‘What’s In Our Air?’ webinar, February 10, 2022
hosted by Longmont Climate Community
by Rick Casey, 2/11/22, for the Larimer Alliance

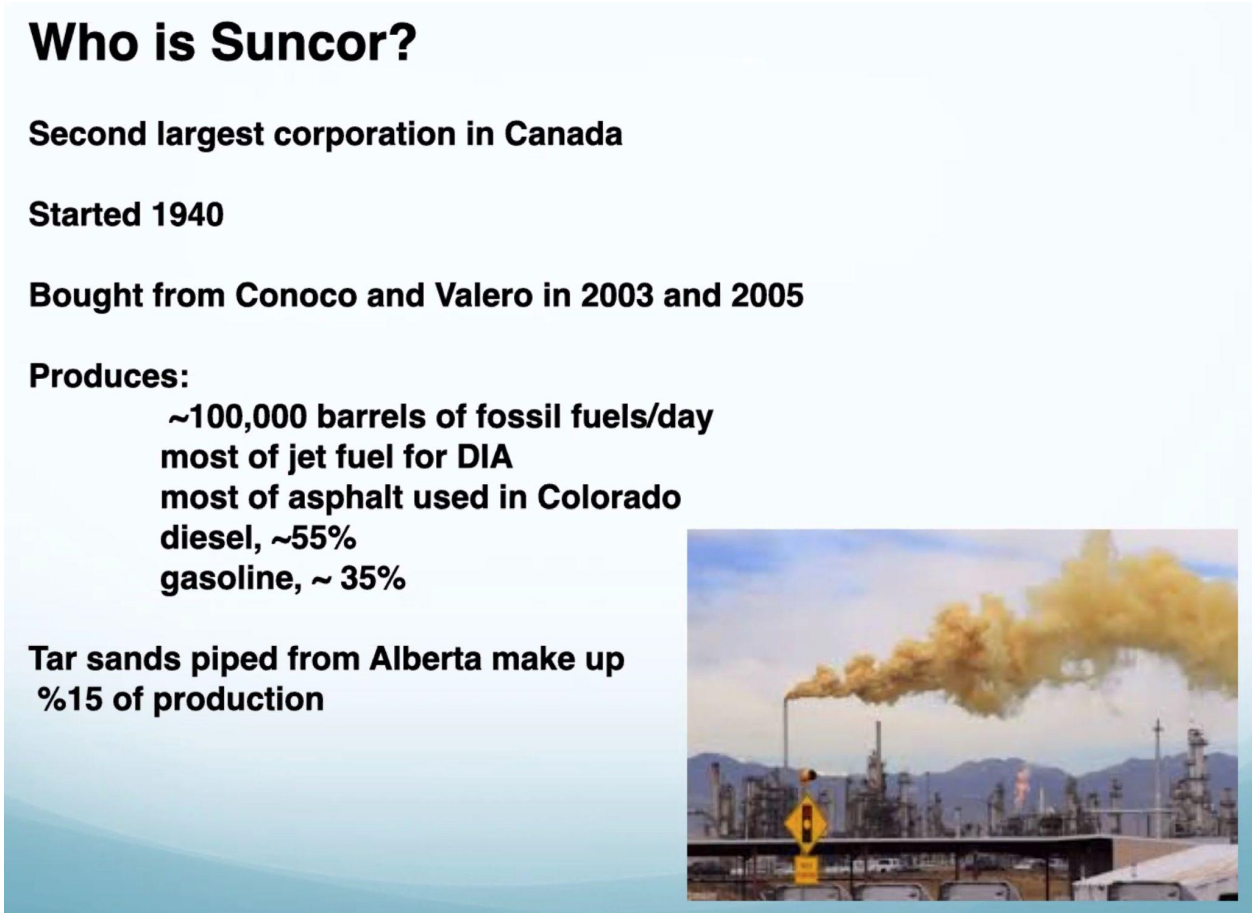
This was a zoom meeting, which was in preparation for some time. It was focused on discussing the Cultivando Project, which is meant to help the residents near the Suncor refinery in Commerce City, which have been suffering from its polluting the surrounding environment for decades.

38 participants, including Mike Foote, Detlev Helmig, Phil Doe, Andrew Klooster
Moderators: Karen Dike, Lynn McClaine, Mitzi Nicoletti, Mike Bellmont, among others
website: https://longmontclimatecom.wixsite.com/longmontclimatecommu

Started w/ a 9 minute video that focused on the residents who live in areas afflicted by the Suncor refinery…pretty sad. This is on record as one of the most polluted areas in the country (seems like on par with Cancer Alley or Love Canal…)

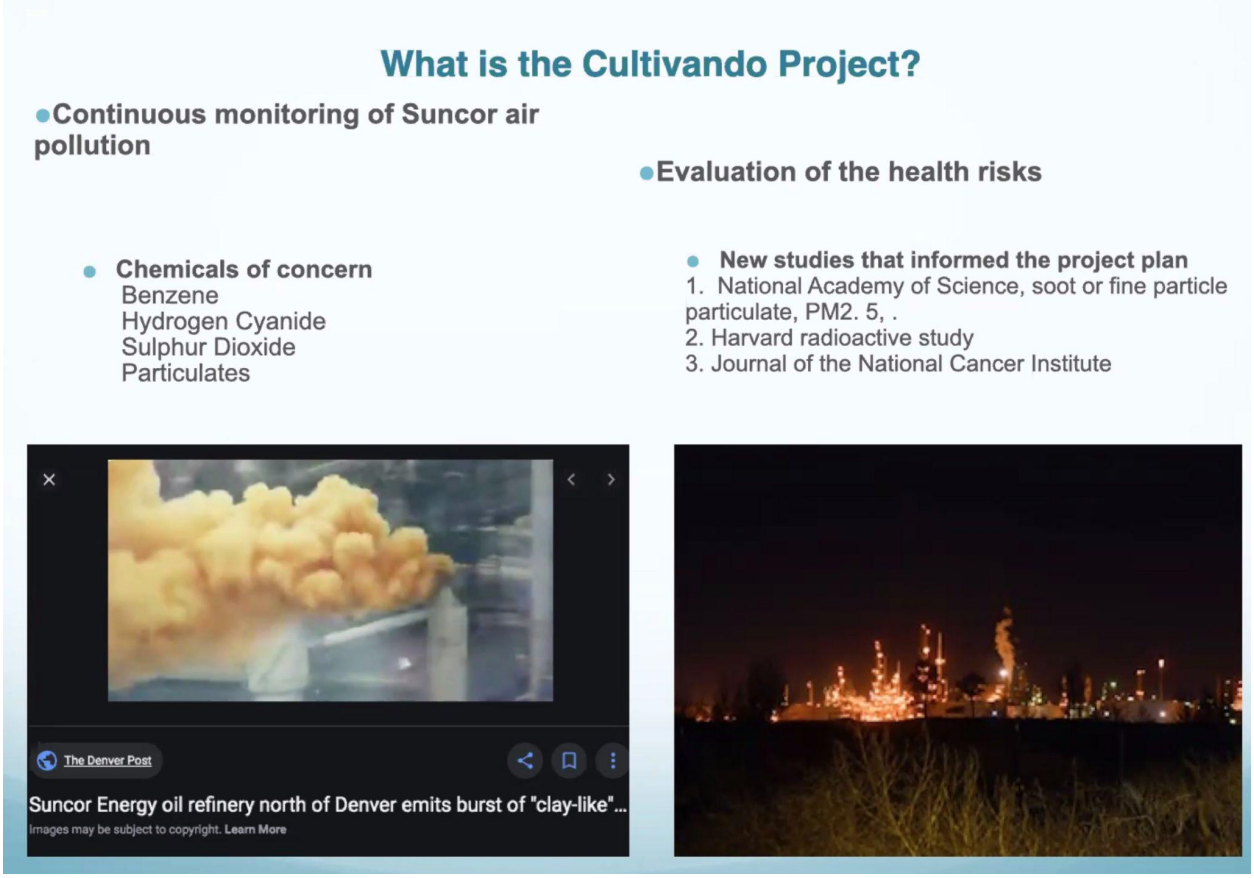
Focused on *Cultivando*, a community organization and an air quality monitoring project that has organized to erect local air quality monitors that report into a website in real time. This went online in fall 2021, and will be operated for 1 year, after which a report will be produced, and presumably will be presented to the state and federal regulators about the matter.

Phil Doe started with a powerful slide deck that conveyed news releases that condemned Suncor pretty conclusively:



Upshot: SUNCOR is a major source of extremely toxic chemical pollutants. 15% of its oil comes from bitumen, the oil from Canadian tar sands, the dirtiest form of oil, the most destructive to extract, and likely the most hazardous to transport (“oil bomb” trains).

About the Cultivando Project:

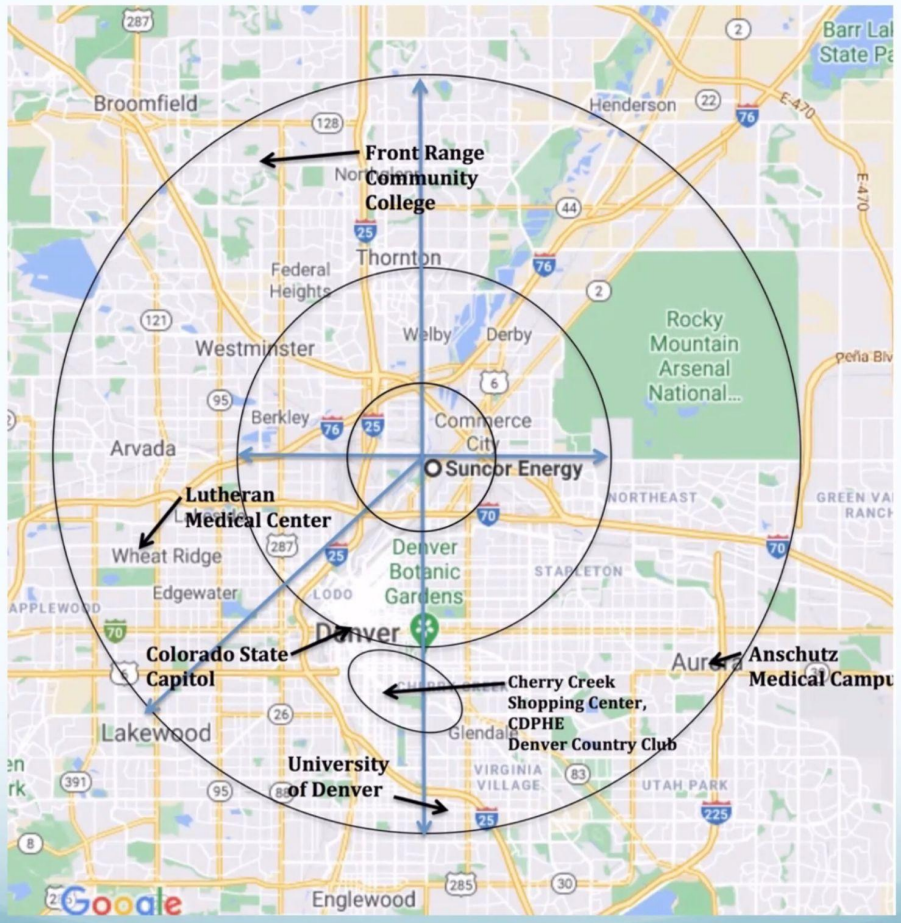


Suncor is the 2nd largest polluter in the state, officially; the #1 spot is held by the Xcel's Comanche coal-fired plant in Pueblo; but it does not run all the time. Suncor runs almost 24x7x365….so it's really the #1 polluter in the state in terms of impacts on people.

It is *extremely* poisonous….Phil's talk covered the poisons it emits, which are enormous…the chemicals are the same used in past chemical warfare…and the past incidents that have occurred, which have at times caused the evacuation of areas within a 2 mile radius, sounded horrifying.

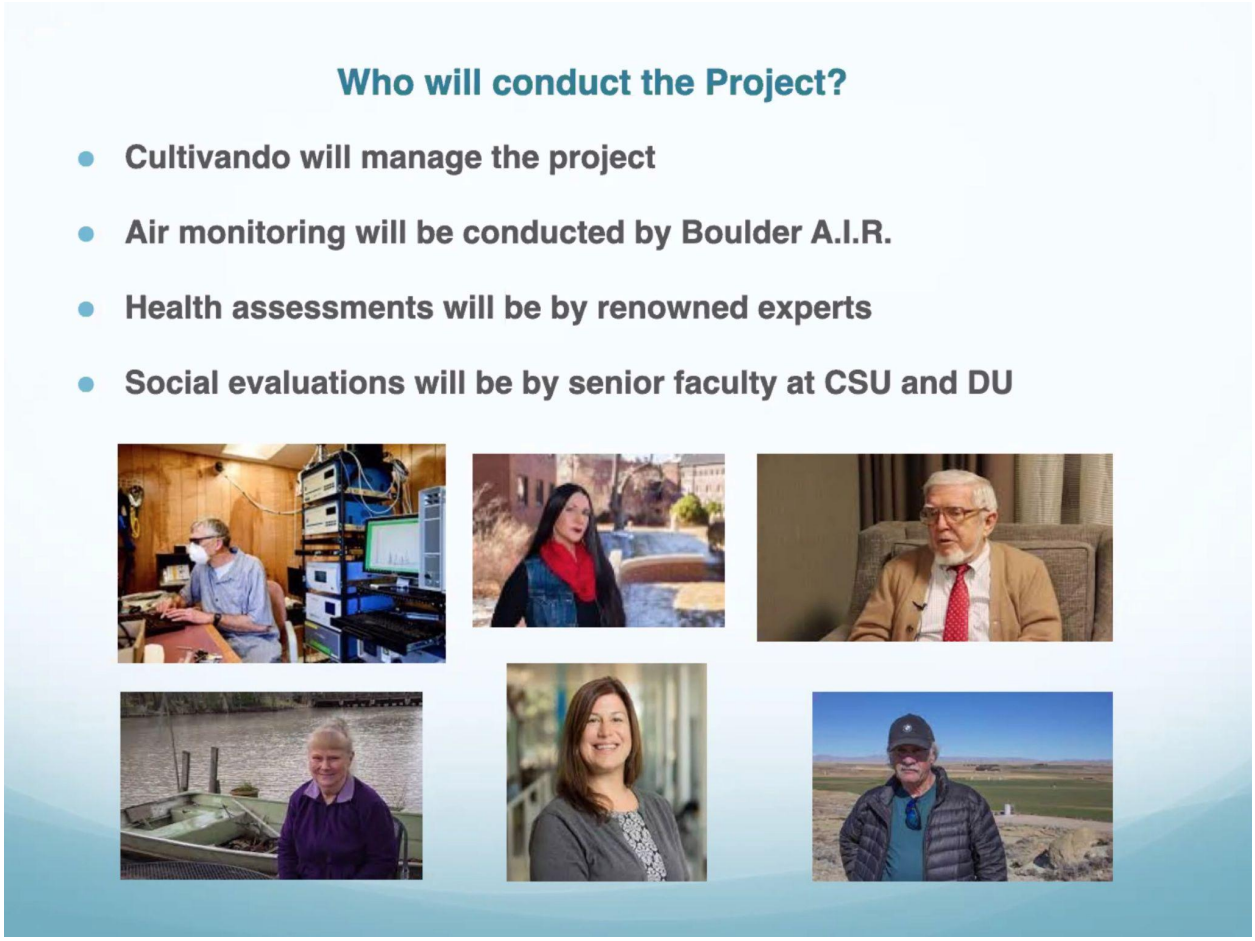
The following slide shows how much Suncor impacts the Denver area: I think the circles are 2, 5 and 10 mile radius.

- 5-10

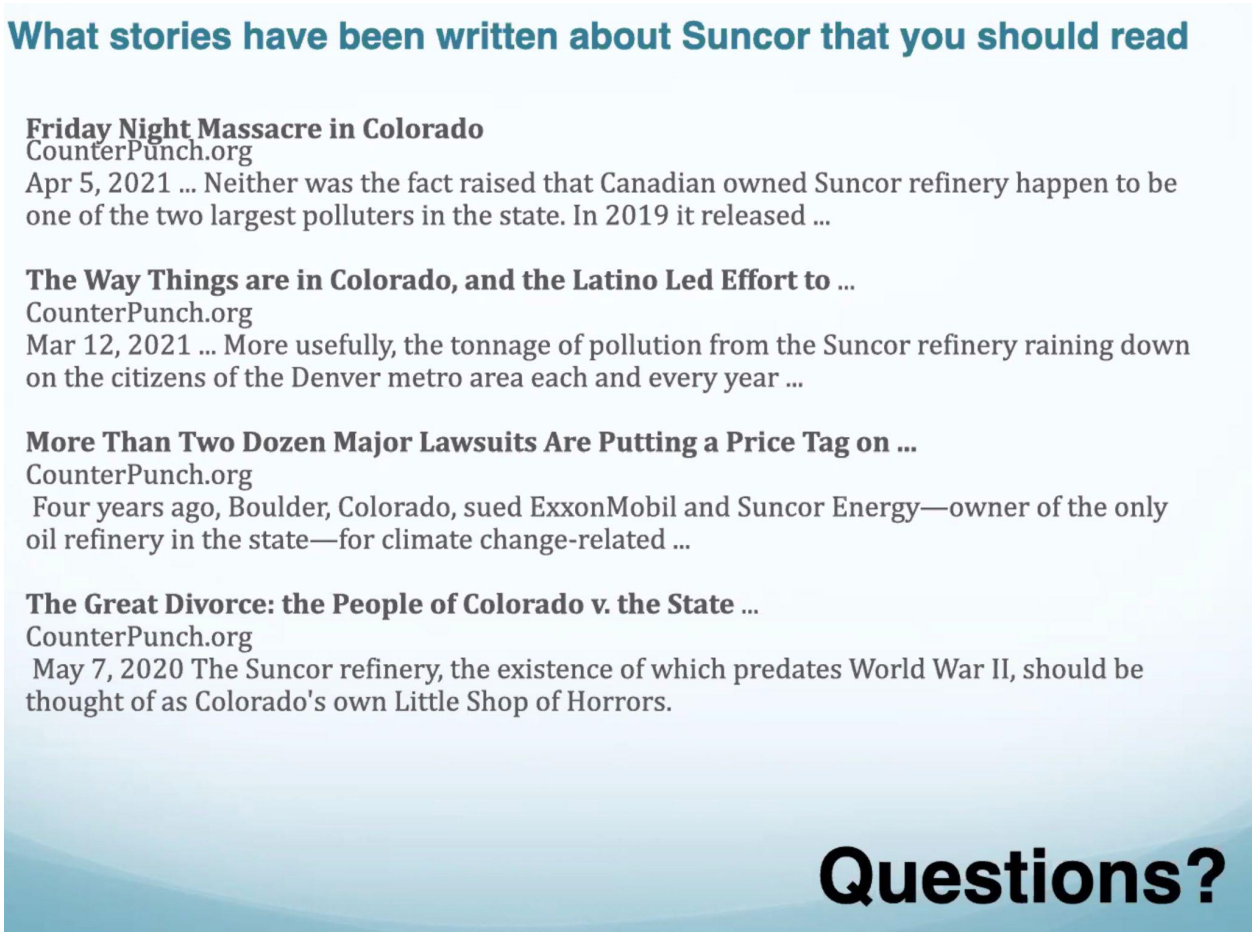


The 10 mile radius includes about 120K people.

This was followed by a description of the Cultivando Project:



Next to last slide from Phil (I think he wrote all of the articles):

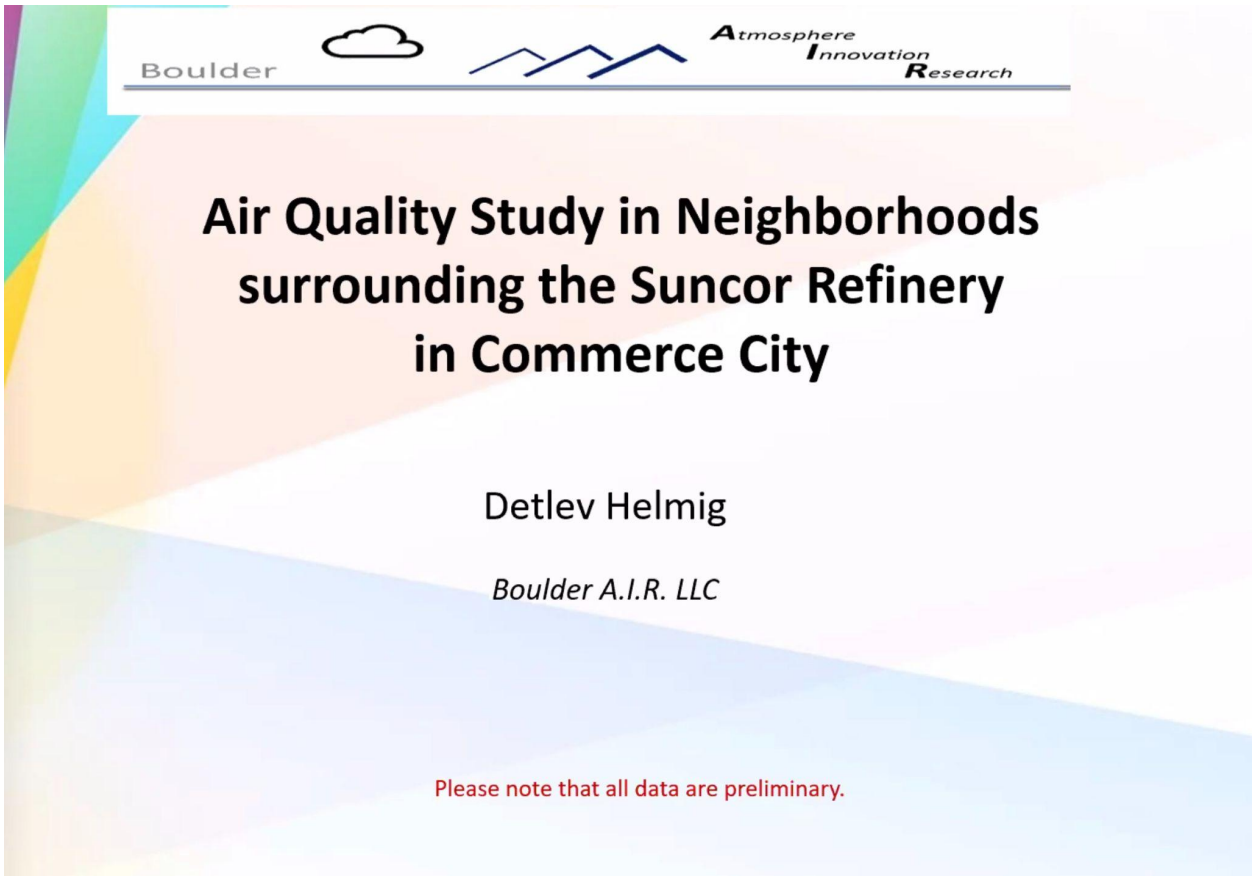


Actual last slide, who supported the project:

Who supports it and why?

- Richard Lamm, former Governor, Colorado
- Father Jorge de Los Santos Nuestra Señora Madre del la Iglesia/Our Lady Mother of the Church
- Eva Henry, Adams County Commissioner
- League of Women Voters – State of Colorado
- Colorado Health Foundation
- Colorado Latino Forum
- GES Coalition Organizing for Health and Housing Justice
- Colorado Businesses for a Livable Climate
- Public Employees for Environmental Protection
- Moms Clean Air Force
- Catholic Network
- I-70/Vasquez Blvd Superfund EPA Community Advisory Group
- Earthworks
- The Climate Mobilization – Colorado
- Fort Collins Sustainability Group
- Colorado Citizens for a Livable Climate
- What the Frack?! Arapahoe
- Eco Justice Ministries
- Northern Colorado Community Rights Network
- 350 Colorado
- Energy and Environmental Initiative of the Colorado Democratic Party
- Call to Action Colorado
- Transformative Leadership for Change
- Colorado Jewish Climate Action
- Be The Change - Colorado

Next to speak was Dr Detlev Helmig:



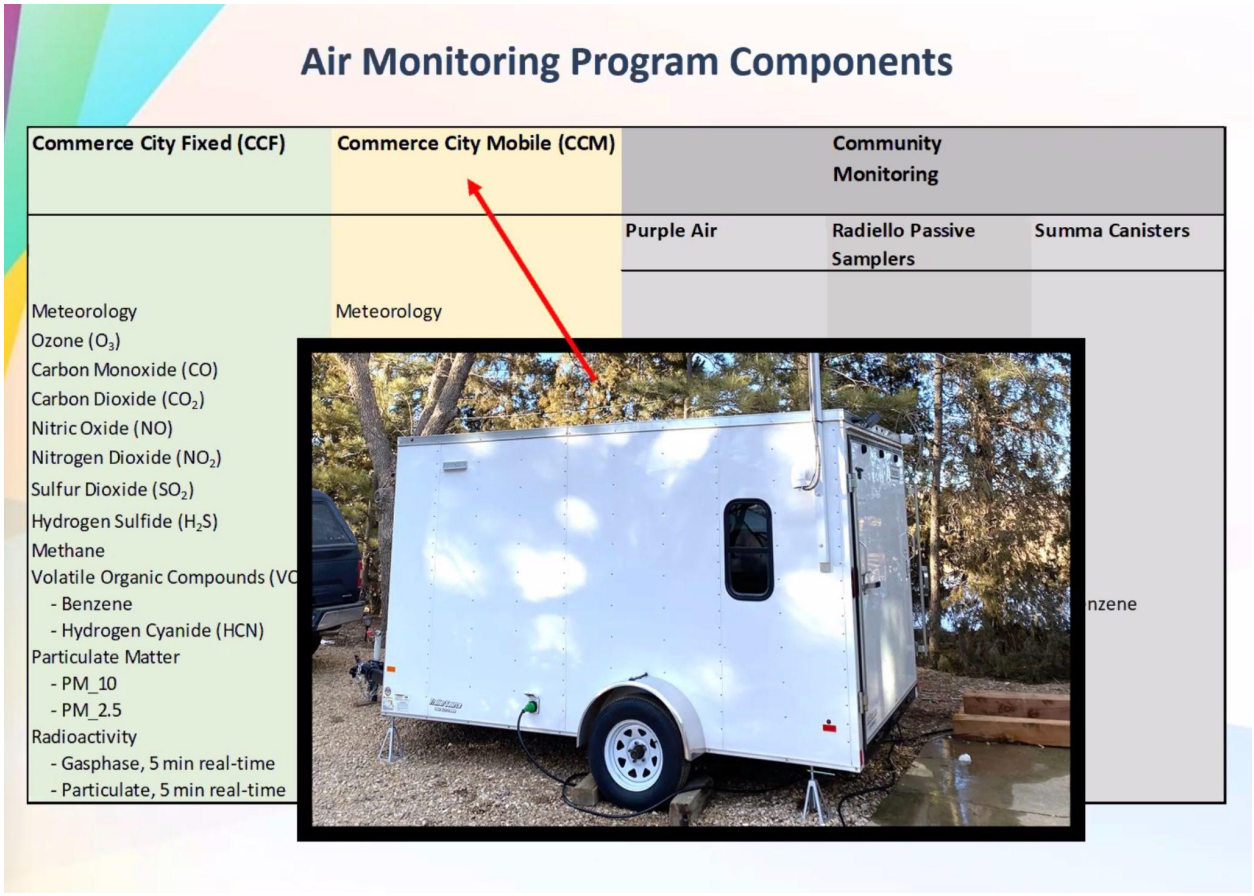
Detlev's comment: this is probably the most comprehensive air quality monitoring project ever done in Colorado.

Air Monitoring Program Components

Commerce City Fixed (CCF)	Commerce City Mobile (CCM)	Community Monitoring		
		Purple Air	Radiello Passive Samplers	Summa Canisters
Meteorology	Meteorology			
Ozone (O_3)				
Carbon Monoxide (CO)				
Carbon Dioxide (CO_2)				
Nitric Oxide (NO)	Nitric Oxide (NO)			
Nitrogen Dioxide (NO_2)	Nitrogen Dioxide (NO_2)			
Sulfur Dioxide (SO_2)				
Hydrogen Sulfide (H_2S)				
Methane				
Volatile Organic Compounds (VOCs)	(VOCs)		VOCs	VOCs
- Benzene	- Benzene		- Benzene	- Benzene
- Hydrogen Cyanide (HCN)				
Particulate Matter		Particulate Matter		
- PM_10		- PM_10		
- PM_2.5		- PM_2.5		
Radioactivity				
- Gasphase, 5 min real-time				
- Particulate, 5 min real-time				

Note particularly the radioactive targets. Detlev believes this is the first air quality project that has ever measured them.

Next 3 slides show the monitoring equipment:



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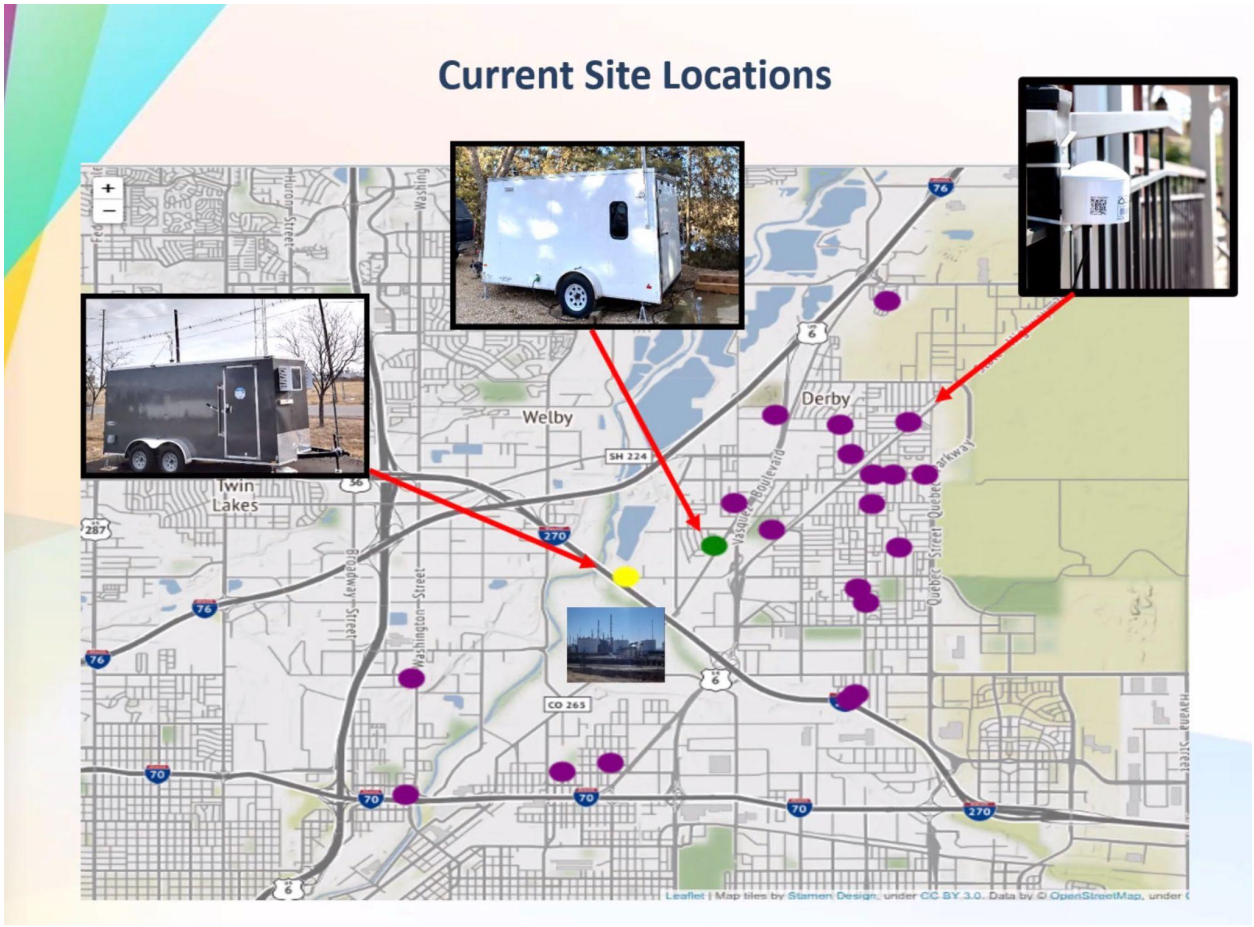
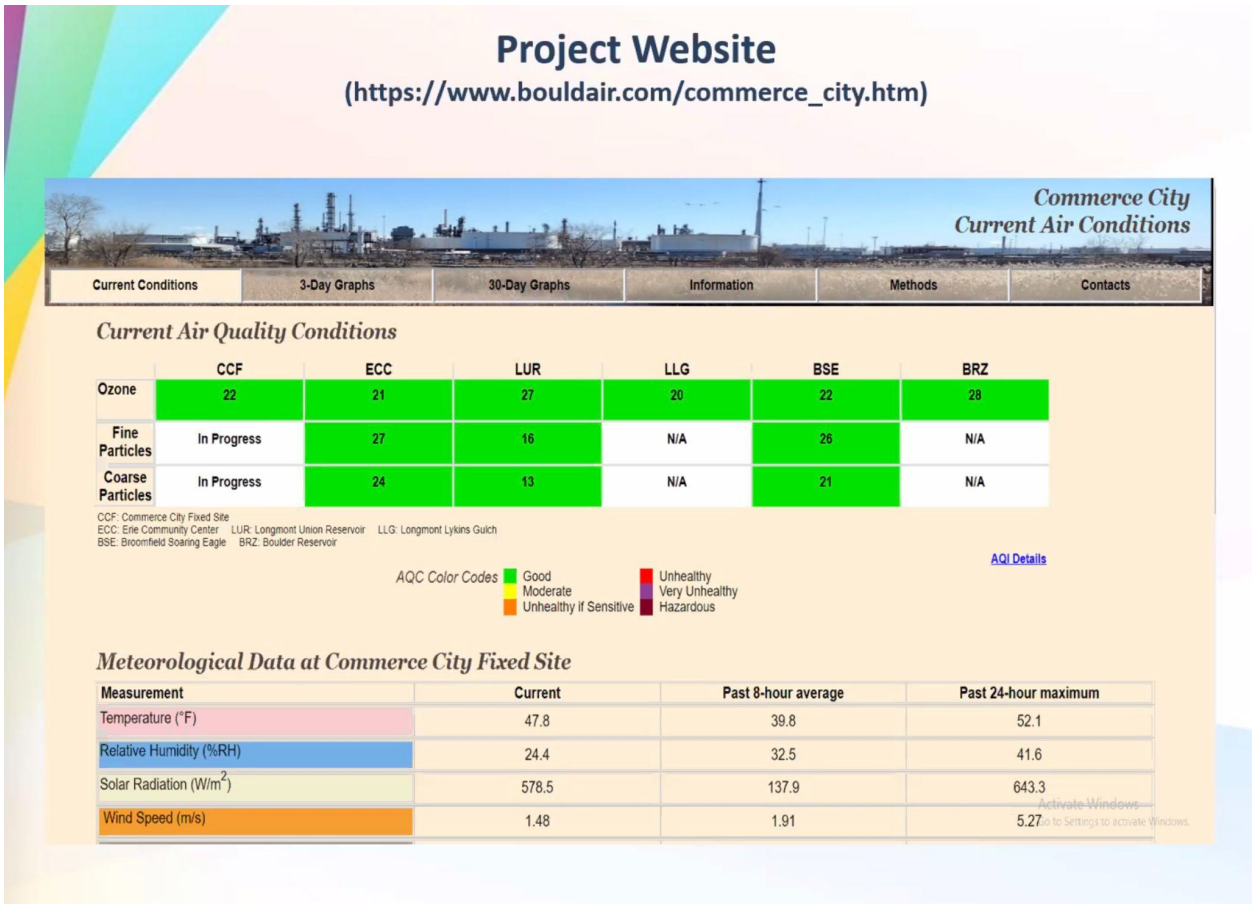
Nitrogen Dioxide (NO_2)	Nitrogen Dioxide (NO_2)			

This shows the locations of the monitors:



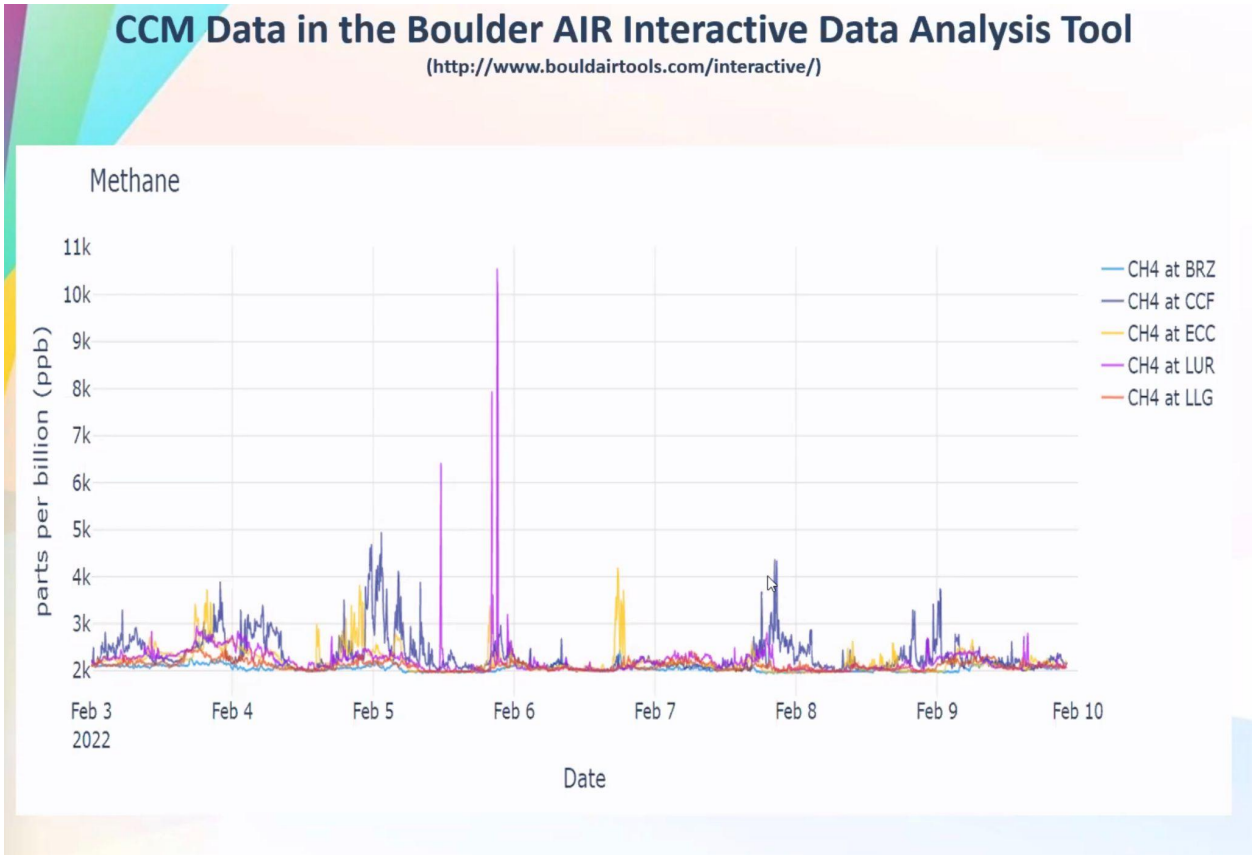
and this is the web portal for the real-time data:



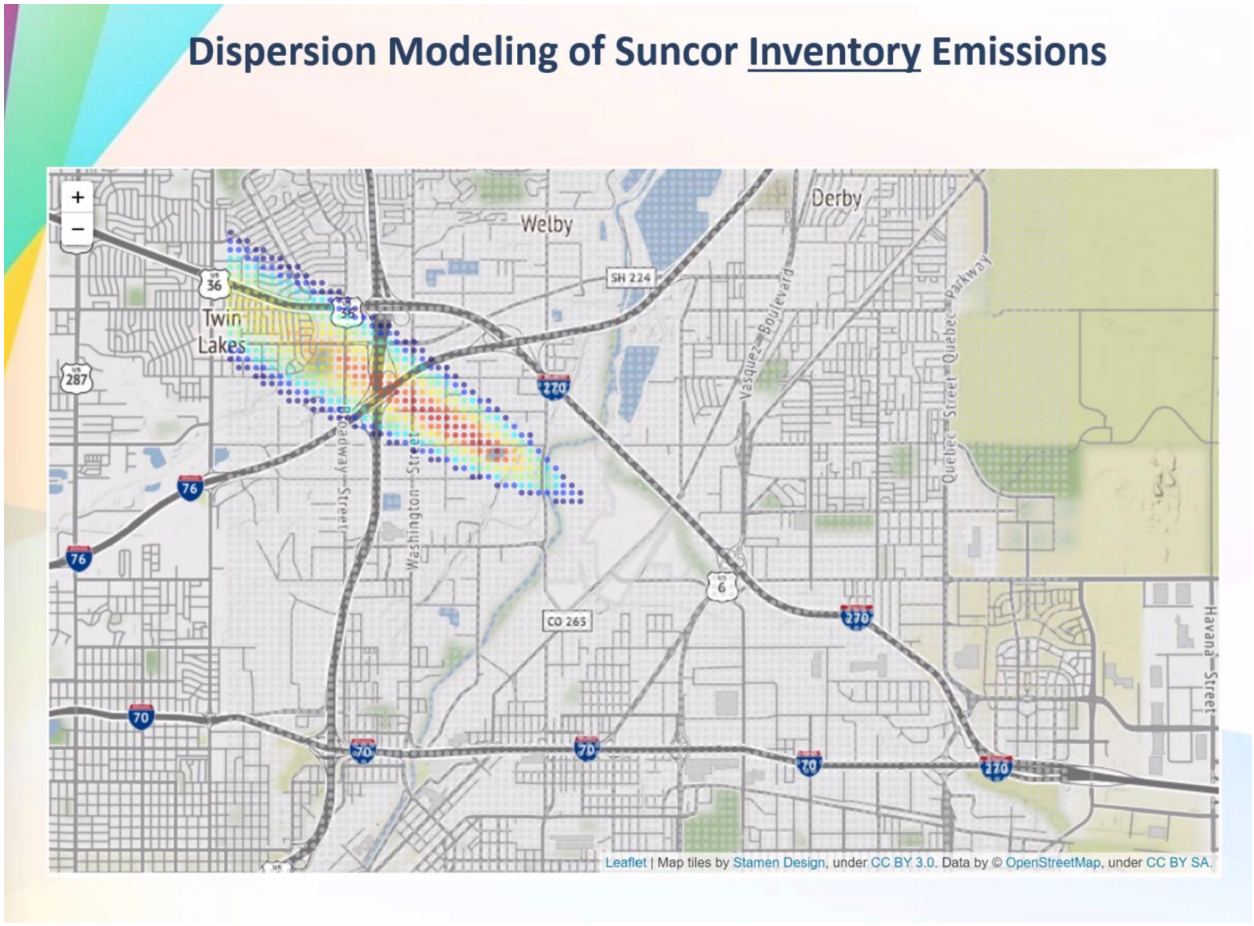
	CCF	ECC	LUR	LLG	BSE	BRZ
Ozone	22	21	27	20	22	28
Fine Particles	In Progress	27	16	N/A	26	N/A
Coarse Particles	In Progress	24	13	N/A	21	N/A

Measurement	Current	Past 8-hour average	Past 24-hour maximum
Temperature (°F)	47.8	39.8	52.1
Relative Humidity (%RH)	24.4	32.5	41.6
Solar Radiation (W/m^2)	578.5	137.9	643.3
Wind Speed (m/s)	1.48	1.91	5.27

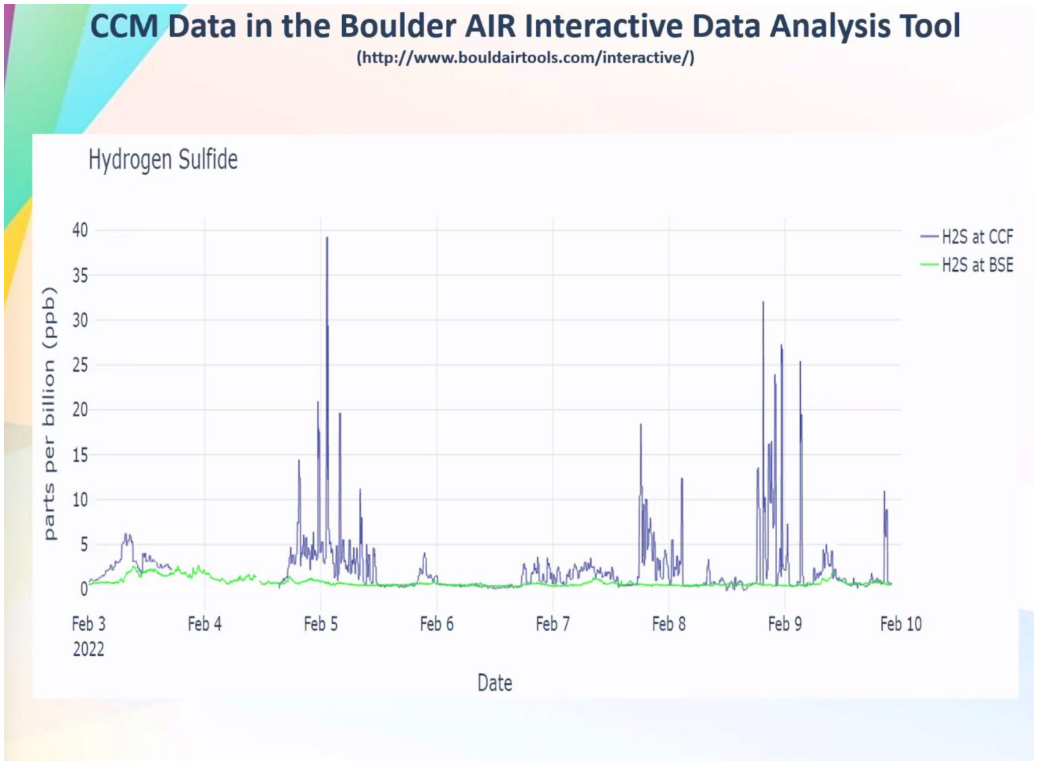
This graphic that combines all BoulderAIR monitors on one graph, showing CH4 (methane):



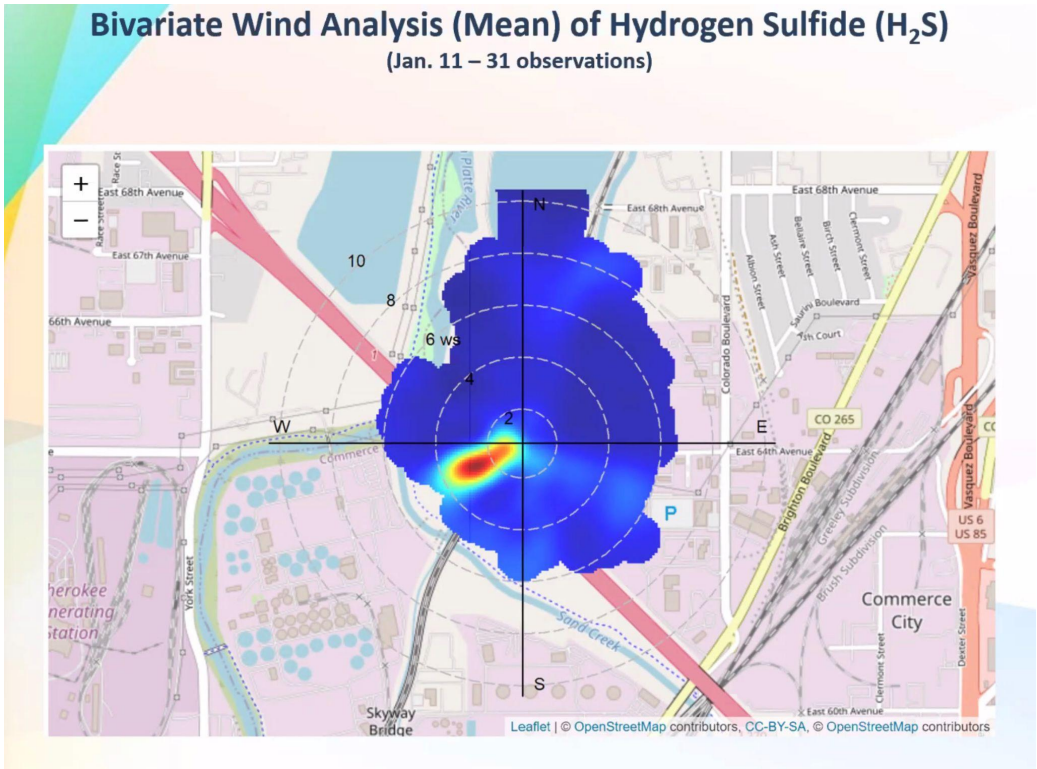
This shows the modeling of air dispersion from Suncor, which combines stationary pollution detection with wind data (not real time):



A specific graph about hydrogen sulfide (a ‘rotten egg’ smell):



A visualization of how H2S (hydrogen sulfide) affects neighborhoods near Suncor:



Detlev emphasized this is all preliminary, and the entire system will become fully operational within the next couple of months.

Next came Andrew Klooster, from Earthworks.
He showed a video that shows how the Suncor refinery resembles something like a forest fire when shown through his FLIR camera:

Next came Mike Foote. (Mr Foote was one of the primary authors of the historic legislation in SB-181, the 2019 law that changed the mission of the COGCC and the role of oil and gas industry in Colorado.) He gave an update on his recent report that was released, on how well the COGCC is doing, 2 yrs after SB-181 was passed. He characterized it as “perilous”: they’ve not made much progress, but all hope is not yet lost. He addressed several targeted areas: Permitting philosophy, Cumulative Impacts, Setback Rules, among some others.

Foote put a good deal of emphasis on cumulative impacts, summarized as: “What is too much?” That is the question which the COGCC has NOT answered, but they HAVE the data to address the question. (Phil Doe has long railed on this point…)

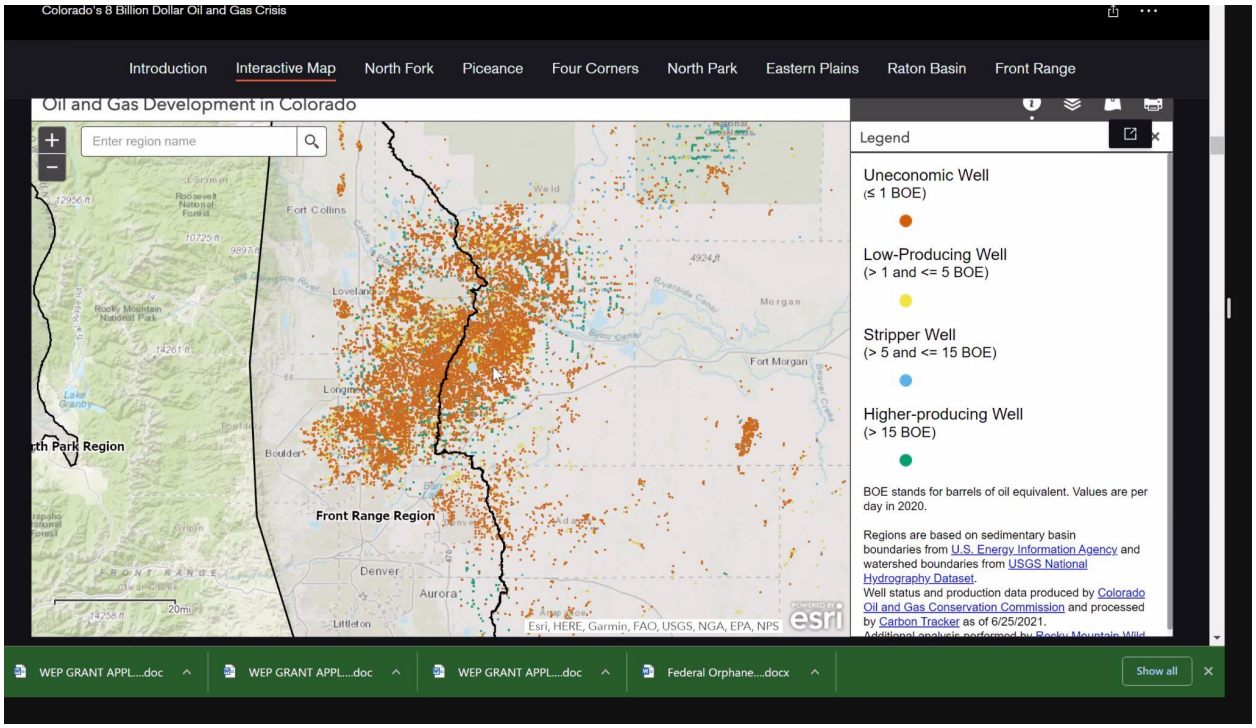
Enforcement: some actions have been taken; but is more like ‘2 steps forward, 1 step back’ approach. There are still too many complaints from residents, in jurisdiction after jurisdiction, about noise and emissions (smells & health hazards from poisonous gasses).

Clearly, Mr Foote is keeping tabs on what has been going on, and is not afraid to speak out against the COGCC.

He specifically mentioned that a “clean-up bill” is a distinct possibility, as has been done in the past. (That was hopeful to hear from an experienced legislator.)

Next was Jonathan Singer, from LOGIC.

He showed some impressive slides based on data of the uneconomic wells (< 1 barrel/day) in the state that LOGIC has compiled from data obtained from the COGCC:



This will be used in future negotiations with the COGCC.

He then went on to describe how the O&G companies collude on non-competitive leasing, which dramatically reduces revenues to the public, by agreeing to low ball their bids prior to bidding. He said John Hickenlooper was a supporter of the portions of this in the Bill Back Better Bill (a rare example of Hickenlooper actually taking part in action against the O&G industry).

Singer’s biggest point was illustrating how local organizers and legislators are taking up the spirit of SB-181, which promises future progress on its implementation.

There followed a Q&A session, starting about 7:50pm.

Mayor Joan Peck (of Longmont) spoke passionately about a bill that originated from Mike Foote, though he’s no longer in government) that puts the onus on the industry to prove it is not doing harm. Foote commented that the bill attempted to implement the Precautionary Principle, but it came to nought.

Other speakers answered the Q&A, but I did not try to take notes on everything.

Jonathan Singer specifically gave a shout out to the Larimer Alliance & LOGIC's appreciation of their efforts.

Phil Doe addressed a question about upcoming 2 permits about Suncor, 1 air, 1 water, which needs public comment. The APCC needs better management; a pretty "sleepy place".

Jonathan Singer mentioned upcoming elections in Erie, and how the right candidates need to be supported. Mike Belmont commented how O&G is supporting candidates at the local level, so that needs to be counter-acted.

Andrew Klooster mentioned how his videos do not seem to make an impact on the air quality regulators. It is only if a staff member from their office, who uses the exact same equipment, makes the recording that it makes a difference.

Near closing, Detlev made a convincing comment about that what is really needed are measurements made 'at the smokestack.' All atmospheric measurements are made at a distance, under varying climatic conditions. *So, what is REALLY NEEDED are sensors placed at the point of origin!* [AUTHOR'S EMPHASIS]