

# LARIMER COUNTY



# ENVIRONMENTAL AND SCIENCE ADVISORY BOARD



## 2020 Annual Report



January 2021

Board of County Commissioners:

This annual report outlines the Environmental and Science Advisory Board's activities in 2020 and sets our general goals and direction for 2021.

Despite the challenges with the coronavirus pandemic, the ESAB continued to work on important topics of discussion that included the County's Oil and Gas regulations, the Land-Use Code update, the Halligan Reservoir expansion project, and the Climate Smart Larimer County Framework. The Board also continued to participate in discussions on air quality and ozone non-attainment, as well as several other topics of interest.

Additional information about the Advisory Board, including full minutes for its meetings, is available on the County's website at:

<https://www.larimer.org/boards/environmental-and-science-advisory-board>.

We would like to acknowledge County staff for their continued help and commitment to sound environmental management. In 2020, representatives from the Department of Natural Resources attended a meeting to assist and inform members of the Advisory Board. Most of our meetings were held virtually via Zoom webinars.



We hope that the feedback we provided was useful for the County. Please feel free to contact me or any of our members if you would like to discuss specific issues in greater detail.



Handwritten signature of Jim Gerek in blue ink.

Jim Gerek, Chair for 2020

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**2020 ANNUAL REPORT OF THE LARIMER COUNTY  
ENVIRONMENTAL AND SCIENCE ADVISORY BOARD**

**January 2021**

**I. INTRODUCTION**

The Larimer County Commissioners established the Environmental Advisory Board in 1993. The Board consists of up to 12 at-large members, appointed by the County Commissioners. The name of the board was changed to the Environmental and Science Advisory Board (ESAB) in 2013.

The primary role of the Board is to advise the Board of County Commissioners and appropriate County departments on environmental and science-related issues that affect Larimer County. Items considered by the ESAB come from the Commissioners, staff, the community and our own members.

The Advisory Board typically meets on the second Tuesday of each month and on an as-needed basis for special work sessions and subcommittees with focused initiatives. The first agenda item of each meeting is devoted to hearing public comments about environmental issues. The list of invited guest speakers that attended the ESAB meetings in 2020 is presented in Section VI of this report.

Important topics and actions considered by the Advisory Board are noted in Section II. Section III outlines the status of issues related to its recommendations. The actual written correspondence provided by the Board is included in the Appendix.

The ESAB uses an issue index to keep track of the various issues that the board monitors and addresses. This index is updated monthly.

John Kefalas served as the County Commissioner Liaison to the Environmental and Science Advisory Board for 2020 and Shelley Bayard de Volo, from the Engineering Department, remained as the staff facilitator throughout 2020.

## II. DISCUSSION TOPICS IN 2020

MONTH	TOPICS (Issue number)
<b>January</b>	<ul style="list-style-type: none"> <li>● Conservation Outcomes for Larimer County Owned Agricultural Lands               <ul style="list-style-type: none"> <li>○ Meegan Flenniken, Department of Natural Resources, Larimer County</li> </ul> </li> <li>● Final comments - Halligan Reservoir Expansion draft EIS and City of Fort Collins Conceptual Mitigation Plan (6.02c)               <ul style="list-style-type: none"> <li>○ Michael Lee Jones</li> </ul> </li> <li>● Finalize 2019 Annual Report, 2020 Workplan               <ul style="list-style-type: none"> <li>○ Jim Gerek</li> </ul> </li> </ul> <p><i>UPDATES</i></p> <ul style="list-style-type: none"> <li>● Commissioner's Update</li> <li>● Oil &amp; Gas regulations</li> <li>● Land Use Code - Assessment</li> </ul>
<b>February</b>	<ul style="list-style-type: none"> <li>● Wolf Ecology and Management in Colorado (18.05)               <ul style="list-style-type: none"> <li>○ Dr. Barry Noon and Dr. Kevin Crooks, Department of Fish, Wildlife, and Conservation Biology, Colorado State University</li> </ul> </li> </ul> <p><i>UPDATES</i></p> <ul style="list-style-type: none"> <li>● Commissioner's Update</li> <li>● Oil &amp; Gas regulations – update</li> <li>● Climate Smart Larimer County</li> <li>● Halligan Wrap-up</li> <li>● Environmental Stewardship Awards Oil &amp; Gas regulations</li> </ul>
<b>March</b>	<ul style="list-style-type: none"> <li>● Water Quality Impacts from PFAS Chemicals from Fire-fighting Foams &amp; Other Manufacturing (6.06)               <ul style="list-style-type: none"> <li>○ David Dani, Emerging Contaminants Coordinator, CO Dept of Health and Environment</li> </ul> </li> </ul> <p><i>UPDATES</i></p> <ul style="list-style-type: none"> <li>● Commissioner's Update</li> <li>● Oil &amp; Gas regulations – Planning Commission update</li> <li>● Environmental Stewardship Awards</li> <li>● Climate Smart Larimer County</li> <li>● Coronavirus update</li> </ul>
<b>April</b>	<ul style="list-style-type: none"> <li>● CANCELLED</li> </ul>
<b>May</b>	<ul style="list-style-type: none"> <li>● CANCELLED</li> </ul>

<b>MONTH</b>	<b>TOPICS (Issue number)</b>
<b>June</b>	<ul style="list-style-type: none"> <li>● Environmental Stewardship Awards (8.01) <ul style="list-style-type: none"> <li>○ Ally Little, David Lehman, Michael Jones, Daniel Beveridge</li> </ul> </li> <li>● NISP 1041 Permit (6.02a) <ul style="list-style-type: none"> <li>○ Michael Lee Jones</li> </ul> </li> </ul> <p><i>UPDATES</i></p> <ul style="list-style-type: none"> <li>● Climate Smart Larimer County</li> <li>● Internal Sustainability Process</li> <li>● Membership Transition</li> <li>● State Air Quality Rules</li> <li>● Commissioner's Update</li> </ul>
<b>July</b>	<ul style="list-style-type: none"> <li>● New Members Introductions <ul style="list-style-type: none"> <li>○ Jim Gerek</li> </ul> </li> <li>● Greenfields in O&amp;G Regulations (10.07) <ul style="list-style-type: none"> <li>○ Jim Gerek</li> </ul> </li> </ul> <p><i>UPDATES</i></p> <ul style="list-style-type: none"> <li>● Environmental Stewardship Awards</li> <li>● Issue Coordinator Assignments</li> <li>● Halligan Reservoir</li> <li>● Climate Smart Larimer County</li> <li>● Commissioner's Update</li> </ul>
<b>August</b>	<ul style="list-style-type: none"> <li>● CANCELLED</li> </ul>
<b>September</b>	<ul style="list-style-type: none"> <li>● CANCELLED</li> </ul>
<b>October</b>	<ul style="list-style-type: none"> <li>● Climate Smart Larimer County (19.02) <ul style="list-style-type: none"> <li>○ Kirk Longstein, David Lehman</li> </ul> </li> <li>● Land Use Code Update 2020 (1.01) <ul style="list-style-type: none"> <li>○ Jim Gerek</li> </ul> </li> </ul> <p><i>UPDATES</i></p> <ul style="list-style-type: none"> <li>● Future Avoided Cost Explorer (FACE: Hazards)</li> <li>● Colorado Public Comment Draft of GHG Pollution Reduction Roadmap</li> <li>● Issue Coordinator Assignments</li> <li>● Follow-up to the Oil/Gas Greenfield definition and policy guidance</li> <li>● Commissioner's Update</li> </ul>

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**MONTH****TOPICS (Issue number)**

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**November**

- Future Avoided Cost Explorer (FACE: Hazards) (5.01)
  - Bill Szafranski, Ryan Spies, Graeme Aggett, Cam Wobus, Water and Environmental Resources Division, Lynker Tech
- State Ozone and Air quality rules (9.02)
  - Katrina Winborn-Miller

*UPDATES*

- Issue Coordinators
- Platte River Power Authority Integrated Resource Plan
- Process for 2021 officer elections
- Commissioner's Update

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**December**

- Issue Index – update and review
- 2020 Annual Report, 2021 Workplan
- 2021 Board Officer Elections

*UPDATES*

- Upcoming BoCC worksession for Climate Smart Larimer County
  - Commissioner's Update
-

**III. STATUS OF ESAB RECOMMENDATIONS IN 2020**

The table below outlines the formal recommendations made by the Advisory Board and provides a brief statement about the status of those recommendations. As an advisory board, the ESAB’s written recommendations are submitted to the Board of County Commissioners or a requesting County department. The actual correspondence is shown in the Appendix.

Issue	Principal ESAB Actions and Recommendations	Status
Halligan Reservoir Expansion Project	ESAB members reviewed the project’s dEIS and the conceptual mitigation plan. Primary comments were presented to the BoCC in worksession January 15 by Michael Lee Jones and Jim Gerek.	The comments memo was provided to the BoCC, who transmitted it, along with a cover letter, to the US Army Corps of Engineers. Comments are presented in Appendix A.
County Oil and Gas Land Use Regulations	An ESAB subcommittee reviewed and developed comments on the County’s Oil and Gas regulations (section 17 of the Land Use Code). Comments were approved by the entire ESAB and then passed onto Matt Lafferty for consideration. Katrina Winborn-Miller presented the comments to the BoCC at their public hearing April 6 <sup>th</sup> .	ESAB comments were received by Planning staff and considered in development of the regulations. Comments are presented in the Appendix B.
Land Use Code Update 2020	The ESAB focused on the Development Standards section of the Land Use Code update. The ESAB agreed that the updates were an improvement, but members had comments on several specific areas. Member’s comments were summarized into a memo that was submitted to Matt Lafferty, Planning Department.	ESAB comments were received by Planning staff and considered in creating the final version. Comments are presented in the Appendix C.
Climate Smart Larimer County Framework	ESAB members participated on the CSLC staff team, developed the GHG inventory, and helped draft the framework document. The full ESAB reviewed the draft framework document and provided extensive comments to ensure the use of sound science and provide clarity. Comments were submitted to the CSLC team and Commissioner Kefalas.	ESAB comments were received by the CSLC team and incorporated into the final framework document. Comments are presented in the Appendix D.  The entire CSLC team, including Kirk Longstein, presented the framework to the BoCC in worksession December 9 <sup>th</sup> .

**IV. ONGOING COMMITTEE WORK**

The table below outlines the ongoing committee work in which the ESAB participates and contributes.

<b>Issue</b>	<b>Principal ESAB Activities</b>	<b>Active ESAB members</b>
Climate Smart Larimer County: Recommendations for Future Action	Participates on the staff-level team. Is developing the County-wide greenhouse gas inventory and assisting with strategy and development of the plan.	Kirk Longstein John Bleem
Environmental Responsibility Policy and Sustainability Team	Participates on the staff-level team. Assisting with strategy and implementation of the policy.	Jim Gerek Kirk Longstein

## V. ENVIRONMENTAL STEWARDSHIP AWARDS

Each year, the Environmental & Science Advisory Board and the Board of County Commissioners recognize significant environmental efforts of county residents, businesses, organizations and/or agencies by awarding the Larimer County Environmental Stewardship Awards. These Environmental Stewardship Awards were first issued by Larimer County in 1995.

The board looks for individual or group activities that are innovative and proactive, and that demonstrate exceptional effort and concern for the stewardship of the environment. Projects can be either completed one-time efforts, or ongoing activities. Both types are judged on their degree of difficulty and the results they achieve. Each year the Environmental and Science Advisory Board solicits nominations, reviews them and makes recommendations for the awards to the Board of County Commissioners.

In 2020, the ESAB reviewed five nominations, of which four provided good examples of the important activities local organizations are engaged in to protect and improve our environment. The recommended projects produced positive environmental results locally and provided good examples of what others can do. These four were recommended to the BoCC for consideration of the award and were ultimately presented with Stewardship Awards at a public ceremony by the BoCC. The 2020 awardees were:

### Wildland Restoration Volunteers

This non-profit volunteer organization has been active since 1999. Their projects focus on restoring trails and riparian habitats, removing noxious weeds, building artificial beaver dams and other activities to restore rivers and streams. Their mission is to foster a community spirit of shared responsibility for the stewardship and restoration of our public lands.

They work on projects across Colorado, but one important project in Larimer County involved the Young Gulch Trail Restoration Project in the Poudre Canyon. The Trail was significantly damaged following the High Park Fire in 2012 and then further damaged by the 2013 floods, both of which made the trail impassable. The trail restoration project involved 821 volunteers working on 51 separate projects over a five-year period (2016-2019). They repaired 42 stream crossings and miles of trail. The trail opened to the public Dec. 13<sup>th</sup> 2019.

This project provides an example of the significant commitment to restoration of important outdoor places and habitats in Larimer County. Volunteers gain significant education opportunities that build lifelong skills and relationships.

### City of Fort Collins Water Treatment Facility

In the effort to meet their Climate Action Goals to reduce greenhouse gas emissions, the City of Fort Collins installed a microhydroelectric generator that provides 20% of their water treatment facility's electrical demand. The generator provides a direct source of renewable energy, and as a result improves air quality in our community by reducing greenhouse gas emissions. This project exemplifies an innovative technology that is typically only seen in larger scale applications. The City's efforts toward conversion to renewable energy provides a significant pollution-reduction benefit to the residents of Larimer County.

### Kids in Nature

The mission of the Kids in Nature program of the Poudre Wilderness Volunteers is to connect kids with nature and foster environmental awareness, land stewardship and education of the importance of our

public lands. The program has been active since 2007, and in 2019 volunteers served more than 400 children, parents, and counselors. What makes their programs special is the fact that they provide opportunities for at-risk kids who don't typically get to experience outdoor activities. Some of the participants have never been outside the city environment, so the opportunity to learn about the natural world can have profound and positive impacts on a child's wellbeing. The kids get to participate in four programs

- 1) Mammals in the mountains
- 2) We need trees
- 3) Aquatic macro-invertebrates (bugs)
- 4) Fire Awareness

The Kids in Nature program is the only one of its kind in Larimer County, and they provide important environmental stewardship and education for our youth.

#### Xanterra Travel Collection

Within Rocky Mountain National Park, toward the top of Trail Ridge Road, is the historic Alpine Trail Ridge Store and Café. Xanterra started operating the Trail Ridge store in 2007, and immediately installed a small 9-panel solar array, which provided 1.78 kw of the store's electricity. By 2018, they increased their array to 153 solar panels that together provides 56 kw of electricity and includes a battery backup system. The solar array provides 90% of their electrical needs and the system replaces the diesel-powered generator, which annually used 5500 gal of fuel. As a result, the solar array eliminates 56 metric tons of the CO2 emissions and saves \$30,000 in electricity costs – annually!

In addition to their use of renewable solar energy, the Xanterra Travel Collection exhibits environmental stewardship in the following ways:

- 42% of gift shop offerings are sourced from Colorado or adjacent states
- 36% of food and beverage purchases for the Café are from local vendors
- They conserve water through the use of low-flow fixtures throughout their facilities
- They conserve energy through the use of LED lights in the store and all other facilities
- They provide education of their sustainability efforts through interactive signage throughout the store and café

The Xanterra Travel Collection's sustainability program at the Trail Ridge Store and Café provides a significant reduction in particulate and greenhouse gas emissions in an ecosystem that is highly vulnerable to such pollutants. Their work is contributing to the conservation of this important alpine resource that so many people get to enjoy.

## **VI. INVITED SPEAKERS AND GUESTS FOR MONTHLY MEETINGS**

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Month	Person	Speaker's Topic
January	Meegan Flenniken, Department of Natural Resources, Larimer County.	Conservation Outcomes for Larimer County Owned Agricultural Lands
February	Dr. Barry Noon and Dr. Kevin Crooks, Department of Fish, Wildlife, and Conservation Biology, Colorado State University	Wolf Ecology and Management in Colorado
March	David Dani, Emerging Contaminants Coordinator, CO Dept of Health and Environment	Water Quality Impacts from PFAS Chemicals from Fire-Fighting Foams & Other Manufacturing
April	Cancelled	
May	Cancelled	
June	No Guests	
July	No Guests	
August	Cancelled	
September	Cancelled	
October	No Guests	
November	Bill Szafranski, Ryan Spies, Graeme Aggett, Cam Wobus, Water and Environmental Resources Division, Lynker Tech	Future Avoided Cost Explorer (FACE: Hazards)
December	No Guests	

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## **VII. ENVIRONMENTAL AND SCIENCE ADVISORY BOARD MEMBERS**

Board Member	Status
Richard Alper	Retired June 2020
Rodger Ames	Appointed July 2020
Daniel Beveridge	Active
John Bleem	Appointed July 2020
Richard Conant	Retired June 2020
Jim Gerek	Active
Michael Lee Jones	Retired June 2020
Allyson Little	Active
Kirk Longstein	Active
Evelyn King	Retired June 2020
David Lehman	Active
George Rinker	Active
Travis Rounsaville	Appointed July 2020
Catriona Smith	Appointed July 2020
Katrina Winborn-Miller	Active
Christopher Wood	Active

Note: This list includes all Advisory Board members who served during the year. At any given time, the Board consists of a maximum of twelve members.

## VIII. YEAR 2021 WORKPLAN

This workplan provides information about the general direction the Environmental and Science Advisory Board considers taking in 2021. Because conditions or priorities in the County can change, a considerable degree of flexibility needs to be maintained.

**Overall:** The ESAB strives to inform, and be informed about, County government-related policies, decisions, issues and actions that have environmental implications. To that end the ESAB will:

1. Serve as an informational resource that provides science-based recommendations to the Board of County Commissioners and County departments, points out areas of uncertainty and suggests appropriate ways to address them;
2. Identify environmental and science-based issues and opportunities for the consideration of the County Commissioners so that the BoCC can be proactive in their responsibilities to the environment. To that end, the ESAB will solicit from its membership ideas with respect to current environmental issues, and develop a consensus of the most relevant topics to be forwarded to the BoCC;
3. Develop and maintain an attitude of trust and respect among the ESAB, the Commissioners, County departments and other boards and commissions;
4. Foster a cooperative working relationship with local and state organizations who are connected to topics the ESAB considers as part of their Issue Index; and
5. Provide updates on current environmental topics to enhance the base of common knowledge of its members.

### Response to Referrals or Requests:

1. Respond in a timely manner to issues raised by the Board of County Commissioners, County departments and ESAB members; and
2. Facilitate the response to citizen comments received by the Advisory Board in cooperation with the Board of County Commissioners and appropriate County departments.

### Current Environmental Topics:

1. Consider the regional implications of important environmental issues and consider ways to address those issues across local jurisdictional boundaries. Examples of current issues include planning for ozone air quality compliance, enhancement of forest and watershed health, and mitigating impacts of hydraulic fracturing in oil/gas development;
2. Monitor important water issues including watershed planning and significant proposed water projects. The Northern Integrated Supply Project (NISP), the Halligan Reservoir and Milton-Seaman Reservoir expansion projects are examples of current water issues;

3. Monitor solid waste management issues such as landfill operations, recycling and hazardous waste disposal. Follow the Solid Waste Policy Council as it develops facilities and policies for the next 10-50 years;
4. Monitor the status of conventional, renewable and alternative energy development and, as requested, consult with County departments and the BoCC regarding potential environmental implications. Wind energy, solar energy, and oil and gas development are current topics of interest;
5. Consider important natural or ecological impacts associated with large-scale events such as wildfire, floods, droughts, climate change and biological events (i.e., emerald ash borer, pine bark beetle). Promote the incorporation of resiliency, mitigation, and recovery into planning and emergency management of such large-scale events;
6. Participate in creating and revising major County policies and plans, including 2021 revisions to the County's Land Use Code and a new Climate Smart Larimer County: Recommendations for Future Action. Also, support implementing the County's revised Environmental Responsibility Policy as part of the County's 2019-2023 Strategic Plan; and
7. Inform County leadership of the integration of diversity, equity, and inclusion with all above topics

#### Stewardship Awards:

1. Coordinate the County's annual Environmental Stewardship Awards in partnership with the Board of County Commissioners.

#### Communications and Process:

1. Maintain open communications with the County Commissioner liaison assigned to the ESAB in order to facilitate dialogue about environmental concerns or issues identified by either the BoCC or the Advisory Board;
2. Use the Commissioners' Work Sessions and Administrative Matters meetings, as appropriate, for communication on important environmental and science issues as they arise;
3. Provide knowledgeable ESAB members, as requested, to participate with *ad hoc* County Task Forces and Stakeholder Groups addressing topics with environmental and/or science implications; and
4. Continue the practice of assigning interested ESAB members monitoring tasks for select environmental issues, and then providing periodic updates to the full Advisory Board.

## **APPENDIX: WRITTEN CORRESPONDENCE**

These documents were prepared by the Environmental and Science Advisory Board as part of their activities in 2020:

- January 22<sup>nd</sup>, 2020. Comments on the Halligan Reservoir expansion project dEIS and Conceptual Mitigation Plan presented to the Board of County Commissioners, and the subsequent transmittal letter from Commissioner Steve Johnson to the US Army Corps of Engineers.
- April 1<sup>st</sup>, 2020. Comments on the County's Oil and Gas regulations provided through email to the Board of County Commissioners. Letter with comments, and summary of the ESAB testimony presented at the BoCC public hearing.
- October 14<sup>th</sup>, 2020. Comments on the Land Use Code update provided via email to Matt Lafferty and Lesli Ellis.
- October 16<sup>th</sup>, 2020. Comments on the draft Climate Smart Larimer County Framework provided via shared Google Drive spreadsheet to Commissioner Kefalas and the CSLC team finalizing the document.

APPENDIX A

INSERT

Halligan dEIS  
ESAB comments memo and BoCC transmittal letter



Consent Item -  
BoCC Transmittal of

## LARIMER COUNTY | BOARD OF COUNTY COMMISSIONERS

P.O. Box 1190, Fort Collins, Colorado 80522-1190, 970.498.7010, [BOCC@Larimer.org](mailto:BOCC@Larimer.org), [Larimer.org](http://Larimer.org)

Mr. Cody Wheeler  
U.S. Army Corps of Engineers  
Denver Regulatory Office  
9307 S. Wadsworth Blvd.  
Littleton, CO 80128

January 22, 2020

Dear Mr. Wheeler:

Larimer County has an appointed Environmental and Science Advisory Board (ESAB) whose role is to advise the Board of County Commissioners and appropriate County departments on environmental and science-related issues that affect Larimer County. Membership on this advisory board is reflective of the diverse geographical, demographic, technical and non-technical backgrounds of the Larimer County community.

The Environmental and Science Advisory Board has reviewed the Halligan Water Supply Project Draft Environmental Impact Statement at a technical level and submitted the attached comments to the Board of County Commissioners at a work session on January 15, 2020. Additionally, our Natural Resources Department staff completed their own internal review and expressed that they had a few minor comments that they would like included for the public record.

We believe you will find this information helpful and are therefore passing on the comments of the ESAB and Natural Resources staff to be considered as part of your environmental review process.

Sincerely,

Steve Johnson  
Board Chair  
Larimer County Board of County Commissioners

Also sent via email to: [NWO.HalliganEIS@usace.army.mil](mailto:NWO.HalliganEIS@usace.army.mil)

Attachments:

ESAB Halligan Water Supply DEIS Comments  
Department of Natural Resources DEIS Comments



January 16, 2020

Commissioner Johnson, Chair  
Commissioner Kefalas, and  
Commissioner Donnelly:

Subject: Halligan Water Supply DEIS Comments

Dear Gentlemen:

Over the past six weeks the Larimer County Environmental and Science Advisory Board (ESAB) has been reviewing the Draft Environmental Impact Statement (DEIS) (dated November 2019) and Conceptual Mitigation Plan (dated October 2019) for the City of Fort Collins' proposed Halligan Water Supply Project. We are pleased to present these brief comments to you for your consideration.

#### Methodology

A subcommittee of our Board, along with several other Board members, reviewed the documents – primarily focusing on key sections for the Proposed Action. These individuals have unique technical skills, and some have worked to author other EISs, serve as project leads for projects requiring EISs, and review numerous EISs. We primarily focused on whether the document is: complete; compliant with current NEPA guidance; well-reasoned; and uses sound scientific principles. A number of potential areas of concern were identified within the DEIS, and then were subsequently prioritized by the subcommittee before being presented at the regular January 2020 ESAB meeting. After full discussion at that meeting two significant areas of concern were identified, and are described below.

#### Better Integrate Climate Change Impacts

The first, and most important concern, is that there is no integration of climate change impacts. In Chapter 4, Affected Environment, impacts from climate change need to be clearly stated, in particular for wetlands, riparian areas, and the Preble's Meadow Jumping Mouse. We believe that scientific data-driven assumptions can be made to facilitate the description of the types and magnitudes of climate change impacts. The North Fork watershed, as described in the Larimer County Comprehensive Plan, will most likely be adversely affected by climate change in several ways and those impacts need to be included in Chapter 4 of the EIS. In Chapter 5, Cumulative Effects, impacts from climate change will occur for all project alternatives, but possibly in different ways. This should be made clear. Climate change is certainly going to increase the frequency and intensity of wildfires in the Poudre River watershed between now and 2065. This important landscape-level effect needs to be included in the discussion of cumulative effects. In the Conceptual Mitigation Plan, efforts to mitigate climate change





effects need to be plainly stated and quantified to the extent possible. The compensation ratios commonly used to mitigate lost acres of wetlands and Preble's mouse habitat needs to be greater than a typical 1:1 ratio to account for the additional adverse effects from climate change on wetlands and riparian areas around the Halligan Reservoir and in the North Fork drainage.

#### More Current Data Needed

The second significant concern is the insufficient data set used for modeling and predictions in the DEIS. The data set being used, in many circumstances, is outdated in that it ends in 2005. Fourteen years (2006-2019) of available data is not included. The current data set being used includes 19 years, but could be nearly doubled if it took into account these additional 14 years of available data. The current data set is inadequate because it does not include a year of significant rainfall (2013) and some of the warmest years (2017-2019) ever recorded in this area. A larger, more inclusive, data set, particularly one that includes the most recent 14 years, will produce more accurate and reliable results in the EIS.

#### Rationale

The ESAB believes that there is inherent value in a full and fair review of the potential environmental impacts of a project the magnitude of the Halligan Reservoir expansion. Understanding what impacts may occur to the environment of our County is important to our residents, and will be important in making any final decision on this project. We believe it is appropriate to provide input to the Army Corps of Engineers on this DEIS to encourage a better work product that can lead to more informed decisions.

#### Recommendation

The ESAB appreciates the opportunity to provide these comments to you, and hopes that they are ultimately useful in creating a better environmental assessment. We urge you to forward them on to the Army Corps of Engineers by the due date of January 26, 2020.

Should you have any questions or concerns about this letter, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "James M Gerek".

James M Gerek – Chair  
Larimer County ESAB

Cc: S. Bayard de Volo, ESAB Liaison

## APPENDIX B

### INSERT

Oil and Gas regulations  
Email and PDF of letter



4-1-2020 email with  
Letter submission ES



Shelley Bayard de Volo <bayardsh@co.larimer.co.us>

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## ESAB Comments On Proposed O&G Land Use Regulations

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Jim Gerek <jmgerek@frontiernet.net>

Wed, Apr 1, 2020 at 11:42 AM

Reply-To: jmgerek@frontiernet.net

To: John Kefalas <jkefalas@larimer.org>, Tom Donnelly <donnelt@larimer.org>, Steve Johnson <swjohnson@larimer.org>

Cc: Lesli Ellis <ellisk@larimer.org>, Matt Lafferty <mlafferty@larimer.org>, Shelley Bayard de Volo <sbayard@larimer.org>, Richard Alper <rsalperesq@aol.com>

Commissioners:

Please find attached some brief final comments that the Larimer County Environmental & Science Advisory Board would like you to consider prior to adopting County land use regulations for Oil & Gas Facilities at an upcoming meeting.

One of our members is signed up to provide brief oral testimony on behalf of our advisory board, but these written comments allow a more expansive description of our recommendations.

Thank you for allowing us to participate in the process of developing these regulations to protect human health and the environment in our community. Should you have any questions, please feel free to contact me.

Jim Gerek

Chair - Larimer County ESAB



**OG Comments to BoCC Final.pdf**

454K

April 1, 2020

Commissioner Johnson, Chair  
Commissioner Kefalas, and  
Commissioner Donnelly:

Subject: Larimer County Land Use Regulations "New Chapter 17"

Dear Gentlemen:

The Larimer County Environmental and Science Advisory Board (ESAB) has carefully monitored the evolution of the County's proposed land use regulations as they relate to oil and gas operations. And we were pleased to be afforded a representative on the County's Oil & Gas Task Force. We commend the County for taking action to address the safety of future oil and gas development in our community. But prior to taking final action, please consider some additional comments on the current set of draft regulations:

**Clarify Setbacks:** Both zoning district restrictions and facility setbacks are appropriately used in land use planning to provide safe separation of incompatible uses. Overall the ESAB supports the Planning Commission's most recent amendment to Section 17.3 B 1 concerning setbacks. But we recommend that extended setbacks for *high occupancy building units* also be included. In addition, the ESAB recognizes the COGCC's definition of *high occupancy building unit*, but would recommend clearly defining where an oil and gas facility Operator should begin measuring the setback, whether that is the center point of the facility or edge of property. The ESAB also strongly recommends additional language to define an appropriate setback from water bodies, which is not addressed by current COGCC regulations. Water is a very important resource in our County, and it needs to be carefully protected from potential contamination.

**Consider Facility Risk Profiles:** Within the draft regulation, the types of "oil and gas facilities" are not differentiated based on the health and safety risk they provide to the community. Some sites may only include one well head or pump jack; other sites may have 30+ oil/produced water tanks, flares, dehydrators, separators, etc., but all "O&GF" are proposed to be regulated the same. This concern could be addressed by differentiating setbacks and other application requirements based on size, or equipment type, or by requiring a risk based analysis of the subject site safety. The community risk from a site with tanks and dehydrators is significantly higher than the risk from a site with only a single wellhead.





**Harmonize Conditions with Federal and Industry Standards:** In Section 17.3 G of the current draft, the County proposes standards to address Spills and Releases, and requires operators to submit a “Spill Prevention and Containment Plan” with their O&G application. The ESAB recommends the language be changed to “Spill Prevention, Control, and Countermeasure (SPCC) Plan” to match EPA language associated with 40 CFR Part 112 – Oil Pollution Prevention. An SPCC Plan is currently required federally for all sites that have more than 1,320 gallons of oil on site, and the regulation includes a list of very specific requirements that are well understood in the industry. The language, as written in the draft Land Use Code now, does not require anything extensive regarding spills or cleanup and would allow operators to submit a “plan” that does not adequately address an emergency situation. The language in the County regulations should be more specific to indicate that the federal SPCC standards must be met.

Also, in Part 3 of Section 17.3 G the draft regulations state, “Secondary containment shall be required which is capable of holding 125% of the total capacity of on-site containment vessels and storage tanks.” As this is currently written, it is much more strict than EPA or local regulations, so it would likely put existing Operators out of compliance. Current regulations require Operators with an SPCC Plan to have containment that will hold ~110% of the largest vessel in containment. For example, if there are six (6) 400-bbl tanks at a facility, federal SPCC regulations would require secondary containment to hold 440-bbl. It is extremely unlikely that all 6 tanks at a facility would rupture at the same time, so it would be unnecessary to have containment that holds 2,400-bbl. And this extra containment would also require the Operators to take up more space than they do already. This added space for unnecessary containment would have to be considered in Operator right-of-way negotiations and County-regulated setbacks. As the draft regulations are written, they are overly prescriptive for an unlikely scenario.

Thank you for the opportunity to comment and for considering the above recommendations about the proposed regulations. At this point the ESAB is planning on providing oral testimony at the BoCC public hearing. But should that not be practical, we have included a brief summary of our key points at the end of this memo that could be read into the record by County staff.

Should you have any questions, please feel free to contact either of us for clarifications.

Sincerely,

A handwritten signature in black ink that reads "Richard Alper".

Richard S. Alper  
Member – O&G Task Force

A handwritten signature in blue ink that reads "James M. Gerek".

James M Gerek  
Chair – Larimer County ESAB



Cc: Matt Lafferty, Lesli Ellis

**Brief Summary to be read at Board of County Commissioner Meeting:**

- The Larimer County Environmental and Science Advisory Board commends Larimer County for taking action to address the safety of future oil and gas development in our community. And we support the Planning Commission's recent amendments to the draft land use regulations regarding setbacks.
- The ESAB believes that appropriate facility setbacks are critical and should be clarified and extended as described in our full written comments to better protect human life and the environment. Most notably Larimer County should define appropriate setbacks from water bodies, something not addressed by the COGCC.
- The regulations should also differentiate requirements for different types of facilities. A site with 30 oil and produced water tanks, dehydrators, etc., does not provide the same risks to the community as a site with only a single wellhead or pumpjack. Holding those vastly different types of facility to the same standards creates unnecessary regulations for some, but not enough attention and regulation for others.
- To the extent possible, County regulations should be harmonized with existing regulatory concepts already common in the industry. The Section 17.3 G language about spills should match EPA's "Spill Prevention, Control, and Countermeasures Plan" requirements. If it doesn't match this language, it allows a loophole for Operator's to provide a "plan" with no set requirements. Also secondary containment requirements should be made similar to federal standards for oil facilities.

## APPENDIX C

### INSERT

Land Use Code update 2020  
Email, Memo with comments and response to comments



20201014 Email and  
Commenst and resp



Shelley Bayard de Volo <bayardsh@co.larimer.co.us>

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## ESAB LUC 2020 comments

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**Matthew Lafferty** <laffermn@co.larimer.co.us>  
To: Shelley Bayard de Volo <sbayard@larimer.org>  
Cc: Lesli Ellis <ellisk@larimer.org>

Mon, Oct 26, 2020 at 10:12 AM

Thanks Shelley,

I will be providing a response to their comments this week to let them know how and when their comments will be addressed.

Matt

On Mon, Oct 26, 2020 at 10:07 AM Shelley Bayard de Volo <sbayard@larimer.org> wrote:

Hi there,

I realized that I do not believe I ever sent the ESAB's comments on letterhead. So here it is. This document will be included in their Board's annual report.

Thank you for giving the ESAB the opportunity to provide comments.

Shelley

On Wed, Oct 14, 2020 at 10:20 AM Matthew Lafferty <laffermn@co.larimer.co.us> wrote:

Lesli,

Thanks Shelly

Matt

On Wed, Oct 14, 2020 at 8:49 AM Lesli Ellis <ellisk@co.larimer.co.us> wrote:

Hi Shelley - Thanks for sharing the preliminary notes before the final. That will be helpful in getting substantive info to the consultant team.

Cheers,  
Lesli



**Lesli Ellis, AICP CEP**  
Community Development Director

Community Development Department  
200 W Oak St, Fort Collins, 80521 | 3rd Floor  
W: (970) 498-7690  
ellisk@larimer.org | www.larimer.org

On Wed, Oct 14, 2020 at 8:45 AM Shelley Bayard de Volo <sbayard@larimer.org> wrote:

Hi there,

attached are the comments from the ESAB. Our plan is to get this on letterhead memo and signed by the ESAB chair, later today.

Lesli suggested I forward on the actual comments and then send the memo later - so her ya go.

Thank-you for giving the ESAB the opportunity to provide input on this important process.

Shelley

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## MEMORANDUM

**TO:** Matthew Lafferty, Principal Planner

**FROM:** Jim Gerek, ESAB Chair  
David Lehman, ESAB Vice Chair

**DATE:** 10/14/2020

**RE: ESAB comments on pertinent sections of the Land Use Code Update 2020**

In general, the draft Development Standards are an improvement over current versions, providing important reorganizations, as well as additional clarity and alignment. To provide further enhancements the ESAB encourages the following changes:

**4.3.6 Fire Protection** - In the 4.3.6.G *Fire Protection Plans* process for creating a site-specific plan when the more basic fire protection standards cannot be met, hazard and risk could be addressed by adding additional conditions to certain land uses, for example by prohibiting a fuel storage facility in a wildfire overlay zone. Also, special exemptions could be provided where enhanced climate adaptation measures were applied to the site plan such as Fire Resistant Landscaping Standards.

**4.4 Environmental Resource Standards** - Recommend adding to 4.4.2 *Wetlands* some administrative notification process, or enforceable permitting system, to provide oversight for work in and/or around wetlands. The code has many important rules about buffers and what work can and can't be done within a wetland, but there doesn't appear to be any type of enforcement process.

**4.4.3 Hazard Areas** - Recommend adding "flooding" to list of natural hazards in 4.4.3.A *Purpose*, and adding reference to the floodplain standards to be included later in Article 6.

**4.4.3 Hazard Areas** - In 4.4.3.M *Site Design for Wildfire Mitigation* the Site Plan for high hazard areas is left up to the discretion of the applicant and they are only held accountable after the development agreement is signed. The County should proactively adopt "Defensible

space regulations" following the NFPA Home Ignition Zone Checklist which define zones for the removal of vegetation and debris around the structure, and vegetation spacing and treatments to create a buffer between the structure and the surrounding wildlands. This should be a required standard and not left as a loose interpretation by an applicant.

**4.6 Off-Street Parking and Loading** - Recommend adding in 4.6.3.C *Construction Standards* the ability to use permeable pavement such as "permeable pavers", "permeable asphalt" and/or "permeable concrete". Also consider allowing these materials in 4.3.4.A.2.a.ii *Drainage* for stormwater conveyance, in lieu of only specifying concrete curb and gutter systems.

**4.9 Exterior Lighting** - Recommend adding language to 4.9.1 *Purpose* or 4.9.3.E *Light Fixtures* to encourage the general use of "energy-efficient lighting" wherever possible/practical.

**4.10 Air Quality** - Recommend adding additional cross-references to 4.10.6 *Compliance with Air Pollution Control Division Regulations During Operation* regarding compliance with new Larimer County O&G air quality regulations (i.e., Sec. 17.C.3), and to recent AQCC revisions to Regulation Number 7, which apply to new and existing O&G operations, including during pre-production, as well as other state regulations that may be more specific and/or restrictive than Larimer County's regulations.

**10.3 Other Defined Terms** - Recommend adding definition of "AAB" which is used without further definition multiple times in the Development Standards (Agriculture Advisory Board?).

**10.3 Other Defined Terms** - Recommend defining the term "utilities". Many references are made to this term in the standards but it is not specifically defined. Could be electric lines / transformers / metering / etc. or water lines / pump stations, etc.?

**13.1 Water Quality Management** - Recommend adding greater specificity in 13.1.3 *Minimizing Water Quality Impacts* regarding post-development ("occupancy phase") water quality standards with some measurable criteria. Some municipalities require water quality treatment systems or Low Impact Development (LID) so that 100% of the development site has water quality treatment. A 100% treatment goal might not align with the County's development objectives but having some specificity for "occupancy phase" water quality treatment would be admirable.

In addition, the November 2019 Land Use Code 2020 Assessment and Annotated Outline prepared by Clarion provided an important roadmap for enhancing the Larimer County Land Use Code. Many elements of this assessment are reflected in the current draft of the Development Standards. However, some elements are not readily evident.

- The Development Standards are missing any reference to the design standards by the American Society of Civil Engineers: *Climate-Resilient Infrastructure: Adaptive Design and Risk Management*. The addition of these references should be considered.
- The key recommendation (pg 56) regarding transfer of development rights (TDR) is admirable but we do not see much of this in the Development Standards document. TDR programs are designed to permanently protect open space and ecologically

sensitive areas, which can include areas of high hazard risk. When setting up a TDR program and drawing the boundaries of the sending area, Larimer County could consider protecting both areas that are of hazard risk (e.g., flood plains) and areas that play a role in mitigating hazard risk (e.g., wetlands) as has been done in other regional counties.

- In the Subdivision Standards (pg 79) the County should ensure the following three basic design criteria are clearly present: availability of affordable housing units; convenience of open space/conservation buffers; and specific density standards/definitions.
- Addition of the "solar ready" concept - What may seem like an update to the building code, "solar ready" has a place in the land use code as well while we transition from natural gas to statewide electrification and the use of more renewables. Other regional counties provide some great examples for amendments to the adopted Land Use Code that prepare new developments and their major alterations for "solar ready".

JMG 10/12/2020

APPENDIX D

INSERT

Comments on the Climate Smart Larimer County draft Framework



Appendix D CSLC  
Comments.pdf

## MEMORANDUM

**TO:** Commissioner John Kefalas, Chair Pro Tem

**FROM:** David Lehman, ESAB Vice Chair  
Kirk Longstein, ESAB member

**THROUGH:** Lori Hodges, Emergency Management Director  
Linda Hoffmann, County Manager  
Shelley Bayard de Volo, Environmental Science Advisory Board Liaison

**DATE:** October 16, 2020

**RE: Environmental and Science Advisory Board review of the Climate Smart Larimer County Framework (Document)**

Thank you for your leadership and pro-active approach to addressing Climate Change hazards across Larimer County. The Environmental and Science Advisory Board appreciates not only your dedicated leadership but also the time commitments invested by the staff team facilitated by Lori Hodges to get the framework document into its current final draft. While we recognize that the Climate Smart Larimer County framework is a living document with the intention of additional public engagement, the Board appreciates the opportunity to co-create such an important piece of work from its early inception.

During its October 13, 2020 meeting, the Environmental and Science Advisory Board discussed numerous comments related to the document. It is our desire as a Board that the most clear, accurate, and scientifically sound framework be created, and it is in that spirit that we are providing the attached comments. We have tried to suggest wording/solutions to each point, but more importantly we wanted to highlight areas of inaccuracy and/or potential confusion in the Sept 30 Final version.

We look forward to continuing public deliberation of this document and are available to review future drafts and initiatives related to climate change action plans.

I. EXECUTIVE SUMMARY			
Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
Bleem	p 5, second to last sentence	Delete "population" after 33%	incorporate

II. LARIMER COUNTY COMMUNITY PROFILE			
sbv	pg. 5, para 3, line3	Change word "chart" to "table"	incorporate
sbv	pg. 6, para 3, line 3	seems part of sentence is missing - "...age rising from 36 in 2017, ..." rising to what?-	incorporate
sbv	pg. 6, para 3, line 5	"32,400 White (Hispanic)" ? should it just read Hispanic?	incorporate
sbv	pg. 6, III, para 4, line 3	Quote "...extreme weather.." should read "extreme precipitation" as that is how it is written in original study. As well, the quote leaves off the last sentatnce which reads "..trend, but not neccessarily summer extreme precipitation event."	incorporate
Bleem	p10, 3rd & 4th para	Is it possible to give a longer view of this trend? Possibly data for the last 5 or 10 years? A longer term trend in the metrics mentioned would provide a more solid case.	incorporate
Ames	p6, 1st full para	Web page cited does not provide projections. It looks like the correct reference should be, <a href="https://demography.dola.colorado.gov/births-deaths-migration/data/components-change/#components-of-change">https://demography.dola.colorado.gov/births-deaths-migration/data/components-change/#components-of-change</a>	incorporate
dwl	p6, ¶ 3	"Native-born citizens, with a median age of 36, were on average younger than foreign-born citizens, with a median age of 42." ? Delete sentence. How does including this bit of demography improve the Framework or advance its agenda?	incorporate

III. LARIMER COUNTY CLIMATE HAZARDS			
sbv	pg. 6, footnote 5 pg 9 footnote 13	Should include " et al." for authors, as there are five total authors. As well, the report was for the Colorado Water Conservation Board - add the word "Water"	incorporate
sbv	pg. 6, para 1, line 3	Quote "...extreme weather.." should read " <b>extreme precipitation</b> " as that is how it is written in original study. As well, the quote leaves off the last sentatnce which reads "..trend, but not neccessarily summer extreme precipitation event."	incorporate

Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
sbv	pg. 6, para 2, line 6	<p>Wildfire are not "often" caused by weather event, and in the WUI 97% of wildifre are human caused. Also, lightning is not a weather event. Consider "<b>can be</b> caused by weather events that include lighting.."</p> <p>Also, it depends on whether you are referring to large fires or just the number of fires. A single tree, 1/10 acre fire, is recorded as a fire. So, yes natural causes (lightning) is highest for all wildfires, but most large fires are human caused.</p>	incorporate
Bleem	p 8, 1st para	Would it be helpful to indicate the breakdown of the 26 events? (how many of each type) Some are more climate related than others (not all driven primarily by climate chanve).	Will address later
Bleem	p 9, last para	Add quote marks at end of quoted text. Assume it's at the very end of the paragraph?	incorporate
Ames	p6, last para, last sentence	<p>Not clear how the two parts of this sentence relate. Suggest rewording.</p> <p>"Weather and climate patterns are the most important indicators of our wildfire and flooding risk and when in collaboration with community preparedness and emergency service response-time, results equate to less of an impact upon our community."</p>	incorporate
Ames	p9, last para of Sec. III	I think at this point we can state "In 2020, Colorado had the two largest wildfires in the state's history, the Pine Gulch Fire, and Cameron Peak Fire in Larimer County." or something to that effect	
dwl	p6, ¶ 6  p7, ¶ 3	<p>The Framework should not minimize the fact that most wildfires are started by humans. CHANGE "Wildfires . . . often caused by a weather event such as lightning, . . ."</p> <p>REMOVE: "severe spring storms causing lightning and hail." Popular attributions of causation are sometimes problematic. The Framework should avoid falling into this trap. Suggested wording: "<b>and the significant hail damage that occurs with some severe spring storms.</b>"</p>	incorporate
sbv	pg 7	both figures need x & Y title - X-axis is " <b>Years</b> " Y-axis is " <b>Number</b> "	
sbv	pg. 10 , para 2, line 4	Extreme heat affects <b>people's</b> cardio....	

Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
<b>IV. WHY DEVELOP CLIMATE SMART ACTIONS FOR LARIMER COUNTY?</b>			
Ames	Top of page 10	As written, the following sentence implies NISP is a Larimer County project. However, the majority of NISP participants are outside Larimer County. Rephrase as "With rising temperatures and changing precipitation patterns, and the majority of NISP participants outside Larimer County, it is not clear if this supply project alone will provide a comprehensive solution to the County's growing population amidst a changing climate."	incorporate
Ames	3rd full para. p 10	The statement that most counties are vertically integrated, followed by an example of Larimer County not owning utility infrastructure is contradictory. Rephrase as "However, Larimer County, like other Colorado counties...."	incorporate
Ames	p 10, last para.	Rather than referring to "hurricanes", maybe choose a more representative local disaster like " <b>floods</b> "	incorporate
DWL	p10, ¶ 1	"it is not clear if this supply project alone . . . Comprehensive solution" "not clear" is "Merchants-of-Doubt-speak" to be avoided. do not have great wisdom about how to talk about NISP in the Framework. However, it is clear that NISP will NOT "provide a comprehensive solution" to water issues in Lar Cty, taking climate change into account or NOT.	incorporate
DWL	p10, ¶ 5	Public opinion (Lar Cty or national?) . . . Hurricanes	incorporate

<b>V. EFFORTS TO ADDRESS CLIMATE SMART ACTIONS</b>			
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Travis Rounsaville	Pg 11	Numbering in Section 5 is confusing/inconsistent. Recommend either changing the numbering methodology for the each planning effort or removing numbers from the subheadings. Perhaps two heading levels without numbers? The Larimer County 2019-2023 Strategic Plan is the particularly problematic heading, It is not numbered, but if "planning efforts" are numbered, think it should be #2?	incorporate
Travis Rounsaville	Pg 11-12	I think references/links to the other Larimer County Documents would be useful for those unfamiliar with their content	incorporate

Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
Bleem	p 11 - section title	The title implies actions, though the section appears to contain guidelines. Suggest title read: CURRENT EFFORTS GUIDING CLIMATE SMART ACTIONS	
Bleem	p 13 - first sentence	Delete "promoting" at the end.	
dwl	p12, ¶ 1 Goal 2	"MEASURE community health, well-being and resilience" Does a metric for these exist?	
dwl	p12, ¶ 1	"decrease the unemployment rate by 5% for residents with disabilities." ??Delete: The Goal and strategy are admirable; they may be a focal point for opponents wanting to highlight costs.	incorporate
dwl	p12, ¶ 1	"housing overburdened ratio" WHAT IS THIS? The Framework should focus on strategies to ↓ C footprint.	SBV - fine the way it is
dwl	p12, ¶ 2 Goal 3	BUT but objective five aligns closely with the CSLC framework. REWRITE to 2 sentences: Objectives 1-4 . . . Objective 5 aligns . . . Why use a confrontational BUT if it is not necessary?	incorporate
dwl	p13, ¶ 1	DELETE PROMOTING	incorporate
dwl	p13, ¶ 3	Land Use Code Section 8 standards ensuring new development is more compatible with wetlands, wildlife habitat and natural systems than previous codes were incorporated into the updated development review process. ADD commas after STANDARDS & CODES	incorporate
Casey Cisneros	Pg. 13	Photo blurry with lo resolution	incorporate

**VI. LC GREENHOUSE GAS EMISSIONS PROFILE**

Travis Rounsaville	Pg 15, Paragraph 4	Break the 2010 emissions from County operations stats out into their own paragraph separate from the 2017 Community Emissions paragraph/table. Having these in the same paragraph is confusing since they aren't directly comparable	incorporate
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Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
Travis Rounsaville	Pg 15	This section would benefit from some context/comparisons. Perhaps break the 2017 numbers into a per capita value (14.1 MTCO <sub>2</sub> e/capita based on 2017 county population of 344,084) and compare that to the national/state per capita emission values from 2015-2020? Compare to nearby counties like Weld/Boulder?	
Bleem	p 15, last paragraph	The paragraph and table appear to indicate that emissions increased from about 92,000 MT in 2010 (text) to about 4,800,000 in 2017 (table). Are the accounting processes used substantially different?	separate into two paragraphs
Longstein	p 15, " The total emissions identified in the 2010 Larimer County operations inventory were estimated at 92,315 MTCO <sub>2</sub> e."	Create separate paragraph providing history and context of where the County has been and where we is going	
Bleem	same	Also, is the value for agricultural emissions (2017 table) correct? (seems very small)	
Bleem	same section	Somehwere in this section, it should be mentioned that Platte River Power and Xcel Energy both plan significant reductions in GHG emissions from electricity sources by 2030 (100% if technologies allow). This would essentially eliminate electricity from the graph.	refer to GHG roadmap, which all utilities are complying with. Maybe put in section G
Bleem	p 16, first sentence	It appears the focus is on facilities and operations that are under the control of the County (not all sources located within the County). Suggest adding "owned and/or operated by and physically located within Larimer County." to the end of the sentence.	incorporate
Bleem	p 16, Figure 7	Does the "Buildings" category on the graph include natural gas and electricity? Perhaps these two sources could be broken out to show electricity separately (since it's mentioned as a large source)? Also woud give a sense of where actions could be taken (gas vs. elec).	
Ames	p 15, first para.	maybe add gas heating to the list of anthropogenic GHG emissions (This ties in with subsequent discussion on pg 21)	incorporate

Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
Ames	p 16, 1st para. text	Building sector includes electricity and natural gas use (see "Larimer County GHG Calcs.xls") last sentence before the chart on pg. 17 should read "Community-wide, our 2017 inventory revealed the largest emission sources are vehicle use and the use of natural gas and electricity in buildings (Figure 7).	incorporate
dwl	p15, ¶ 1-2	See 2 NEW ¶s.	
dwl	p15, Table	MT CO <sub>2</sub> e rounded to 2 Significant figures	
dwl	p15, ¶ 3-4	Problematic; needs improved presentation/explanation of differences in 2017 & 2010 data;	
sbv	pg 15 para 1, line 6	Change "emitted" to <b>"reflected"</b>	incorporate
sbv	pg 15 - Table	number table. Also, fix MTCO <sub>2</sub> e to subscript the 2	incorporate
sbv	pg. 15 para4, line7	MTCO <sub>2</sub> e - subscript the 2	incorporate

## VII Climate Smart Larimer County Planning Areas

sbv	pg. 17, para 4 Why create Recommendations section	last bullet item - Enhancing environmental stewardship <b>and social equity</b>	incorporate
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## BUILDINGS, LAND USE AND ENERGY

Rinker	A p.18 Area of concern #4:	UV radiation is increased by ozone depletion, not carbon loading, and is more or less irrelevant to climate change in any direct way, only indirectly through its effect on plants as the ozone layer disintegrates.	DISCUSSION NEEDED
Rinker	A p.19 Area of concern #6	A/C load is certainly increased by a warmer climate, but space heating load is decreased. That is ignored here.	DISCUSSION NEEDED
Rinker	A p.23 LARCO claims about low energy usage	5.67 kWh/sf looks good compared with national average 14. But space heating, typically one of the largest uses, is strongly dependent on building size, since surface area goes as the square of the size scale and volume as the cube. Internal square feet counts every floor, so any comparison like this doesn't mean much unless everything is normalized to the same volume or some other comparable size adjustment is made.	N

Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
Bleem	p 17. para 3 and 5	The order referenced in these paragraphs does not match the content provided later. Public engagement is the last section and recommendations are second to last.	N
Bleem	p. 17. Not sure where is best for this comment, so placing it here.	Is there an intent / process to further consider or prioritize the "possible" actions from Appendix A? Could the Commission prefer some of these (over the "top" recommendations)? Perhaps it could be stated that the "top" recommendations were selected from the broader list based on X, Y, Z selection criteria?	N
Bleem	p 24, recommended actions bullet list	As part of first bullet, include partnering / collaboration with the Efficiency Works program, a regional efficiency initiative run collaborative among local utilities (Platte River Power, City of FC, Loveland, Estes Park, etc.). The program has made something like \$50 million available for efficiency incentives. Perhaps mention other collaboration options as well. Add this to the Appendix too.	incorporate
Bleem	p 24, public engagement list	Same idea - partner with Efficiency Works public engagement programs.	incorporate
Bleem	p 22. last para	Platte River sells only wholesale power (no direct sales to property owners). Delete Platte River from the list of property owner providers.	N
Bleem	p 23. second para	The case for lifecycle cost reductions for homes and businesses via improved efficiency may be enhanced using actual data from programs run by FCU. Can Utilities provide information to indicate how much codes save (net) over the life of the buildings?	N
Bleem	p 24. third bullet	Are there TWO recommendations? (1) Improve county buildings, and (2) implement a county-wide efficiency code?	N
Bleem	Recommendations	Specifically encourage more renewable energy development on county land. Wind and solar potential are significant in this region. More jobs, potential for enhanced tax/use revenues, etc. Perform studies to identify best project (potentially via partnerships with entities having this expertise). Ties to economic health as well. <b>AGREE we can strengthen this recommendation.</b>	

Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
Little	Page 20	Figure 8 located in the middle of a paragraph and seems out of place	incorporate
Little	Page 24, Top Recommendations,	Also encourage individual homeowners and landlords to utilize incentives to use more energy efficient equipment/appliances	incorporate
Ames	p. 21, 1st para under figure	Clarify that this para. is discussing national totals, not Larimer County emissions. e.g., "...841 million metric tons of carbon dioxide emissions nationally."	incorporate
dwl	p17, ¶ 2	"No one is immune" is problematic; How about using active voice: "Climate change impacts all of us to some degree and will likely cause significant disruption to some of us."	incorporate
dwl	p18, table	Consider: Move wildfires to top of table	incorporate
dwl	p19, ¶ 3	design bldg for "climate of next century": Prediction is difficult esp about the future.	incorporate
dwl	p21, ¶ 3	Missing Zero 75,000	incorporate
dwl	p22, ¶ 2	150 permits = <0.5% of existing <b>[unincorporated county]</b> housing stock; pg 21 says 150,000 housing units <b>[that includes incorporated areas over which county has no building code authority]</b> . "ensure" We should not claim more than can be delivered. CHECK DATA: If it is permits for 150 housing units, then 150 equates to 0.1% of existing stock. <b>Statistic is correct, words should be added to clarify. Add "help" to "ensure" so it reads "Although new codes will help ensure..."</b>	incorporate
dwl	p23, ¶ 1	unstated issue of needing consolidation of utilities. <b>Just trying to state the existing conditions making incentives problematic. I don't think utility consolidation is legally, politically or practically possible.</b>	incorporate

Appendix D: ESAB Comments on Climate Smart Larimer County Framework

Name of editor	Chapter heading, Topic heading, Page #, Paragraph #, Starting Line #	Substantive Comments/Recommendations	Status
dwl	p23, ¶ 2	Assertion Re relative GHG savings from different interventions is PROBLEMATIC. We need to promote both. There may be reasonable models for GHG savings/\$↑costs from "tighter building codes." <b>I doubt there is a metric of "regional collaboration" to use for a reasonable model. It is correct that regional collaboration leading to improved Land Use/transportation is not easily measured. The wording could be changed to "...would likely produce greater GHG savings..." Both regional planning and tighter building codes can produce savings as the discussion indicates, while pointing out why planning would likely do more than tighter building codes for new homes in the county.</b>	incorporate
dwl	p24, ¶ 1	Recs: Phasing out single family homes (eg, Minneapolis model) <b>I think this recommendation would be a bridge too far for the elected officials and could cause a backlash against the entire report.</b>	incorporate
dwl	p24, ¶ 2	Recs: Re: Public Engagement: potpouri of BIG POLICY QUESTIONS, inviting sharing of ignorance <b>I welcome specific suggestions for question refinements. If we are to really get public buy-in, we need to get their honest opinion on the basic parameters, so they do not feel like the policy is already decided and they get to choose, for instance, between brands of electric cars.</b>	
Casey Cisneros	Pg. 21 map	Poor photo resolution	sbv can try to make a better image

**ECONOMIC HEALTH**

Rinker	A.p.25 bullet 2	Tiny homes and other smaller buildings are suspect for the above reason. Condominiums/apartments/other multi-family buildings should be emphasized more.	N
Rinker	A.p.25 public question 9	Question is too vague. Energy efficiency and indoor air quality are related in more ways than one, and these should be stated if thoughtful answers are desired. Relation is inverse so far as radon contamination and pathogen concentrations are concerned resulting from decreased infiltration. Also lowered oxygen content.	DISCUSSION NEEDED

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Bleem	Recommendations	Specifically encourage more renewable energy development on county land. Wind and solar potential are significant in this region. More jobs, potential for enhanced tax/use revenues, etc. Perform studies to identify best project (potentially via partnerships with entities having this expertise). This ties to land use considerations as well.	N
dwl	p25, table	Econ impacts: Reduced UNKN?; Options "resiliency training" ? Is there a metric of "resiliency?" Explore ways to create a low-growth economic model, maybe as a grant-funded pilot project.	Maybe change to "adaptable skills training"? see comment on document
dwl	p26, table	inefficient development patterns: ↑ multi-fam units; Promote ↑density housing development along transportation corridors.	incorporate
dwl	p27, ¶ 1	Develop topic of pandemics: For example, the Covid pandemic exposed supply chain vulnerability, creating opportunities for entrepreneurs.	incorporate
dwl	p27, ¶ 5	Flood insurance is a proven approach to saving money on extreme flood events. Who is "saving money?" My understanding is that flood insurance requires taxpayers to subsidize losses; some individuals receive sums sufficient to cover a substantial portion (but not all) of their financial loss.	incorporate
Casey Cisneros	pg. 28 bottom photo	blurry with low resolution	incorporate
Casey Cisneros	pg. 29 top of page	call out <b>Colorado State University</b> if this is the first use in the document	incorporate
Casey Cisneros	pg. 30 photo	blurry with low resolution	incorporate
sbv	pg 29, existing adapttaion and mit strat	footnote acronym or spell out OEDIT	incorporate

**EMERGENCY MANAGEMENT AND PUBLIC SAFETY**

Cat Smith	Planning Area Table pg 31; row 1, increased drought	Consider changes to multi-family and business landscaping to reduce water usage; allow greater % of xeriscaping in subdivisions rather than lawns	incorporate
Cat Smith	Planning Area Table pg 31; row 2, increased flood	Increase emphasis on natural SW mitigation such as engineered wetlands, vegetative buffers etc	incorporate
Cat Smith	Planning Area Table pg 31; row 3, rising temps	Add emphasis on BMPs to reduce runoff from fertilized/planned landscaping	incorporate

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sbv	pg 33, para 3, line11 & 12	more water is pulled <b>from</b> soil and <b>vegetation</b>	incorporate
sbv	pg 34	I think we need to cite where the statement "...large fire in the County are caused by lightning". This somewhat contradicts the recent trends and studies that show that across the west large fires are human caused. Can we get accurate up-to-date-data on this for Larimer County and cite the report and date range for data. Also what constitutes a "large" fire.	incorporate

**WATERSHED, AGRICULTURE, OPEN SPACES AND FORESTRY**

Travis Rounsaville Pg 41, Paragraph 4	Recommend reorganizing the paragraph to clarify that BOTH drought and flood events are expected to increase as a result of climate change, and clarify which effects belong to which event (ie loss of aquatic vegetation is associated with drought). As it currently reads it seems to imply that drought would reduce flood storage (it wouldn't) and floods would reduce groundwater recharge (they don't). Separating the effects of flood from the effects of drought would make this more clear. This would also be a good place to mention the fact that increases in both floods and droughts creates water management conflicts. There is also a typo "o" in the last line, and the "Table 1" reference should be capitilized.	incorporate
Travis Rounsaville General	I recommend adding headings for Watershed and Agriculture subsections, as they seem distinct and each have over a page of information, with several paragraphs.	discussion needed
Travis Rounsaville General	Forestry/Open Space climate impacts could be beefed up a bit more. Impacts of drought/wildfire/invasive species all have profound recent examples in the County	look at comp plan and haz mit plan on how the topic is addressed there. Take from those for language. Note watershed coalitions and their collaborative work

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Travis Rounsaville	Missing information on existing conservation/recommendations for future action wrt watershed/water impacts	Numerous potential issues/problems raised in regard to watershed/water management, but not much in the way of solutions. Perhaps highlight some of the 2013 flood restoration efforts and add a recommendation for future action (riparian habitat restoration?). A couple examples mentioned in the full list in Appendix A, but probably could use one in the body of the text	incorporate
Casey Cisneros	Pg. 40	Paragraph two about wildlife conflicts is more related to population growth than climate change. Consider removing this section.	incorporate
Casey Cisneros	Pg. 41	Sentence above blue border has an errant o.	incorporate
sbv	pg. 41	number table according to all other previous tables	incorporate
sbv	pg 41 para 3 bullet list	add to human impacts...(e.g., social trails, <b>trash and dog feces</b> )	incorporate
sbv	pg. 43, footnote 56	bring publication year 2017 up to following author list	incorporate

**PUBLIC AND ENVIRONMENTAL HEALTH**

Ames	p. 48, Para. 1	I like the background discussion on state regulations to protect public health. No edits suggested, but adding similar regulatory background to other sections (e.g., VII.G) may be informative to the public.	
dwl	p49, ¶ 1	Major sources of NOx and VOCs are fine particulates and aeroallergens from industrial facilities and electric utilities, motor vehicle exhaust, fuel vapors, and oil and gas development activities. DELETE "are fine particulates and aeroallergens from" SUTSTITUTE include	incorporate
dwl	p49, ¶ 2	longer a time; DELETE a	incorporate
dwl	p49, ¶ 3	Higher temperatures cause algal blooms. SUBSTITUTE: Algal blooms are exacerbated by high ambient and water temperatures,	incorporate
dwl	p51, ¶ 3	Existing Adaptation and Mitigation Strategies "Land Use Code could include" seems to be aspirational, NOT a description of "Existing"	incorporate
Casey Cisneros	Pg. 45	remove bottom row which is misplaced	incorporate

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sbv	pg. 43	why are some sentences bolded?	incorporate
sbv	pg 50 para 1, bullet item 2	should read (e.g., <b>Aedes sp.</b> )	Changed to suggested. Could also replace with disease carrying mosquito

<b>PUBLIC WORKS AND ENGINEERING</b>
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Travis Rounsaville	Page 53, Row 3-Column 2	"or" should be "of"	incorporate
Travis Rounsaville	Page 53, Row 3-Column 3	Recommend changing "Stormwater retention ponds" to "Stormwater detention ponds," as detention ponds are generally more prevalent than retention ponds in the county (due to water rights issues with evaporation in retention ponds)	incorporate
Travis Rounsaville	Page 54, Row 2, Column 5	Another adaptation option would be to adjust/minimize fertilizer use in parks/open spaces, especially near wetland/ponds to reduce nutrient pollution	incorporate
Cat Smith	Page 54, Row 1, Increased water pollution	an additional adaption - support/educate on BMPs for reduction in fertilizer application and encouraging xeriscapes instead of grass in multifamily areas and subdivisions; enhance efficiency of and reduce irrigation systems, to reduce runoff	incorporate
Travis Rounsaville	Contents of Summary Table	The text in this chapter is really good/thorough, but I suggest adding an item from the Solid Waste discussion on the following pages to the summary table (The green waste problem would be a good addition to the table)	incorporate
Casey Cisneros	Pg 54	First box under adaptation options repeats education and outreach - delete	incorporate
sbv	pg 60, existing adaptation and mit strat	suggest "Landfill <b>Methane</b> Capture Project"	incorporate
sbv	pg. 60 para4, line 4	suggest - "on <b>pollution prevention</b> and good facility ..."	incorporate
sbv	pg 61, rec for pub engagement	Change "Poudre Watershed Coalition" to " <b>Coalition for the Poudre River Watershed</b> "	incorporate

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sbv	pg. 58, para 5, add sentence at end	<p>Larimer County is an active member of the Colorado Stormwater Council, whose mission is to effectively protect and improve stormwater quality through collaboration and local partnerships.</p> <p>can add footnote of url <a href="https://colorado-stormwater-council.org/">https://colorado-stormwater-council.org/</a> however then all footnote numbers would have to be changed :/</p>	
<b>GREENHOUSE GAS MANAGEMENT</b>			
Bleem	p 63. Recommendations	<p>Suggest stating the recommendation more clearly - in format similar to other recommendations in earlier sections. Something like:                      "Conduct an updated community-wide greenhouse gas inventory, including emissions from outside the county boundary, stationary and mobile sources, waste management and GHG sinks"</p> <p>Also suggest moving the information not directly related to the recommendation to a location earlier in the section (i.e. move later paragraphs up above the recommendations). These include background information in the Studies and Management paragraphs.</p>	not sure
Little	p 63 figure 10	Per capita GHG tracking makes sense, but using Bloomington, Indiana as a comparison seems out of place. I'd recommend removing that line from the figure or adding additional cities to the comparison.	Y, unless author has a reason to keep

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Little	p 65 Recommendations for public engagement	<p>"Based on a public opinion study conducted by Yale's Climate Change Communication Program in 2019, 67% of Larimer County adults believe that global warming is mostly caused by human activities." Suggest removing the sentence as it doesn't pertain to recommendations. Sounds like 33% of people don't agree with this statement anyway and instead of focusing on whether or not climate change is due to human activities, I think it's important to focus on how to do our best to minimize impact to the environment.</p> <p>So should it be the % that believed climate change was real? 2020 Yale survey data indicate 75% of LC residents believe global warming is happening. But only 41% of LC respondents believe that global warming will harm them personally.</p> <p><a href="https://climatecommunication.yale.edu/visualizations-data/ycom-us/">https://climatecommunication.yale.edu/visualizations-data/ycom-us/</a></p>	Remove the Yale study
Ames	p 63, Figure. 10	Add citation for the Figure/Table 10: Lotus Engineering and Sustainability, CITY OF BOULDER'S 2018 GREENHOUSE GAS EMISSIONS INVENTORY & SUMMARY REPORT, OCTOBER 2019. Also, add source for Larimer County emissions as these are not included in the Boulder report.	incorporate
Ames	p 63, Recommendations for future actions: Studies	It seems that the Larimer County inventory presented is partially consumption based. That is, it accounts for energy use in buildings and fuel use in vehicles. How would a consumption based inventory differ?	
Ames	p. 64. 1st para. under management.	This would be a good place to reference Colorado's statutory (HB 19-1261) GHG emissions reductions targets and related state regulations to increase GHG monitoring and reporting. Providing state regulatory background for GHG reductions is consistent with discussion of state health regs. in Sec. VII.E., 1st para. Pg. 48.	incorporate
Ames	p. 65, last para.	This paragraph pertains mainly to health. Consider moving the text to Sec. VII.E	
Ames	p. 73, bullet 13	Consider adding another bullet below "Reduce barriers to solar PV installations, both on-site and utility scale, by becoming a SolSmart "solar-ready" community.	incorporate

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Ames	Bullet 13a	Consider adding another recommendaion: Work with retail and wholesale electricity providers to encourage greater penetration of renewable energy in Larimer County	incorporate
Ames		Rationale for added bullet: Tri-State currently imposes a 5% cap on independent renewable generation by its member retail providers, such as PVREA. PVREA is currently at this cap. Allowing greater penetration of renewables in rural areas of Larimer County served by retail electric co-ops would help increase clean energy generation within the County.	incorporate

## VIII Next Steps: Public Engagement

Gerek	VIII Next Steps: Public Engagement, complete chapter	Plan seems sound, however explanation is fairly "academic" using specialized jargon - (e.g., "work through a lens of health equity")	
Gerek/Kefalas	VIII, Communication Strategies, p. 67, 3rd graph, line 7	"discussing why climate change <b>effects</b> communities" probably should be "discussing why climate change <b>affects</b> communities"; <i>AGREE</i>	incorporate
Gerek/Kefalas	VIII, Detailed Course of Action #2, p 68, line 2	<b>"Commissioner Kefalas'</b> annual survey" probably should instead reference the "BoCC County opinions survey" or something like that; <i>actually referred to as the Larimer Couny Community Survey</i>	incorporate
Gerek/Kefalas	VIII, Detailed Course of Action #5, p. 69, line 6	"Currently, <b>the County</b> believes" seems overreaching - perhaps "Currently, it is likely" is more accurate; <i>AGREE</i>	incorporate
Bleem	p 68. List of actions	The 81 page CLSC document has an impressive amount of information contained within and provides a good resource for those interested in detailed background. For the public process - simple, straightforward communication materials will be needed. These will include the (high level) actions endorsed by the Commissioners, which is not yet clear. Should the public process description list engagement with (input from) the Commissioners first? Both the specific climate related actions and the public process depend on Commissioner direction / approval. Once approval is completed, moving from the current CSLC document to simplified communications for public participation efforts will require significant time and effort. What staff (or outside) resources are available for communication materials development and public process implementation?	A consultatnt has already been contracted to produce materials for the initial public engagement taks

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Kefalas	VII Next Steps: Public Engagement	John makes a valid observation; at this juncture, the plan is to present the CSLC Report to the current BCC (and invite newly elected commissioner on 11/10 at worksession to get buy-in and approval to move to public engagement phase in 2021 with input from new BCC; don't yet have answers to county resources question.	
Kefalas	p 66, overview, 1st paragraph	after "to" insert "address climate change and"; after "climate related" insert "disruptions and"	incorporate
Kefalas	p 66, overview, 2nd paragraph, rewrite 1st sentence	The purpose of this community outreach is to actively involve and engage public and private sector stakeholders in further developing the Climate Smart Larimer County (CSLC) Framework.	incorporate
Kefalas	p.66, overview, 2nd paragraph, line 4	change "efficiently" to "effectively"	incorporate
Kefalas	p 66, overview, 2nd paragraph, rewrite 4th sentence	Based on the social values of diversity, equity, inclusion and community-driven change, this framework will help identify and relay personal connections to the local impacts of climate change.	incorporate
Kefalas	p.66, deliberative steps, 1st bullet	change "Larimer County Climate Smart framework" to "CSLC Framework"	incorporate
Kefalas	p 66, deliberative steps, 2nd bullet	change "on the Framework's issues and goal" to "about the purpose and recommendations of the CSLC Framework"	incorporate
Kefalas	p 66, deliberative steps, 5th bullet rewrite	Involve community members who already show interest and recruit new participants throughout the assessment and implementation of the CSLC Framework recommendations to ensure diversity of opinions.	incorporate
Kefalas	p 66, deliberative steps, 6th bullet rewrite	Identify community ambassadors - leaders in various communities who will commit to serving as a conduit between their community and the CSLC Framework process.	incorporate
Kefalas	p 67, communication strategies, 2nd paragraph, last sentence	change "Explaining why public input is critical to developing Larimer County's Climate Smart framework and how public feedback will be used will help create buy-in and a sense of ownership by individuals." to <b>"Explaining why public input is critical to developing the CSLC Framework will help establish buy-in and a sense of ownership by individuals and community sectors."</b>	
Kefalas	p 67, communication strategies, 3rd paragraph after example, last sentence	after "transportation" insert "and childcare"	incorporate

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Kefalas	p 67, communication strategies, 4th paragraph	In 1st sentence, change "mentioning" to "discussing"; change 5th sentence to read "Informing local public and private sector opinion leaders about the CSLC Framework provides another important opportunity for buy-in when these leaders disseminate the information to their respective communities." Change 6th sentence to read "For the success of this initiative, it is critical to reach out to rural and less populated Larimer County communities through community ambassadors and other best practices. Our goal is to generate participation from more of our diverse community, bring underrepresented voices to these discussions, and deepen the pool of opinions and expertise received."	incorporate
Kefalas	p 67, communication strategies, 5th paragraph	replace "dovetail" with "align" and "Climate Smart Framework" with "CSLC Framework."	incorporate
Kefalas	p 68, detailed course of action, #1	For consistency, in 1st paragraph, change the two references to "CSLC Framework"; change this paragraph to read "The public's introduction to the CSLC Framework will come through press releases to traditional media outlets and notifications to social media outlets in close coordination with the county public affairs director. Some ideas for spreading the information widely and managing the narrative include:	incorporate
Kefalas	p 68, detailed course of action, #1, bullet points	<ul style="list-style-type: none"> <li>• Work with existing community-based organizations that provide community support services</li> <li>• Disseminate information through social media, the Larimer County Connects Newsletter, commissioner communications and other county public information channels</li> <li>• Host community events including community conversations, town halls, open houses and creative work sessions such as 'action and art' events</li> <li>• Share the CSLC Framework with newly identified stakeholders</li> <li>• Participate in various cross-sector community events including festivals, forums and neighborhood gatherings</li> <li>• Create bi-lingual flyers, posters and pamphlets</li> </ul>	
Kefalas	p 68, detailed course of action, #4, 1st bullet	change "services related to climate change, especially those that provide services to marginalized community members" to "community support services"	

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Kefalas	p 68, detailed course of action, #5	change "implementation and assessment stages" to "assessment and implementation stages"	incorporate
Kefalas	p 69, implementation and assessment	change to "assessment and implementation"	incorporate
Kefalas	p 69, implementation and assessment, 2nd bullet	change "detected" to "determined"	incorporate
Kefalas	p 69, ongoing engagement	change to read, "Stakeholders include people, businesses, institutions and organizations impacted by climate change - the entire community, rural and urban, and those with an interest the successful implementation of the CSLC Framework . As people move into the county, they become potential new stakeholders and identifying new stakeholders should be an ongoing process. We can identify new stakeholders through networking with existing stakeholders and community members, and implementing continuous outreach and civic engagement efforts."	incorporate
Kefalas	p 75, appendix a, economic recommendations, 2nd bullet	change "Economic Department" to "Economic and Workforce Development Department"	incorporate
Kefalas	p 79, appendix b, identifying stakeholders & community members	Identifying Stakeholders and Community Members: The County must continue recruiting diverse stakeholders including business, civic, environmental, faith-based, neighborhood groups for community buy-in to the CSLC Framework and to inform future decisions, services and actions. Examples of key stakeholders include: Health Care Providers, Businesses, Industries, Educational Institutions, Home Owners Associations, Manufactured Housing Communities, Municipalities, Unincorporated Areas, Law Enforcement and First Responders, Emergency Management, Faith Based and Nonprofit Organizations and marginalized populations.	incorporate

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Kefalas	p 79, appendix b, marginalized populations	change to read "Marginalized Populations: It is important for the County to recognize that marginalized and underrepresented community members exist, and these are people who may have trouble engaging in public discourse and may be predisposed to intersecting marginalized identities. For example, an older adult immigrant experiencing homelessness with multiple perspectives may be considered an intersecting marginalized identity. Marginalized community sectors may include: • Older adults on fixed incomes • Religious minorities • Persons Experiencing Homelessness • Immigrants who speak English as a second language and other members of the Latinx Community • LGBTQ+ communities • People with Disabilities • Veterans • Low-Income Workers	incorporate
Kefalas	p 80, appendix b, non-profit organizations	change to read "Nonprofit Environmental and Civic Engagement Organizations: These organizations typically provide social capital and information for natural resource projects and educational tools for public input. A few organizations to include for future stakeholder outreach are: <ul style="list-style-type: none"> <li>• Peaks to People Water Fund</li> <li>• Colorado Water Trust</li> <li>• Trees Water and People</li> <li>• Coalition for the Poudre River Watershed</li> <li>• Big Thompson Watershed Coalition</li> <li>• Colorado State University (CSU) - Colorado Water Center, Center for Protected Area Management, Institute for the Built Environment, Center for Collaborative Conservation, Center for Public Deliberation • Hach Center for Regional Engagement</li> </ul>	incorporate

**Full List of Recommendations**

Casey Cisneros	Pg. 76	Top bullet insert reservoir: " <b>Consider "reservoir" alternatives...</b> "	SBV - Changed to: Consider alternatives for reservoir provided water storage
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