

LARIMER COUNTY | ENGINEERING

P.O. Box 1190, Fort Collins, Colorado 80522-1190, 970.498.5738, Larimer.org

The role of the Advisory Board is to advise the Board of County Commissioners and appropriate departments on environmental and science-related issues that affect Larimer County.

MINUTES

Date: August 8th, 2023

Time: 6:00 – 9:00 p.m.

Location: Rm 150 Carter Lake, 200 West Oak St., Fort Collins, Colorado and Virtual by Zoom

Contact: Shelley Bayard de Volo, sbayard@larimer.org or 970.498.5738

MEMBERS		STAFF		GUESTS
Rodger Ames – Chair	X	John Kefalas*		Colorado State University
Tasha Carr	X	Shelley Bayard de Volo [‡]	X	Dr. Emily Fischer
Anna Cloud	X	Heidi Pruess [§]	X	Dr. Jeffrey Collett Jr.
Jim Gereck	X			
Matthew Haag	X			University of Colorado, Boulder
Ted Hendrickx	X			Dr. Roger Pielke Jr.
Allyson Little	X			
Andrew Newman	X			Larimer Alliance
Barry Noon	X			Ed Behan
Nicole Poncelet-Johnson	X			Doug Henderson
George Rinker	X			
Shelby Sommer - Vice-Chair				Virtual
Natalie Walsh	X			Karen Artell
Katrina Winborn-Miller	X			Alejandra
Chris Wood	X			

X = present; * = Commissioner Liaison; † = Community Planning; ‡ = ESAB Liaison; § = Larimer County Environmental and Sustainability Program; ¶ = Community Planning, Infrastructure, and Resources

Call to Order: 6:00 p.m.

1. **Amendments or additions to the agenda** – Commissioner is not in attendance tonight, so no commissioner update. The 3rd Discussion items on the LC Health and Environment programs is canceled due to staff illness. They will present at a future meeting.
2. **Introduction of members, staff and guests** – members introduced themselves.
3. **Public Comment** – Doug Henderson and Ed Behan, Larimer Alliance, introduced themselves and took a few minutes to read into the record their public remarks to the Board. Those remarks commended Larimer County Health and Environment for the





actions they have taken, the programs they have established and the monitoring efforts they are engaging in with CSU researchers. But they noted that while the efforts are a good first step, and they solve part of the problems the region faces, there are still issues that are not adequately dealt with. They encouraged the County to continue to seek answers and solutions and develop a more comprehensive air quality monitoring program. Also, to engage with the community in an effective and transparent manner. They stressed that the air quality problems are regional, and thus it will take efforts at that scale to be effective. They submitted their written comments to Rodger and members.

4. Discussion Items

- Climate Communication – Tasha introduced Dr. Roger Pielke, CU Boulder. His presentation “Climate Extremes and Climate Scenarios” covered two separate topics. The focus was on the IPCC (International Panel on Climate Change) annual reporting. The annual reports provide advice to governments around the globe. The reporting is voluminous, which makes it difficult to digest. The most recent report is ~12,000 pages and it covers the science, economics, politics, etc. of climate change. Dr. Pielke used hurricanes as an example for his discussion on extreme events. He showed a time-series for large hurricane events over the past 102-years, and pointed out that although there is often reporting in the media that hurricanes are becoming more extreme, the data for continental US landfalling of major hurricanes show no increase/decrease in the past 102 years. His point was that local governmental leaders need to pay attention to the data and not the news media, who are often biased to focus on the extremes. He pointed out that to really see trends in climate data, it’s best to look at daily collected data like precipitation or temperature. Using extreme events is problematic because they are rare.

Dr. Pielke then discussed IPCC Chapter 12, Table 12 on identifying human caused signals from natural variability in extreme weather events. He pointed out that high confidence could only be seen in mean air temperature, extreme heat, lake and sea ice, mean ocean temperature and atmospheric CO₂ at terrestrial surface. All other measures were medium to low confidence meaning that many of the measures of climate change are still uncertain in terms of human signal vs natural variability. He noted that detecting signals in climate data is very difficult, especially when the time periods for data collection are relatively short - decades, not centuries.

Climate Scenarios was the next topic. Dr. Pielke discussed how climate forecasting involves the use of emission scenarios to map out different futures. Scenarios should be plausible, probable, preferable. There are emission scenarios still being used that are no longer considered plausible. RCP 8.5 is the “business as usual” (i.e., all carbon-based energy production and use) scenario and is no longer considered realistic. Many countries are implementing alternative energy sources like solar wind and hydropower and that trend is expected to continue. Dr. Pielke noted that the IPCC has now removed the RCP 8.5 scenario from its suite of scenarios for forecasting. At the Federal level, for policy development, RCP 4.5 is considered climate policy success, however in reality, emission targets are predicted to be less than a 4.5 deg F increase (more like 3.4 deg F increase). Dr. Pielke then took some questions from members, including some discussion on whether Dr. Pielke’s presentation contrasts with what is reported in the 2022



IPCC report – Dr. Pielke argued that it does not. Also, the question came up on what the scenario looks like for whether things continue like now – use some fossil fuels. Dr Pielke noted a new suite of scenarios based on current emissions policies that forecast a more moderate 2-3 deg F increase (from baseline) assuming emissions plateau until the end of the century. It was noted that research publications are biased toward papers that include the implausible RCP 8.5 scenario. Dr Pielke ended by stressing that when it comes to policy decisions it's important that they be grounded in science and not misinformation. Member comments included that it's important to consider what was discussed tonight, but it's also important to consider the real impacts to people and the environment.

- **CC4CA Policy Statement and Larimer County Climate, Environmental Stewardship and Sustainability Policy** – Heidi Pruess first introduced herself to the new members. She explained that the BOCC has asked her to bring the Climate, Environmental Stewardship and Sustainability Policy, adopted earlier in the year, to the Boards and Commissions for review and comment. She noted that the current version is a band-aid of sorts to update the policy from its previously adopted form, which was very brief and general. The ask from the BOCC is that boards and commissions review the County's policy and make recommendations for improvements/changes. Heidi will collect those recommendations from all the Boards and Commissions along with staff comments, consolidate them and then bring them to the BOCC in November. Updates will then occur every other year moving forward.

The Policy is used in several ways including guidance on weighing in on state legislative issues, guiding decisions on county programs and policy issues that come before them.

Rodger asked for clarification on the reference in the policy to the County's internal Climate and Sustainability Action Plan. Heidi noted that the plan is now called the ICARE (Internal Climate Action, Resilience, and Education) Plan. Jim noted that the previous policy was intentionally short, and he expressed his concern that the process to update the current policy could result in an unreasonably long and complex policy that some might find difficult to use. Heidi noted that some of the impetus with including more in the current policy is to add content that was otherwise another policy, which has been sunsetted. By incorporating it into the sustainability policy that content is not lost. The BOCC is looking to reduce the number of policies, and where there is redundancy. Heidi requested that comments be sent by the end of October. Rodger suggested that members look at the policy prior to the September meeting and then they can have a work session to develop some comments, which they can then approve at the October meeting.

- **Air Toxics and Ozone Precursors monitoring in Larimer County** – Dr.s Emily Fischer and Jeffrey Collett Jr. presented on two topics that are related, but different. The first is air toxics monitoring. Air Toxics, also known as HAPS (Hazardous Air Pollutants), are recognized by the EPA who has listed 188 individual toxics. EPA



and CDPHE are seeking to better understand air toxics - their sources and exposure rates in communities. The City of Fort Collins with Larimer County and CSU partnered on an EPA grant to characterize air toxics sources and exposures in the region. Once it kicks off it will be a 3-year study. The monitoring strategy involves weekly air sampling using several different VOC sensors. One is a fast collector that can detect transient plumes and characterize acute exposure. The instrumentation is mobile so they can survey neighborhoods and track the plume sources. The study areas will be identified by a city/county advisory group that can help to identify marginalized communities and areas of concern. Next, they presented some data results and there was discussion (Q/A) from members.

The next project focuses on ground level ozone. They explained some background on the EPA non-attainment areas and the Fort Collins West monitor (FTCW), which is currently measuring values higher (75.7 ppb ozone) than the 2026 projected value (71.5 ppb) in the State's recent SIP (State Implementation Plan). They explained ozone atmospheric chemistry and the precursors needed to make ozone. The sources of those precursors (VOCs and NOx) vary over space and time along the North Front Range. They are primarily emitted from oil/gas production, ground transportation and industry. In Larimer County, although ozone is being monitored at two sites, the precursors to ozone (NOx and VOCs) have not been monitored. The EPA, however, has initiated at the FTCW monitor a NOx monitor, that will take samples for two years. The EPA is trying to better understand the impacts of smoke (particulates) on ozone readings. This will be an ideal time because it will pair well with the VOC measurements also being done at the same site.

A grant proposal for the CSU Ozone Precursor study was submitted in July to the Colorado Air Quality Enterprise. If funded, this study will collect data next summer and will add to the data being collected by the EPA and CDPHE. They showed results from a similar study that exemplified the kinds of measurements and data analysis they will do. They ended their presentation by showing a table that shows how the two studies differ, and then took some more questions from members. Some discussion of the Boulder Air study and how it compares to the studies that CSU will do.

5. **Approval of Minutes** – With the agreement that Shelley will make the edits identified by Jim, Natalie moved to approve the July minutes, and Matthew seconded. The July minutes were approved by acclamation.

6. **Updates and Round Table**

- Commissioner's Update – Commissioner is not in attendance tonight.
- Issue Index and Work Plan – Rodger suggested that the Board look at the Issue Index and the Work Plan. He suggested that the board look at those documents next month. He encouraged members to look at the documents before the next meeting. Matthew suggested that the members take a tour of some of the energy providers facilities to learn more about the electric grid. Also, to think about decommissioning non-functioning solar panels, batteries, etc.
- Meeting Recordings – Tasha asked if the board could take up the topic of making recordings of the meeting available to the public. Shelley explained the



background on why members decided to not make recordings public. Jim expanded on those decisions and discussed the importance of members being able to talk freely at meetings and not having to worry about being recorded. Jim also commented on the risk of someone clipping a portion of the video and using it to misrepresent what a member is saying.

- Shelley thanked members for updating the skills spreadsheet.
7. **Issue Index** – will be updated for tonight’s agenda items.
 8. **Agenda Topics for Future Meetings** – September meeting will host Coalition for the Poudre River Watershed, DNR’s Our Lands Our Future Partnership survey.
 9. **Adjourn** – Ally moved to adjourn the meeting and Natalie seconded. The meeting was adjourned at 9:00 PM

**REMARKS TO LARIMER COUNTY
ENVIRONMENTAL AND SCIENCE ADVISORY BOARD
AUGUST 8, 2023**

Good evening, Chairman Ames and esteemed Board members. My name is Ed Behan, and I am Media and Outreach Liaison for the Larimer Alliance for Health, Safety, & the Environment. I live on Stanford Road in Fort Collins.

I am aware you will be receiving reports later this evening on current air quality monitoring programs being operated for Larimer County, in conjunction with the City of Fort Collins and Colorado State University. I want to commend the relevant governmental offices and CSU for taking steps to monitor air quality along the Northern Colorado Front Range. It is no secret that due to our peculiar topography and the cumulative effects of growth, traffic, industrial site sources, and the drifting emissions from over twenty thousand oil and gas sites in Weld County, that we have been in non-compliance with EPA standards for clean air for a number of years.

I want to make a pitch for more comprehensive air quality monitoring. I know that the canister monitors currently employed may be sampling 24/7, but that they are triggered by an anomalous spike in emissions. Information like this can be critical, especially in terms of tracking the precursors for ozone in our region. However, it is my understanding that there is a lag time following that alert, that the sample has to be sent away to a lab to be analyzed. The information may provide some accurate data as to the amount and nature of the emissions in that event. But with the lag time, it is not particularly useful for enforcement purposes. I think it is important to have more than one methodology operational in this critical work.

Many in the City and the County have heard the Alliance speak in the past in support of using technology available from Boulder Air. Pioneered by noted atmospheric scientist Detlev Helmig, these monitoring sites provide real time, around the clock readings of regional emissions. Some of these stations have been utilized by several regional governments. With detailed weather data and location tracking, these systems can also pick out individual chemical signatures of a range of emissions, differentiating between what can be expected from rush hour traffic to some sort of problematic burst from an oil and gas facility. With other large-scale emitters in our county such as Anheuser Busch and Broadcom, such data strikes me as being widely useful. It is also data that can be utilized in litigation.

Our problems are regional. They require a wider monitoring capacity. I want you all to be aware of this and other technologies such as drone and satellite-based surveillance to be sure we have the best information available to address our serious air quality issues. Thank you for your attention to this matter.

www.larimeralliance.org
www.bouldair.com

I am Doug Henderson, a resident of Larimer County

Larimer County suffers severe air pollution and is within the EPA non-attainment area for ozone.

The American Lung Association gives Larimer County a grade F for air quality. In 2019, Fort Collins was ranked #24 worst ozone pollution of over 200 cities in the US -- and since then it has steadily gotten worse, we are now ranked #17 worst.

Every resident in the County suffers from lower Quality of Life and health harm as a direct effect.

The NCAR FRAPPÉ study found conclusively that oil & gas emissions are the major driver of unhealthy air quality in the northern Front Range.

You and I and many others believe in science. We know that our air quality is terrible and we breathe some of the worst air in America because of oil & gas emissions.

Improving our air quality depends on reducing emissions from all the wells and other facilities affecting our air -- which includes those in Larimer but also reducing the emissions in Weld County, which are transported westward and damage our air, as NCAR's research determined.

A number of local citizens groups supported the grant proposal submitted to the EPA for an AQ monitoring project, "Enhancing Monitoring of Air Toxics and Air Quality Education in Underserved Communities in Northern Colorado."

The Sierra Club Poudre Canyon Group (PCG) provided a supporting letter to EPA for the grant proposal -- and offered to cooperate in participatory planning, implementation, and evaluation of air quality monitoring and other activities funded by this EPA grant.

In a letter to the principals involved in the grant proposal, PCG also identified some key points and concerns, which are undoubtedly shared by other local groups and residents --

- participatory planning, implementation, and evaluation of air quality monitoring and other activities --
- including participation in a Monitoring Advisory Group and other mechanisms that engage local communities in air quality monitoring and reporting, and enhance advocacy for actually improving air quality which must include timely and effective enforcement actions;
- and a variety of other ways are also identified regarding how public participation should be deeply embedded in the project.

The project should also be viewed as contributing to a broader comprehensive framework for air quality monitoring that will actually improve AQ

This EPA-funded AQM project is a start, but it's one piece of a larger puzzle – and putting the puzzle together in a way that really leads to improving AQ will require other critical pieces.

Our AQ problems are both local – such as Project's facilities that are chronic violators – and regional, as NCAR's research determined.

Effectively addressing our AQ problems requires addressing both local and regional issues.

Larimer County needs a comprehensive plan that frames the issues and problems, and provides a reasonable action plan for addressing the causes of both local and regional AQ problems.

I encourage the Board to be thinking about AQ and advising the County about AQ well beyond the scope and limited methods in the immediate AQM project.

And please be attentive to the critically important role of public participation and collaboration by local groups that provide effective means for engaging public participation.



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SIERRA CLUB POUDRE CANYON GROUP

Serving Northern Colorado's Larimer & Weld Counties

March 16, 2022

To: City of Fort Collins

cc:

Cassie Archuleta

City of Fort Collins Air Quality Program

Lea Schneider

Larimer County Department of Health and Environment

Emily Fischer

Colorado State University Atmospheric Science Department

Mindy Hill

Colorado State University Center for Environmental justice

Re: Proposal for EPA grant entitled "Enhancing Monitoring of Air Toxics and Air Quality Education in Underserved Communities in Northern Colorado"

The Sierra Club Poudre Canyon Group (PCG) supports the grant proposal submitted to the Environmental Protection Agency (EPA) entitled "Enhancing Monitoring of Air Toxics and Air Quality Education in Underserved Communities in Northern Colorado." The PCG will also cooperate in participatory planning, implementation, and evaluation of air quality monitoring and other activities funded by this EPA grant.

PCG supports this proposal because it will expand air quality monitoring (AQM) in priority disproportionately impacted and underserved communities; expand public participation in identifying and addressing air quality issues and priorities, especially in disproportionately impacted and underserved communities; and foster and strengthen cooperation among stakeholders who can effectively advocate for air quality enforcement actions needed to improve and protect air quality. By targeting air quality monitoring and expanding public participation in disproportionately impacted and underserved communities, this proposal provides strategic action to improve air quality, which will provide health benefits for its residents, especially those who suffer negative impacts from racial and economic injustices, and who often disproportionately suffer with the health burdens associated with poor air quality.

PCG will collaborate in efforts to engage communities to monitor air quality, address air quality issues, and improve air quality, by actively engaging in:

- participatory planning, implementation, and evaluation of air quality monitoring and other activities, with priority to identifying, engaging and helping disproportionately impacted residents and underserved communities;



- a Monitoring Advisory Group and other participatory mechanisms that engage local communities in air quality monitoring and reporting, broaden understanding of air quality issues, and advocate for improving air quality including timely and effective enforcement actions;
- a participatory process for developing and refining guidelines for deployment of AQM equipment and other resources; and for testing innovative approaches to leverage and utilize existing air quality monitoring expertise and resources;
- disseminating information, hosting events, networking with key stakeholders, and other activities aimed at engaging communities impacted by air pollution to address air quality issues;
- fostering relationships with impacted communities regarding cooperation in AQM, including those with known health problems caused by or associated with air pollution;
- development of public, user-friendly reporting of air quality data, to enable communities to monitor their own air quality, and a system for timely dissemination of alerts to impacted communities when emissions thresholds are exceeded;
- development and sharing of informational materials for increasing community understanding of AQM, air quality issues, and community response options;
- participatory policy dialogue regarding AQM data standards and evidence standards, related to practical community participation in improving air quality;
- participatory assessment of AQM activities and evaluation of results.

For many decades, the Sierra Club has raised attention to air pollution and air quality issues, and advocated for clean air. The local Sierra Club Poudre Canyon Group has actively strived to broaden public understanding of air pollution in northern Colorado, especially related to the outsized role of oil and gas development and fossil fuels in localized and regional air pollution which has resulted in negative health and environmental impacts, as well as incalculable damage to Earth's climate with increasing local and regional costs. Drawing on the knowledge and commitment to environmental justice of over 1500 members in Larimer and Weld Counties, PCG actively cooperates with other local organizations and community members, and engages with local governments in Larimer County and Fort Collins, to address air quality issues and advocate for necessary actions to reduce air pollution and improve air quality. PCG has actively participated in numerous collaborative efforts and public meetings, testified in hearings before City councils and the Larimer County Board of County Commissioners, and engaged in public policy processes such as formulation of regulations. PCG actively connects community members to policy makers and agencies responsible for air quality, to enable people's voices and concerns to be heard in the ongoing struggle to reduce air pollution and improve air quality.

Coloradoans are ardent protectors of our state's environment, its natural resources, its beautiful landscapes, waters, and blue sky – and Coloradoans *WANT CLEAN AIR*. Communities suffering from harmful air pollution want real and significant improvement in air quality. These



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communities need enforcement grade quality AQM that can produce evidence sufficient for regulatory or other action that reduces air pollution and improves air quality.

Environmental justice and improving air quality are high priorities to PCG, which can be addressed by implementing comprehensive local and regional air quality monitoring and expanding public engagement in disproportionately impacted and underserved communities which suffer poor air quality, and supporting effective advocacy for action to reduce air pollution. PCG also sees AQM activities and results from this EPA grant as contributing to a broader comprehensive framework for air quality monitoring and air quality improvement that includes near-source monitoring and a network of continuous near real-time monitoring. To that end, PCG is committed to participating in a comprehensive multi-stakeholder program for improving air quality in communities and regionally in northern Colorado.

PCG looks forward to collaborating with the City of Fort Collins, Larimer County, Colorado State University, scientists, risk assessors, engineers, policy makers, and other experts, and our impacted local communities in air quality monitoring and other activities enabled by this EPA grant, and cooperating in other ongoing and future efforts to reduce air pollution and improve air quality.

Sincerely,

Megan Thorburn, Chair, and Doug Henderson

Sierra Club Poudre Canyon Group