash Regulation Zone. The first implementation area is the highest priority for securing waste from bears and includes properties with trash pick-up in alleys (Zone I). The second implementation area includes the remainder of the properties in the Regulation Zone (Zone II).

The phased approach includes the following locations, waste containers, and timeline:

- **Phase I**- single family residences in Zone I effective Oct. 1, 2014
- **Phase II**- commercial and multifamily units (dumpsters) in Zone I and single family residences in Zone II enforcement to begin June 16, 2016
- **Phase III**- commercial and multifamily units (dumpsters) in Zone II effective date to be determined

Hiring additional Code Enforcement staff

Two additional Code Enforcement positions were created to execute the enforcement of Ordinance No. 7962 in addition to enforcing other laws that pertain to quality of life issues.

An additional Officer was hired July 7, 2014 and fully trained by September 12, 2014. An Administrative Assistant was also hired and began work on Dec. 8, 2014. Both of these new positions are fully functional and address all code issue to include the bear ordinance.

Monitoring ordinance effectiveness, violations, and bear behavior

For the past six years the city has been maintaining a database of all reported bear sightings and the attractants associated with the bear activity. In addition, in 2012 & 2013, the city, in partnership with Colorado Parks and Wildlife (CPW), monitored compliance with trash ordinances and bear activity in waste containers in western Boulder as part of the Black Bear Education and Enforcement Pilot (for final report visit: www.boulderwildlifeplan.net "Background"). In 2014 city staff collected the same bear report data and attractant data as in previous years, and monitored trash violations and bear-resistant cart misuse.

Factors that cloud interpreting cause and effect change in bear behavior

Urban bear behavior in Boulder can be highly variable from year to year and is dependent on a variety of dynamic environmental factors. For example, in wet years with no late spring freeze, food production in natural areas is high, and pressure on bears to search for human-based food sources in town is lower. Similarly, prior to 2008 (and particularly in 2007) bear activity in south Boulder seemed to be greater than bear activity in north Boulder. That pattern of behavior seems to have shifted in recent years, but not due to any programmatic, or environmental change. Sometimes individual bears and their offspring have a preference for an area and these individual preferences change over time. For these reasons, we cannot look at a season of bear activity after initiating a new waste storage program and identify changes in bear behavior as a result of the program. It is important to note there are factors independent of secure trash and compost containers that contributed to less urban bear activity in 2014. These factors include, good natural and domestic fruit tree production (though some of the drainages and fruit producing vegetation west of town were scoured by the flood of 2013); and four habituated bears were killed in Boulder in 2013 which lowered the number of bears in the area in 2014.

ANALYSIS

Phased ordinance implementation

Phase I of Ordinance No. 7962 implementation occurred in Zone I and focused on single family residential homes. This phase involved: notifying landowners, residents, and property managers about the ordinance requirements, working with local trash haulers to establish a feasible cart distribution and compliance timeline, and focused education and enforcement.

- **Notification**

In June 2014, 9,392 informational postcards (see **Attachment A**) were mailed to residents, property managers and landowners that were responsible for waste management in the approximate 7,000 residences and business in Zone I.

- **Bear-resistant container distribution**

During the months of June through September 2014, approximately 3,100 trash, and 2,900 curbside compost bear-resistant carts were put in use at single family residences in Zone I.

- **Education and Enforcement**

In September 2014, staff began monitoring bear-resistant cart use (see 2014 Waste Cart Monitoring section in Analysis). Staff observed a pattern of bear-resistant cart misuse (lids not being latched) and developed an educational door hanger to reinforce the importance of latching the carts (see **Attachment A**). These door hangers were distributed by Code Enforcement staff and Boulder Bear Coalition volunteers at locations where cart misuse was observed. On October 1, ordinance enforcement began. Between Oct. 1 and Dec. 1, Code Enforcement issued 245 warnings. Most of the warnings were for cart misuse but some were for not storing waste in a bear-resistant cart or enclosure. All properties where warnings were issued voluntarily complied and no summonses were issued.

Phase II of Ordinance No. 7962 implementation began in February and is focusing on dumpsters in Zone I, and single family residential homes in Zone II. Western Disposal customers in Zone II began receiving their fully-automated, retrofitted, bear-resistant carts in February. Some residents, particularly older adults, expressed concerns with the weight of the carts when moving them to and from the curb. City staff and Western Disposal are exploring ways to accommodate all residents, and Western began testing two lighter versions of the cart in May at the [Grizzly and Wolf Discovery Center](#) in Montana. A lighter version of the 32 gallon bear-resistant cart passed the bear testing in the spring and is currently being manufactured and distributed.

The process of notification will be similar to activities in Phase I, and enforcement of this second phase will begin on June 15, 2016.

Phase II of Ordinance No. 7962 implementation efforts are expected to include:

- Distribution of approximately 4,400 bear-resistant trash carts and 4,300 bear-resistant curbside compost carts throughout Zone II by September 2015.
- Distribution of approximately 460 bear-resistant trash dumpsters in Zone I by September 2015.
- Enforcement of ordinance requirements of dumpsters within Zone I, and single family residential properties within Zone II on June 15, 2016.

Collaboration a key component of successful implementation

Developing an implementation program for Ordinance No. 7962 involved a significant level of collaboration and support from local businesses, and other agencies.

Community obstacles to securing trash from bears included: cost, local availability of carts, availability of bear-resistant containers in all three sizes (32, 64, and 96 gallon), potential waste and environmental impact of purchasing thousands of manufactured

bear-resistant carts rather than retro-fitting carts currently in use, service and product options for residents that wanted to store waste in structures or bear-resistant enclosures, service options for residents that wanted to maintain “pay-as-you-throw” services. Due to local waste haulers and businesses including Western Disposal, One-Way, CanShed and organizations such as Colorado Parks and Wildlife and the Boulder Bear Coalition actively participating in the ordinance development and implementation process, many obstacles could be addressed. The contributions of these organizations were key to the feasibility and success of implementation.

2014 urban bear activity

The city maintains a database of all urban bear sightings and reports. The number of reports varies from year to year and is not considered a representation of actual bear activity as much of the urban bear activity goes unreported. The bear report database is helpful in providing information on the pattern of urban bear activity over time and was also used to develop the Secure Trash Regulation Zone.

Reported bear activity from 2009 through 2013 showed only one report of a bear west of Broadway and north of Sumac (Wonderland Lake). In 2014, the pattern of activity looks different with several bear reports north of Sumac (see map **Attachment B**). The number of reports north of the Regulation Zone (Sumac) was greater (13 reports) than in previous years (8 reports total 2009 to 2013). Activity beyond the Regulation Zone will continue to be monitored and evaluated to determine whether 2014 trends will continue and necessitate expansion of the current Regulation Zone.

2014 waste cart monitoring

In 2012 and 2013 the City of Boulder partnered with Colorado Parks and Wildlife (CPW) to monitor trash violations including trash being strewn by bears in three neighborhoods as part of the Black Bear Education and Enforcement Pilot project (for Bear Education and Enforcement Pilot final report visit: www.boulderwildlifeplan.net “Background”). In the fall of 2014 staff monitored the same route including 612 single family homes for a reduced number of days in the fall. Staff conducted 12 days of monitoring and compared the data to 12 days of fall monitoring in 2012 and 2013. The monitoring showed fewer bear-trash conflicts in 2014 with only four carts being knocked over and strewn, compared to 116 and 142 carts knocked over in 2013 and 2012 respectively (see **Table I**).

Though enforcement of the ordinance did not begin until Oct. 1, 2014, most of the residences along the monitoring route had bear resistant carts when the monitoring began on September 16. Staff also noted how many bear resistant carts had waste in them and were not latch/locked closed. There were 146 observations of carts not being latched. In these cases the carts were not overflowing, the lid had just not been pushed down to engage the locking mechanism.

Table I. Number of observed trash violations at 612 residences in the Bear Ordinance Regulation Zone between Sept. 16, and Oct. 30, over the past three years.

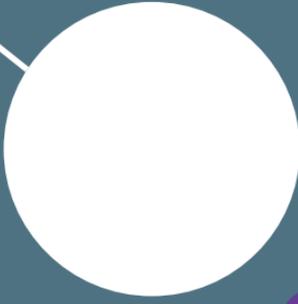
Year	Total Trash Violations	Unique Addresses	Bear-Caused Violations (Trash Strewn)	Percent of Total Caused by Bears
2012	145	113	142	97.9%
2013	120	71	116	96.7%
2014	42	35	4	11.6%

NEXT STEPS

- Develop timeline for “Phase III” of implementation which will include dumpsters in Zone II, and public (street) waste receptacles in the Secure Trash Regulation Zone.
- Further develop monitoring protocol to evaluate bear behavior and ordinance effectiveness.

Attachments:

- A:** Educational Materials: Postcard and Door hanger
- B:** Map of Reported Bear Sightings 2009-2014



PROTECT BOULDER'S BEARS

NEW CITY ORDINANCE

Your trash and compost must be secured at all times until it is collected by a trash hauler.

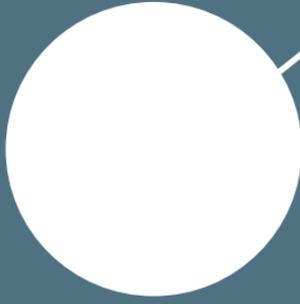
SECURE YOUR WASTE

All containers, dumpsters or enclosures must be bear-resistant.

OR

Waste must be stored in a house, garage, shed or other structure.

Storage requirements are available at www.boulderwildlifeplan.net. Waste haulers will provide details about the options and services.



Secure Trash Regulation Zone

The ordinance applies to all properties west of Broadway to the western city limits, south of Sumac Avenue to the southern city limits.

In summer 2014, implementation of the new storage requirements will begin in central Boulder, including areas where waste is collected from alleys.

The fine for a first offenses is \$250. Code enforcement officers may issue tickets in-person or give citations to property owners via email, mail, or printed notification.



PROTECT BOULDER'S BEARS



NEW CITY OF BOULDER ORDINANCE

Your trash and compost must be secured at all times until it is collected by a trash hauler.
All containers, dumpsters or enclosures must be bear-resistant.



Storage requirements are available at www.boulderwildlifeplan.net.

Waste haulers will provide details about the options and services.

Secure Trash Regulation Zone (Gold)

The ordinance applies to all properties west of Broadway to the western city limits, south of Sumac Avenue to the southern city limits.

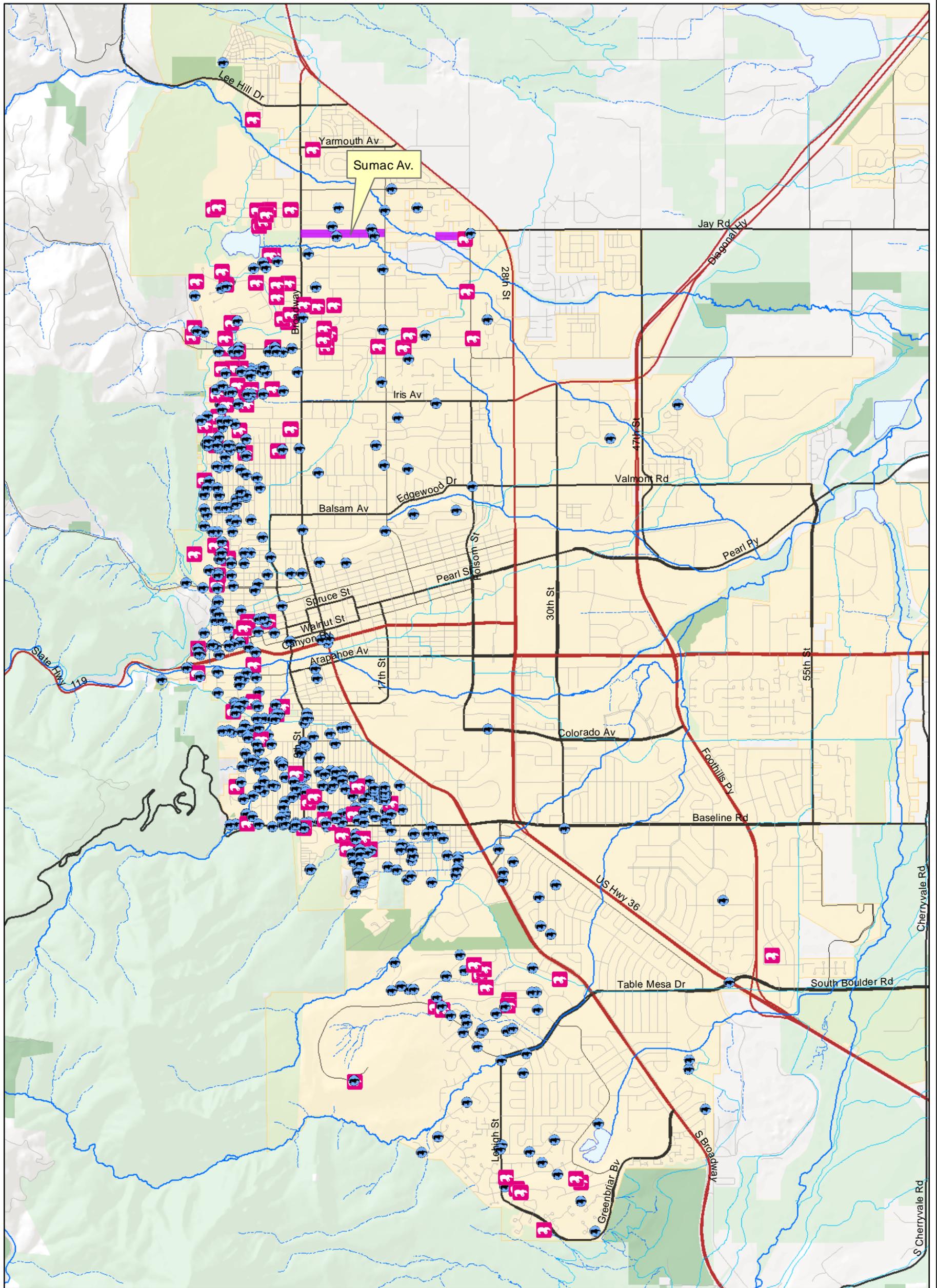
First Trash Implementation Zone (Green)

Implementation of the new storage requirements will begin in summer 2014.

The fine for a first offenses is \$250. Code enforcement officers may issue tickets in-person or give property owners citations via email, mail, or printed notification.

Reported Bear Sightings 2009 - 2014

Within City of Boulder Limits



Bear Sightings

Year

2014

2009-2013

Sumac Avenue

Major Lakes

City Limits

Open Space and Mountain Parks Property

Conservation Easement

Fee Property

Miscellaneous Easement

Alley

Highway

Local Street

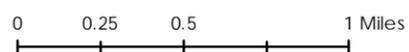
Major Road

Minor Road

Creek

Creek, Intermittent

Ditch



Urban Wildlife Management Plan

PROGRAM UPDATE

To: Environmental Advisory Board
From: Jamie Harkins, Sustainability Coordinator
Date: August 5, 2015
Subject: Update on Boulder Energy Challenge

The purpose of this item is to update the Environmental Advisory Board on the Boulder Energy Challenge grant program, which launched in 2014. The program was developed with the assistance of a Community Working Group to fund innovative solutions to reducing greenhouse gas emissions in Boulder. Following the evaluation of submitted applications and a Community Pitch Night in August 2014, six projects were funded:

- Boulder Housing Partners: Affordable Housing Energy Empowerment (\$70,000)
- eGo Carshare: TripSmart Pilot Project (\$19,100)
- Evolution7 Labs/Smarthome Labs: Solar-Plus-Storage Demonstration Project (\$60,000)
- Lightning Hybrids: Via Hydraulic Hybrid Vehicle (\$27,000)
- Snugg Home: Electric Vehicles with Solar PV and Energy Efficiency (\$86,300)
- Boom Algae: CO2 Capture Algae Greenhouse at Upslope Brewing (\$75,100)

Projects received initial funding in late 2014 after all grant agreements and work plans were finalized. In addition, the grant program is receiving technical support from the Colorado Clean Energy Cluster, a nonprofit economic development organization that supports innovative projects and clean energy businesses. Executive Director Lisa Rephlo has attended check-in meetings with three of the more technical projects, including Evolution7 Labs/Smarthome Labs, Snugg Home and Boom Algae. In addition to providing technical expertise and project advice, she can also connect the projects with additional resources to support their efforts.

PROJECT UPDATES

Boulder Housing Partners: In the last update on this project it was communicated that installation of the eGauge electrical metering hardware had begun, with the equipment already installed at the control site Madison Apartments. However soon after that occurred the installation stopped as Boulder Housing Partners management decided to renovate a third of their property portfolio, including properties that are a part of this project. The installation of eGauge hardware is expected to continue in the third quarter of 2015, with the project now completing at the end of the second quarter 2016.

eGo Carshare: The eGo Carshare team has begun the process of providing one-on-one transportation advising sessions, and continuing to gather participants using the intake survey. Out of the 50 consultations included in this project, they are targeting their outreach so that approximately one third of the participants will be eGo Carshare members, one third will be residents in Boulder Housing Partners properties, and one third will reside in the Dewey to Alpine neighborhood. The project was delayed due to staff turnover at eGo Carshare and weather, and the project end date may need to be extended in order to track participants for a full six months and issue the final report.

Evolution7 Labs/SmartHome Labs:

Residential Sites: Four residential home test sites, two more than is required in the grant agreement, are in various stages of having all components in place for the project. Additional prospective residences have also expressed interest. An exciting development includes the use of several repurposed Nissan Leaf electric car batteries that were removed from cars by Nissan but still have plenty of power for a home. Finally, the HOMER energy model that will be used in the test sites is in its final stages of design.

Commercial Site: The City of Boulder owned commercial building that is also being set up as a test site is progressing as well. The final piece of equipment that needs to be purchased, the Mango box, is currently being obtained and will then be installed. The project team already has access to the energy management account, so once all technology is installed they can move on to the next phase of the project.

Lightning Hybrids: The installation of the hydraulic hybrid system on a Via transport bus was completed in late February and has been on the road ever since. The project is now in the assessment phase, with Lightning Hybrids tracking fuel economy data to measure the system's performance.

Snugg Home: The Snugg Home team continues to market the project concept and recruit participants into the process, interacting with 76 parties so far. They are using the input from the early participants to alter and continue developing the software model that will be used with the other program participants. Several residences are close to completion, combining energy efficiency measures, solar PV, and an electric car, and five more are getting close to completion. Over forty leads are in the pipeline as well. Lessons learned to date include that people are very busy and get overwhelmed, but once they find they time they are responsive and interested in exploring the concept. It is time consuming to gather bills and coordinate between all the parties, including participants, contractors, and lenders. Getting consistent contractor focus to achieve good customer service can also be a challenge.

Boom Algae (formerly Superior Ecotech): The team had to make some significant modifications to the original project proposal, mainly the relocation of the algae greenhouse from the roof of

Upslope Brewing to a site on the ground. This was mainly due to incorrect information about the strength of the roof and other accessibility issues. The team is currently working with the City of Boulder Planning and Development Services to locate the greenhouse on the ground on a site that will work with the property's setbacks and other parameters. Once the location is set the team will apply for a building permit and the greenhouse will be constructed. This change of location and approval process could extend the project past the original deadline. The team has also made improvements to the greenhouse technology to make the entire process more efficient and sustainable.

NEXT STEPS

Staff will continue to hold project status meetings with all teams, and will be featuring footage of project milestones on Channel 8 as they occur. The original plan was for all projects to be completed in the 4th quarter of 2015, at which time the grant program would be evaluated and any program modifications made before the next grant cycle was launched in 2016. Given the significant delays in several projects, staff will have internal discussions in the coming months about how to move forward and if it is necessary to wait for all projects to complete before re-launching the program.

**Environmental Advisory Board (EAB)
Agenda Items (January-December 2015)**

STAFF CALENDAR

January 7 Meeting

Public Hearings	Staff
1. ZWSP Work Plan, Community Engagement, Action Plan and on-going ZW program enhancements	Kara Mertz, Environmental Action Project Manager, LEAD/Jamie Harkins, Business Sustainability Specialist, LEAD

Discussion items	Staff
1. Prepare for Board Retreat	Brett KenCairn

NFCH due by 4 pm on Tues, Dec 23 (for Sunday, Dec 28 and Jan 4 paper)
Materials due by **noon on Friday, Jan 2**, emailed to EAB by 3:30 pm
Wednesday Jan 7 - PPTs for meeting due to **Juliet Bonnell** by 4:00 p.m.

January 21 Joint Board Meeting to discuss AMPS

February 4 Retreat

NFCH due by 4 pm on Wednesday, Jan 21 (for Sunday, Jan 25 and Feb 1 paper)
Materials due by **noon on Friday, Jan 30**, emailed to EAB by 3:30 pm
Wednesday Feb 4 - PPTs for meeting due to **Juliet Bonnell** by 2:00, Retreat @ 4 pm

Discussion items	Staff
1. Debrief 2014 Board Accomplishments: successes and lessons learned	Heather/Brett KenCairn
2. Debrief of 2015 City Council Priorities and staff work plan	Susan Richstone
3. Operation issues: Review of Board bylaws and board roles	Heather/All
4. 2015 Board Priorities in relation to Council Priorities and the 2015 Work Plan	Group Discussion
5. Review draft 2015 board calendar	Brett KenCairn

March 4 Meeting (M. Abbott and S. Morgan will be absent)

NFCH due by 4 pm on Wednesday, Feb 18 (for Sunday, Feb 22 and March 1 paper)
Materials due by **noon on Friday, Feb 27**, emailed to EAB by 3:30 pm
Wednesday, March 4 - PPTs for meeting due to **Juliet Bonnell** by 4:00, Meeting @ 6 pm

*Retreat f/u items: citizen email response protocol

Public Hearings	Staff
Commercial & Industrial Energy Efficiency Ordinance Update	Kendra Tupper and Elizabeth Vasatka, LEAD

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Discussion items	Staff

Old Business Updates:

- Boulder Energy Challenge update

April 1 Meeting

NFCH due by 4 pm on Wednesday, March 18 (for Sunday, March 22 and 29 paper)
 Materials due by **noon on Friday, March 27**, emailed to EAB by 3:30 pm
 Wednesday, April 1 - PPTs for meeting due to **Juliet Bonnell** by 4:00, Meeting @ 6 pm

Public Hearings	Staff
Neonic Resolution	Rella Abernathy, CP&S

Discussion items	Staff
Municipalization Update	Heather Bailey, Energy Future

Old Business Updates:

- Plastic Bag ordinance results

Monday, April 27 Joint Meeting with PRAB at 6 p.m. at 3170 Broadway, North Boulder Rec Center to discuss Emerald Ash Borer (coordinate with Sally Dieterich) – CANCELLED!!!

May 6 Meeting – Morgan Lommele absent

NFCH due by 4 pm on Wednesday, April 22 (for Sunday, April 26 and May 3 paper)
 Materials due by **noon on Friday, May 1**, emailed to EAB by 3:30 pm
 Wednesday, May 6 - PPTs for meeting due to **Juliet Bonnell** by 4:00, Meeting @ 6 pm

Public Hearings	Staff

Discussion items	Staff
Greenhouse Gas Inventory Update	Elyse Hottel

Old Business Updates:

- Proposed ZW ordinance (and request for letter of support for ordinance from EAB to share with council)
- Board Protocol for Responses to Public Emails

June 3 Meeting – Steve Morgan absent

NFCH due by 4 pm on Wednesday, May 20 (for Sunday, May 24 and 31st paper)
 Materials due by **noon on Friday, May 29**, emailed to EAB by 3:30 pm
 Wednesday June 3 - PPTs for meeting due to **Juliet Bonnell** by 4:00, Meeting @ 6 pm

Public Hearings	Staff
1. Engagement Strategies re: Municipalization and Climate	Sarah Huntley, Communications Lisa Smith, Communications
2. Climate Commitment	Brett KenCairn, Senior Environmental Planner, CP&S
3. Resilience	Greg Guibert, Chief Resilience Officer and Brett KenCairn, Senior Environmental Planner, CP&S

Discussion items	Staff

July 1 Meeting

NFCH due by 4 pm on Wednesday, June 17 (for Sunday, June 21 and 28 paper)
 Materials due by **noon on Friday, June 26**, emailed to EAB by 3:30 pm
 Wednesday July 1 - PPTs for meeting due to **Sandy Briggs** by 4:00, Meeting @ 6 pm

Public Hearings	Staff

Discussion Items	Staff
A. EAB Rules & Roles	Brett KenCairn/Steve Morgan
B. Climate Commitment	Brett KenCairn

August 5 Meeting

NFCH due by 4 pm on Wednesday, July 22 (for Sunday, July 26 and August 2 paper)
 Materials due by **noon on Friday, July 31**, emailed to EAB by 3:30 pm
 Wednesday August 5 - PPTs for meeting due to **Sandy Briggs** by 4:00, Meeting @ 6 pm

Public Hearings	Staff

Discussion items	Staff
1. Mid-year check-in	Brett KenCairn
2. Building Performance Ordinance	Kendra Tupper

Old Business/ Updates:

- Emerald Ash Borer Update
- Bear-Proof Receptacle Ordinance
- Boulder Energy Challenge

Kathleen Alexander
Valerie Matheson (written update)
Jamie Harkins (written update)

September 2 Meeting

NFCH due by 4 pm on Wednesday, August 19 (for Sunday, August 23 and 30 paper)
Materials due by **noon on Friday, August 28**, emailed to EAB by 3:30 pm
Wednesday September 2 - PPTs for meeting due to **Sandy Briggs** by 4:00, Meeting @ 6 pm

Public Hearings	Staff
1.	

Discussion items	Staff
1. BVCP Update	Lesli Ellis
2.	

October 7 Meeting

NFCH due by 4 pm on Wednesday, September 23 (for Sunday, September 27 and October 4 paper)
Materials due by **noon on Friday, October 2**, emailed to EAB by 3:30 pm
Wednesday October 7 - PPTs for meeting due to **Sandy Briggs** by 4:00, Meeting @ 6 pm

Public Hearings	Staff
1.	

Discussion items	Staff
1.	
2.	

November 4 Meeting

NFCH due by 4 pm on Wednesday, October 21 (for Sunday, October 25 and November 1 paper)
Materials due by **noon on Friday, October 30** emailed to EAB by 3:30 pm
Wednesday November 4 - PPTs for meeting due to **Sandy Briggs** by 4:00, Meeting @ 6 pm

Public Hearings	Staff
1.	

Discussion items	Staff
1.	
2.	

3.	
4. Priorities/Letter to Council Discussion	

December 2 Meeting

NFCH due by 4 pm on Wednesday, November 18 (for Sunday, November 22 and 29 paper)

Materials due by **noon on Friday, November 27**, emailed to EAB by 3:30 pm

Wednesday December 2- PPTs for meeting due to **Sandy Briggs** by 4:00, Meeting @ 6 pm

Public Hearings	Staff
1.	
2.	

Discussion items	Staff
1. Priorities/Letter to Council Discussion	
2.	

Items to follow up on: