



Sustainability Planning & Oil and Gas Update

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City Council Meeting November 7, 2022

Sustainability : 4Q Internal Operations

Municipal Operations Data Analysis

- Fleet Analysis
- McKinstry Facility Assessment
- Trash/Utility Use/Costs
- Staff Vetting EPAC Recommendations
- Energy Disclosure Compliance – December 1, 2022
(Buildings > 50,000 sq. ft. – FTK)

Engagement

- Hosted Booth Employee Health Fair (LEDs and Healthy Home Products)
 - LEDs were distributed that will yield an annual 448,000 kWh energy reduction and \$ 4,380 savings.

Planning: 2023 Employee Challenges

Greenlight a Vet Campaign

- Nov. 7- 13, 2022
- November 11 – Veterans Day
- 4 million citizens and over 3,000 cities and counties show support for our veterans
- Green: color hope, renewal and moving forward



Sustainability - 4Q External

Engagement

- Community Survey Results
- EPAC Draft Resolutions & Goals
- Business & Industry Workshop
- Community Meeting – Vetting
- Intercept Interviews
- Modeling
- Low Impact Development (LID)
 - Guidance document in development

Planned: Dec 5 Preliminary EPAC Recommendations and Jan 9 Study Session - Report

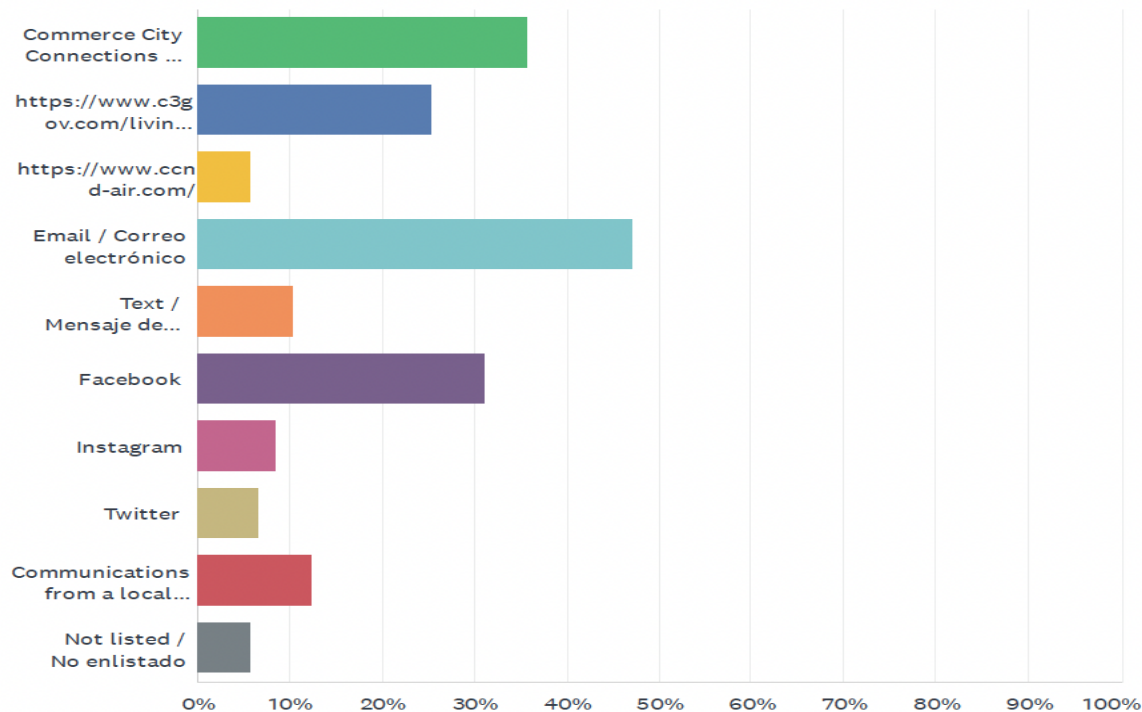
EPAC - Draft Resolutions and Ordinances

1. EPAC as a permanent committee
2. 100% Renewable Electricity Transition
3. Pay-As-You-Throw Modifications/Hauler Reporting Requirements
4. Cardboard Ban (separate out cardboard)
5. Anti-Idling Ordinance
6. EVGo Ordinance
7. Drought Tolerant/Fire Resistant Landscape Amendments
8. Low-Impact Development Amendments

Key Findings - Communitation Preferences

Q12 What is your preferred method to learn more? Check all that apply | ¿Cuáles son sus métodos preferidos para aprender más? Marque todo lo que corresponda

Answered: 106 Skipped: 8



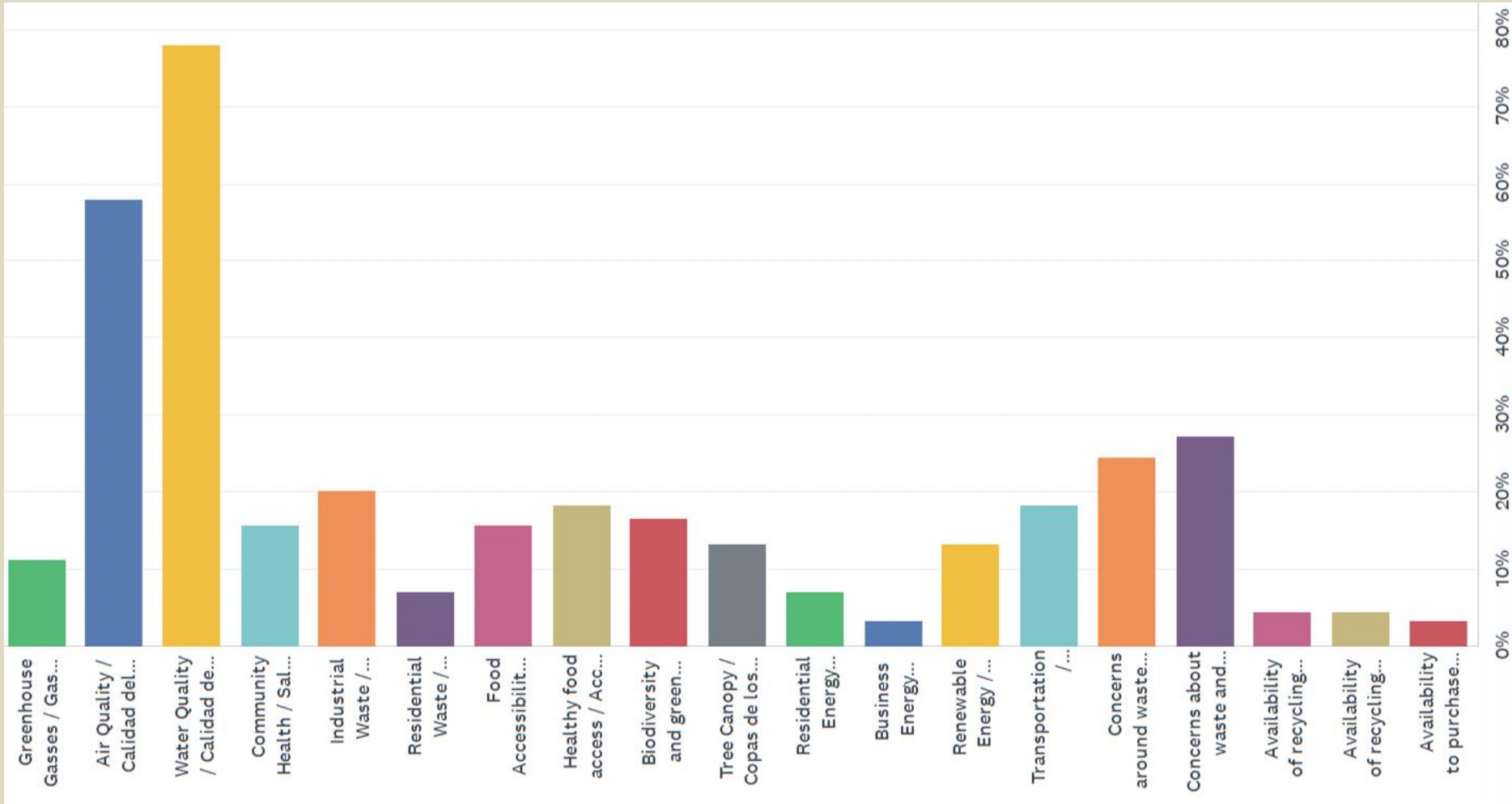
Proposed Solutions

- Taking action to make the air and water safe and high-quality
- Water conservation
- Green infrastructure - solar, green building codes
- More trees, native plants, trails and open space in the south end, and less green lawns.
- Areas set aside for community gardens/food forest. More grocery stores or somewhere to buy fresh food.
- Monitoring, accountability & strict requirements for Suncor, Arsenal, Tower landfill
- Community health clinics/health care facilities, grocery stores, better transportation
- Infrastructure and planning - making things more local to cut down on traffic and support residents/small businesses
- Hiring more experts (arborists, water engineers, etc) at the City
- More knowledge needed - several "I don't know anything about this" answers

Proposed Solutions

- Testing and improving air and water quality to address disease
- More education - information on current quality/effect, ways to keep safe
- Monitoring of Suncor and SACWSD, more inspections and fixing what needs to be fixed
- More supports for those experiencing poverty and homelessness, trash receptacles to help people help themselves.
- Transportation access
- Eliminating barriers to going green
- “Put bias aside, listen to what residents and business have to say.”
- “If you want to do something about the environment, you have to do something about poverty.”

Key Concerns



Key Engagement Learnings - Business and Industry

- Waste industry engaged and supportive of education and increased recycling.
- Water and wastewater providers want to ensure the City collaborates on these efforts.
- Overall interest from industry reps in working with the EPAC and City on these efforts.
- Interest in an incremental approach.

Attendees:

- Metro Wastewater Recovery
- Waste Connections
- Republic Services
- Suncor
- Allied Recycling Aggregate
- Waste Connections
- City Staff
- South Adams County Water District



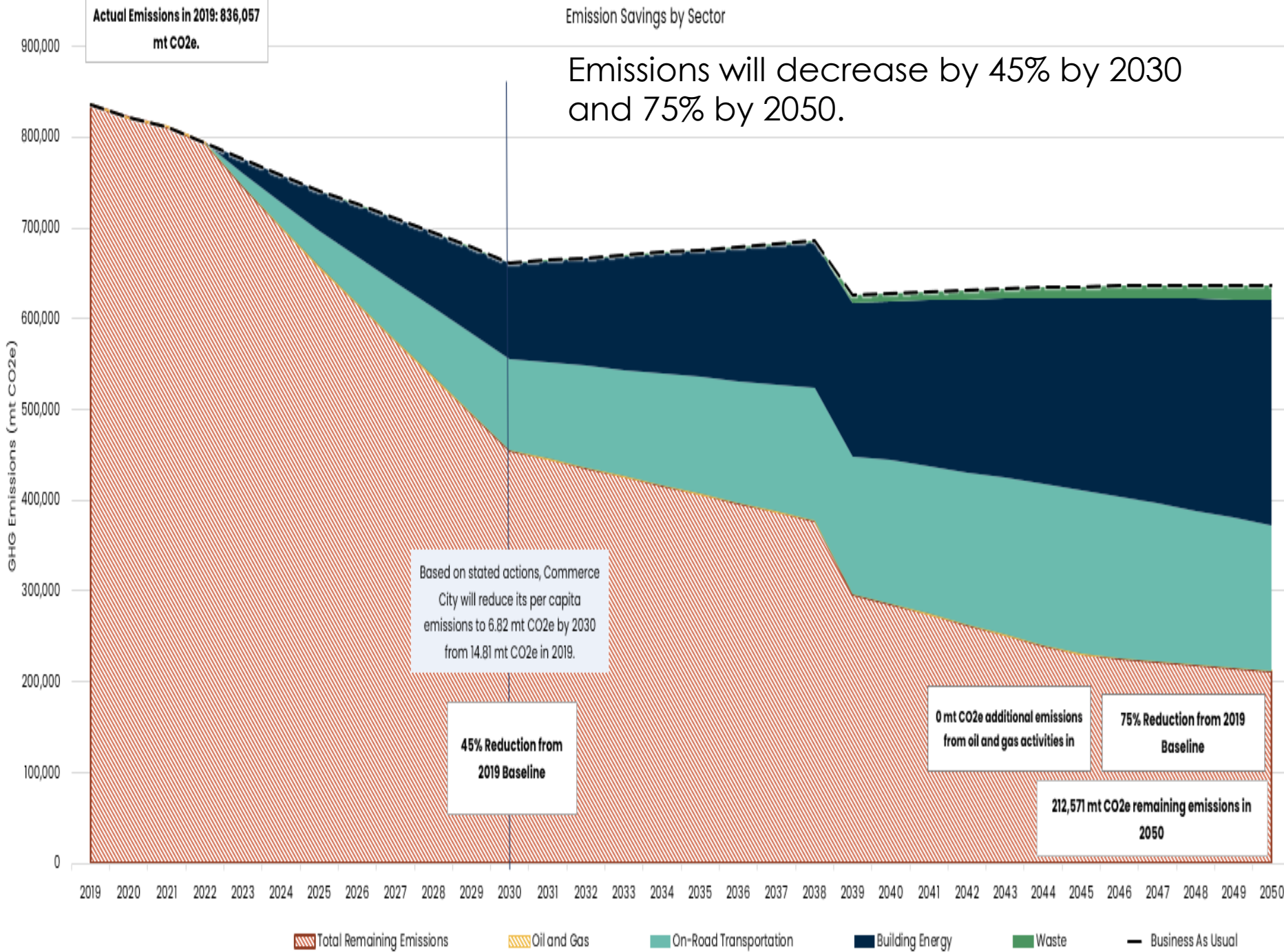
Goals Modeled

Based on the goals below, **emissions will decrease by 45% by 2030 and 75% by 2050.**

- Energy use is reduced by 25% by 2030 and 40% by 2050.
- Electrification is adopted by 15% of new buildings by 2030 and 60% by 2050.
- Rooftop and Community scale solar is utilized by 40% of households by 2050.
- Light-duty vehicles on the road are 30% EVs by 2030 and 75% EVs by 2050.
- Idling time is reduced by 78% by 2030.
- There is a 20% mode shift by 2030 and 50% mode shift by 2050 towards greater use of transit, bikes, walking, etc.
- Waste diversion increases to 85% by 2050.
- Only carbon neutral oil and gas wells are developed within City limits.

Emission Savings by Sector

Emissions will decrease by 45% by 2030 and 75% by 2050.



Modeling Results

- Lotus estimated the impact of the strategies EPAC developed... on GHG emissions in the community. Results are comparative to a business-as-usual case scenario that presumes emissions will increase between now and 2050 due primarily to population growth.
- Results shared today are based on the City's primary business-as-usual emissions, which do not include emissions from the industrial processes sector (i.e., Suncor and similar facilities, which account for over half of the City's GHG emissions in 2019).
 - The model also assumes that in a business-as-usual case scenario, the 46 wells under consideration for approval within City limits will be permitted, and additional wells may be developed between now and 2050.
- Initial goals can be adjusted up or down based on the desired end result of emissions levels, as well as feasibility of achieving the goal.

Engagement - Intercept Interviews

Key Themes :

- Connection between other issues and environment (i.e. housing instability and the amount of trash)
- Need for a transition plan- if Commerce City switches to new (technology, policy, approaches) overnight it could be detrimental for small businesses and the community as a whole - economic and social impacts need to be considered (i.e. electrifying cars)
- Distrust of air/water in Commerce City, not feeling a sense of ownership/ stewardship of Commerce City, even as a long time resident

City Staff Workshop

- Great input on existing City efforts to leverage, departments that want to support this work, and challenges that need to be considered.
- Excitement regarding many strategies identified by EPAC.
- Concern regarding cost and impact of certain strategies on affordable housing developers.
- Consultant team will go through comments and strategies/actions to ensure that EPAC's intent is maintained while the City staff's concerns are addressed to the degree possible.



LEGISLATIVE & REGIONAL LEADERSHIP



National Renewable Energy Lab (NREL)

EPAC, Sustainability Team and community members from Northglenn, Westminster and Commerce City toured NREL and meet with grant administrators and program managers to discuss SLED and SLOPE Programs (i.e. technical and economic development assistance)



Commerce
CITY



Suncor Update



Suncor Air Exceedance Reports

Date	Media Impact	Location/Unit	Summary	Exceedance	Permit Limit	Community Impact
10/14/2022	Air	Plant 1 Main Plant Flare, Plant 1 Flare Gas Recovery Unit (FGRU)	In order to replace a filter upstream of the Plant 1 Flare Gas Recovery Unit (FGRU), the FGRU was taken offline. The gases normally recovered by the FGRU were sent to the Plant 1 Main Plant Flare for safe combustion. Hydrogen sulfide (H2S) is combusted at the flare tip, which results in the generation of sulfur dioxide (SO2) and water vapor	320 ppm H2S in flare gas for a 3-hour average	162 ppm H2S in fuel gas for a 3-hour average	The Commerce City North Denver Air Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event.
10/11/2022	Air	Plant 1 Main Plant Flare, Plant 1 Flare Gas Recovery Unit (FGRU)	There was an increase in gas flow to the Plant 1 Flare Gas Recovery Unit (FGRU) and a subsequent pressure spike, which caused the safety systems on the FGRU to activate and shut down the unit. The gases normally recovered by the FGRU were sent to the Plant 1 Main Plant Flare for safe combustion. Hydrogen sulfide (H2S) is combusted at the flare tip, which results in the generation of sulfur dioxide (SO2) and water vapor	202 ppm H2S in flare gas for a 3-hour average	162 ppm H2S in fuel gas for a 3-hour average	The Commerce City North Denver Air Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event.
10/4/2022	Air	Plant 1 Fluidized Catalytic Cracking Unit (FCCU) C	Two pressure relief devices opened on the refinery steam system. The loss of steam pressure in the No. 1 FCCU resulted in reducing the output of the main air blower, which caused a spike in carbon monoxide (CO) from the unit	623 ppm CO at 0% O2 for a 1-hour average	500 ppm CO at 0% O2 for a 1-hour average	The Commerce City North Denver Air Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event.
9/26/2022	Air	Plant 1 Hydrogen Plant, Sulfur Recovery Unit	While replacing an electrical component within the Hydrogen Plant control system, a safety system trip was inadvertently activated. As a result of the Hydrogen Plant trip, hydrogen was temporarily routed to the flare to maintain safe operating conditions. This additional hydrogen in the flare impacted the Flare Gas Recovery Units' ability to meet flare gas H2S limits.	20.59 lb/hr SO2 (1 hour average, maximum value)	15.68 lb/hr of SO2 (1 hour average) from H-25	The Commerce City North Denver Air Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event.
9/26/2022	Air	Plant 1 Hydrogen Plant, Sulfur Recovery Unit	While replacing an electrical component within the Hydrogen Plant control system, a safety system trip was inadvertently activated. As a result of the Hydrogen Plant trip, hydrogen was temporarily routed to the flare to maintain safe operating conditions. This additional hydrogen in the flare impacted the Flare Gas Recovery Units' ability to meet flare gas H2S limits.	204 ppm H2S in flare gas for a 3-hour average	162 ppm H2S in flare gas for a 3-hour average	The Commerce City North Denver Air Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event.
9/28/2022	Air	Plant 1 Main Flare	A process leak was discovered on a plant fuel gas piping system. To ensure the safety of plant personnel, the line was immediately removed from service. To remove the leaking line from service, refinery fuel gases had to be temporarily routed to the flare system.	325 ppm H2S in flare gas (3-hour rolling average)	162 ppm H2S in flare gas (3-hour rolling average)	The Commerce City North Denver Air Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event.
			A leak developed in the fuel line. The line needed to be isolated and the fuel gas flared to reconfigured the line. Emergency Planning and Community Right to Know (EPCRA)			The Commerce City North Denver Air Monitoring network of sensors within a three-mile radius of the refinery did not detect any levels above the acute health reference guidelines during this event.



Oil and Gas Update



City Oil & Gas Permit Applications

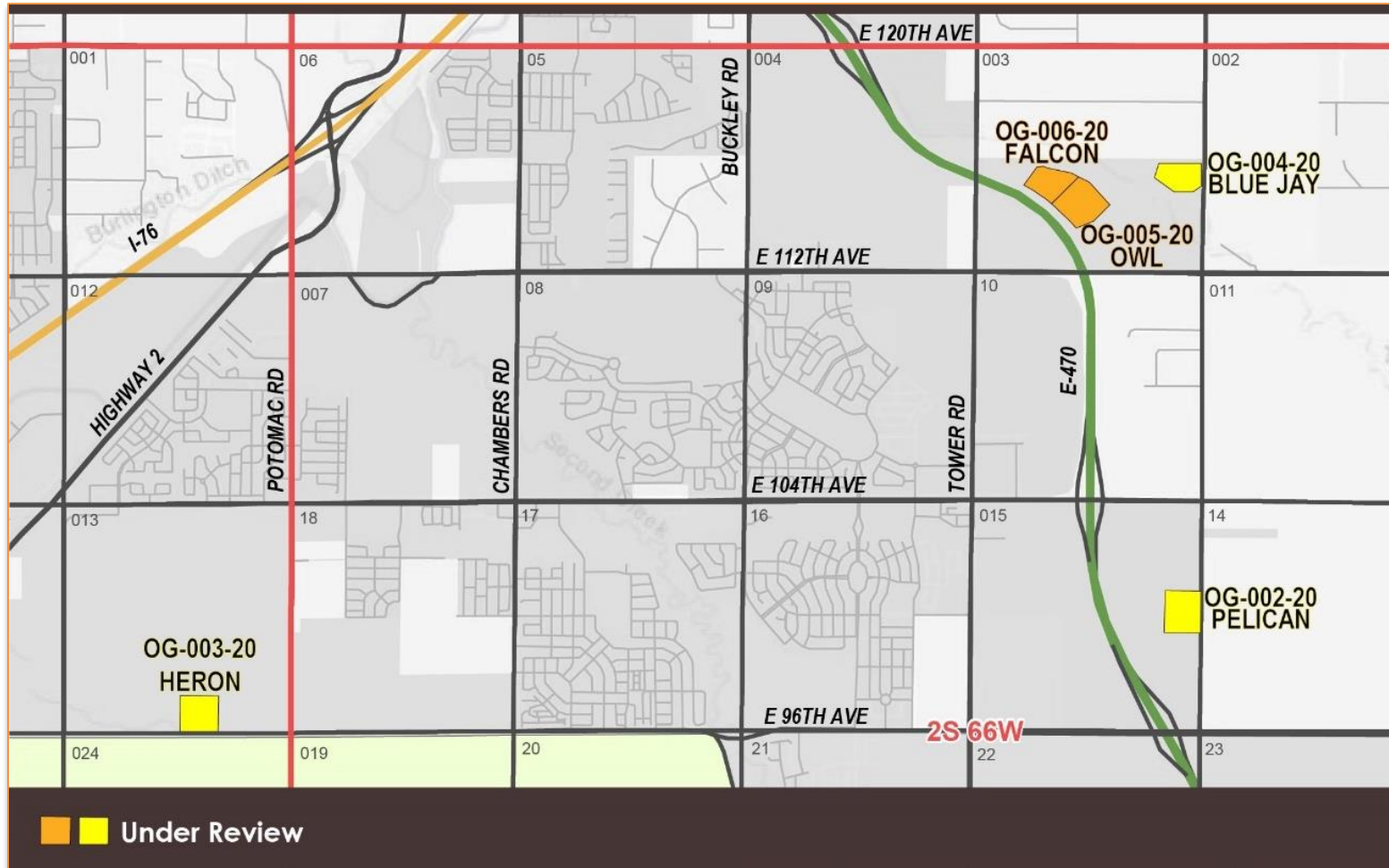
Staff notified Civitas in September that the applications for Anteater, Heron, Owl, Harlo and Falcon were considered inactive. Subsequently, these applications are deemed withdrawn by CD Director and Civitas has been notified.

No. wells associated with the withdrawn applications:

- Heron: 24
- Anteater: 24
- Owl: 16
- Falcon: 18
- Harlo: 32

Total: 114

Blue Jay and Pelican – ONLY ACTIVE SITES



Oil & Gas Permits

Active Permits

Site Name	Case Number	Operator	Council Action Required	Well Count
Pelican	OG-002-22	Extraction Oil and Gas	Conditional Use Permit	28
Blue Jay	OG-004-22	Extraction Oil and Gas	Rezoning	18

State Spacing – No change

Docket No.	Operator	Location	Date	Status
18030 0262	Petro Operating	Sections 10 & 11, T2S R67W	4/16/2018	Approved
18040 0300	Extraction Oil and Gas	Sections 21, 22 & 23, T2S R66W	4/16/2018	Approved
18040 0284	Extraction Oil and Gas	Sections W 26, 27 & 28, T2S R66W	4/16/2018	Approved
18070 0524	Great Western Operating	Sections 32 & 33, T1S R66W	4/16/2018	Approved
19030 0473	Extraction Oil and Gas	Sections 3, 4 & 5, T2S R66W	2/25/2019	Pending
19030 0476	Extraction Oil and Gas	Sections 9 & 10, T2S R66W	2/25/2019	Pending
190300230	Extraction Oil and Gas	Sections 15 & 16, T2S R66W	2/25/2019	COGCC Consent Agenda
		Sections S½ 22, 27 & 34, T1S R66W		Consent Agenda

No Status Changes

Docket No	Operator	Location (Sections)	Intervention Date	Status
180300233	Extraction Oil and Gas	Sections 27 & 34, T1S R66W, Section 3, T2S, R66W	4/16/2018	Withdrawn
180400303	Extraction Oil and Gas	Sections 1 & N ½12, T2S R67W	4/16/2018	Withdrawn
180400304	Extraction Oil and Gas	Sections S ½12 & 13, T2S R67W	4/16/2018	Withdrawn
180600377	Extraction Oil and Gas	Sections 8 & 9, T2S R66W	4/16/2018	Withdrawn
180600433	Extraction Oil and Gas	Sections 11 & 14, T2S R66W	5/25/2018	Withdrawn
180600434	Extraction Oil and Gas	Sections 10 & 15, T2S R66W	5/25/2018	Withdrawn
180600437	Extraction Oil and Gas	Sections 4, 5 & 6, T2S R66W	5/25/2018	Withdrawn
180700555	Great Western Operating	Sections 12 & 13, T2S R67W	7/16/2018	Withdrawn
190600410	Great Western Operating	Sections 1 & 2, T2S R67W	5/17/2019	Withdrawn
190300230	Extraction Oil and Gas	Sections 11 & 12, T2S R66W	2/25/2019	Withdrawn
		Sections 13 & 14, T2S R66W		Withdrawn
190300474	Extraction Oil and Gas	Sections 7 & 8, T2S R66W	2/25/2019	Withdrawn

Oil & Gas Training: Storage Tanks & Air Pollution



Vapor Control Systems & Air Pollution

Reg. 7



Staff is reviewing submittals against Best Management Practices for storage tank and vapor recovery system guidelines issued by CDPHE: Air Pollution Control Division.



Questions?

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City Council Meeting November 2022