



EARTHWORKS

*Dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions.*

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Earthworks opposes the Lowry Ranch Comprehensive Area Plan (CAP) and requests that the Energy and Carbon Management Commission (ECMC) deny the application.

Earthworks is a nonprofit organization committed to working with frontline communities to address the adverse impacts of mining and energy development on public health and the environment while promoting sustainable solutions. For more than 20 years, Earthworks staff have worked on the ground with local partners across the US and the world to expose harmful pollution and to engage local, state, and federal regulators and lawmakers to reform policies and adopt stricter rules that put the lives of people before the interests of industry. Earthworks' optical gas imaging (OGI) thermographers have conducted 1573 surveys of oil and gas facilities in Colorado using FLIR G-Series OGI cameras<sup>1</sup> designed to detect hydrocarbon gasses and have documented numerous leaks, equipment malfunctions, and other possible compliance issues that have been reported to compliance staff at both the ECMC and the Air Pollution Control Division (APCD).

Since the Lowry Ranch CAP was originally proposed, Arapahoe County residents have expressed numerous concerns about the planned development. With this comment, we will limit our discussion to specific concerns about impacts to air quality.

The Lowry Ranch CAP should not be approved because:

1. The proposed development is located within the Denver Metro/North Front Range (DMNFR) area which was recently classified as in Severe nonattainment for the 2008 Ozone National Ambient Air Quality Standards.<sup>2</sup>
2. The ECMC does not presently have rules that address cumulative impacts or a process for sufficiently considering air quality impacts of proposed oil and gas developments.
3. Earthworks research suggests that emissions from pre-production equipment and activities continue to be an issue despite the adoption of voluntary best management practices (BMPs) intended to mitigate impacts and are not fully accounted for by monitoring conducted by operators.<sup>3</sup>

## 1. Ozone Nonattainment

In 2022, the American Lung Association released a State of the Air report that listed the Denver metropolitan area as the 7th worst in the nation for ozone pollution.<sup>4</sup> That

<sup>1</sup> <https://www.flir.com/products/flir-g-series/>

<sup>2</sup> [https://raqc.egnyte.com/dl/dMZr3PcfW/Finalized\\_Severe\\_2008\\_NAAQS.pdf](https://raqc.egnyte.com/dl/dMZr3PcfW/Finalized_Severe_2008_NAAQS.pdf)

<sup>3</sup> <https://cdphe.colorado.gov/oil-and-gas-and-your-health/oil-gas-compliance-and-recordkeeping>

<sup>4</sup> <https://www.lung.org/getmedia/74b3d3d3-88d1-4335-95d8-c4e47d0282c1/sota-2022.pdf>

same year, the ECMC approved three CAPs in the Front Range that were estimated to contribute thousands of tons of VOC and NOx emissions - which are the primary ingredients for the creation of ground-level ozone - to a region that had been in nonattainment for ozone standards for decades. Now, in the 2024 State of the Air report, the Denver metropolitan area has risen to 6th worst out of 228 metropolitan areas nationwide for high ozone, with Fort Collins and Colorado Springs also identified in the top 20 cities for worst ozone pollution.<sup>5</sup>

The ECMC shoulders some of the blame for these unenviable rankings as it continues to approve new oil and gas development without fully considering the impact of that development on ozone pollution. The oil and gas sector is the single largest source of ozone precursor emissions in the nonattainment area, something Governor Polis acknowledged in a letter last year addressed to the ECMC.<sup>6</sup> That same letter also acknowledged that the agency needed to do more to address ozone, and in particular NOx emissions from oil and gas. This is because modeling conducted for the Regional Air Quality Council demonstrated that while Colorado may be making progress in reducing VOC emissions from the oil and gas sector, NOx emissions from the sector are actually projected to increase.<sup>7</sup>

Approving over a hundred new wells on 10 locations in the nonattainment area as proposed in the Lowry Ranch CAP certainly does not help arrest these trends, and is inappropriate when ECMC has not done the needed work to reduce NOx emissions.

Given that the DMNFR area, which accounts for roughly 4 million individuals and almost 70% of Colorado's population, is in severe nonattainment for ozone and that serious efforts to address NOx emissions have yet to be undertaken by the ECMC or the APCD, there is no defensible argument for approving a development of this scale at this time.

## **2. Cumulative Impacts**

The air quality impacts from the oil and gas industry go beyond being the largest source for ozone precursor emissions in the Front Range. For instance, following the passage of HB22-1244, the Colorado Department of Public Health and Environment has been required to gather additional data on air toxics and has revealed that stationary sources within the oil and gas extraction sector account for almost 60% of statewide air toxic emissions.<sup>8</sup> The problem is, context like this is not a primary consideration when the ECMC permits new oil and gas developments.

This is something we are hopeful can be improved with the adoption of rules to address cumulative impacts. As we highlighted in our comments on the Proposed Rules before the rulemaking dates mandated by HB23-1294 were vacated, individual OGD or CAP applications must take this bigger picture into account, such as by considering ambient air pollution levels.<sup>9</sup> Without this level of analysis prior to application approval, the ECMC risks continuing to exacerbate air quality issues in the Front Range.

<sup>5</sup> <https://www.lung.org/research/sota/key-findings/ozone-pollution>

<sup>6</sup> <https://drive.google.com/file/d/1OByLS0TEoJx2SGpqqM4FQlhcxFVIFLc3/view>

<sup>7</sup> <https://raqc.egnyte.com/dl/A3Keg67jKk>

<sup>8</sup> <https://cdphe.colorado.gov/air-toxics/reporting/data>

<sup>9</sup> <https://drive.google.com/file/d/19Jh4sQiN88bEulFgS6ybZ4WU8FEITFOh/view>

Given that the cumulative impact rulemaking has now been pushed back until later this year, it would be inappropriate for the ECMC to approve the Lowry Ranch CAP application without first adopting rules that will allow the Commission to put the proposed development's impacts into the proper context. SB19-181 mandated that the ECMC address cumulative impacts and yet five years have passed and numerous OGDs and CAPs have been approved without rules being in place to fulfill this mandate. This CAP process should not follow that same unfortunate precedent.

### **3. Pre-production Emissions**

Finally, it is important to understand that the current regulatory environment in Colorado is not able to ensure that emissions from pre-production have been mitigated by BMPs in a way that substantially reduces impacts on nearby communities and on regional air quality.

While the ECMC has adopted rules that prohibit certain polluting activities and considers practices and technologies that operators may adopt to reduce emissions, it does not directly regulate sources of emissions. The APCD does directly regulate sources of emissions, but only in a limited context for oil and gas operations. APCD imposes emission controls for stationary sources, which excludes all of the most emissions-intensive equipment and activities during pre-production. This means that many of the sources of emissions during pre-production, especially temporary equipment used during drilling and completions, while not entirely outside of regulatory oversight, are also not directly regulated for air quality impacts. So while we continue to document emissions with our OGI cameras due to incomplete combustion, engine exhaust, or uncontrolled releases during drilling and completions - including on pads where BMPs have been adopted to minimize impacts<sup>10</sup> - there is little recourse for regulatory intervention.

This also means that we continue to have an incomplete understanding of the emissions that occur during pre-production, and the impacts those emissions may have on nearby communities and on regional air quality. In 2020, the Air Quality Control Commission adopted changes to Regulation 7 in response to SB19-181 that were intended to provide greater oversight of these emissions including requirements that flowback be stored in closed containers and a requirement for air quality monitoring to be conducted onsite during pre-production activities.<sup>11</sup> Since the intent of the rule in 2020 was not to set a standard for air quality monitoring but instead to create space for operators to innovate and adapt to emerging technology, operators have been allowed to develop and implement their own monitoring plans. This has resulted in months and months of publicly reported monitoring data from numerous facilities during pre-production without much assurance that the data being collected is an accurate record of the emissions that occur during pre-production.

Last year, we released a report that highlighted the results of our own research into the accuracy of the monitoring data collected per Regulation 7 requirements.<sup>12</sup> In this report, we discuss how over a seven month period in 2022 we conducted 77 OGI surveys of oil and gas facilities in the Front Range where air quality monitoring was occurring during pre-production and detected 22 hydrocarbon emissions events. None of those 22 emissions events were detected by the monitoring conducted by the operators of those sites. Furthermore, a review of 246 monthly

<sup>10</sup> <https://earthworks.org/blog/residential-drilling-will-never-be-safe/>

<sup>11</sup> [https://drive.google.com/file/d/13rAbGwssS\\_YPt16zX4WuWWaWLUFAA9b4/view](https://drive.google.com/file/d/13rAbGwssS_YPt16zX4WuWWaWLUFAA9b4/view)

<sup>12</sup> [https://earthworks.org/wp-content/uploads/2023/04/certified\\_disaster\\_report\\_FINAL\\_04\\_14\\_2023.pdf](https://earthworks.org/wp-content/uploads/2023/04/certified_disaster_report_FINAL_04_14_2023.pdf)

monitoring reports from 28 different facilities revealed that only 11 emissions events were recorded out of a total 177,210 hourly readings.

In other words, if the monitoring being conducted by operators during pre-production is demonstrating anything it is that we are still poorly informed about when and where emissions are occurring during pre-production, which means neither the APCD nor the ECMC is able to guarantee Coloradans that current BMPs are achieving the intended effect in regards to reducing air quality impacts.

With this in mind, and for the reasons previously discussed, it is difficult to see how the Lowry Ranch CAP can be approved in a manner that is consistent with protecting “public health, safety, welfare, the environment and wildlife resources,” and the application should be denied.



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