



Date: September 6, 2023

From: Mike Silverstein  
Executive Director

To: North Front Range Metropolitan Planning Organization

Subject: Monthly Meeting Briefing Memo

**Severe Ozone State Implementation Plan Development Update**

With its partners at the Colorado Air Pollution Control Division, RAQC has completed its efforts developing the revised Severe Ozone SIP. This plan contains all necessary information, analyses, and emission control programs necessary to attain the 2008 Ozone Standard of 75 ppb by 2027. The Severe Ozone SIP chapters and Executive Summary are available on the RAQC's website at: <https://ragc.org/sip/ozone-2008-8-hour-standard/>

The Severe Ozone SIP will be presented to the Colorado Air Quality Control Commission for consideration at its September 20, 2023 monthly meeting.

**Ozone Season Update**

As the summertime ozone season approaches its end, the region has experienced improved air quality when compared to previous years. All North Front Range monitors have recorded 4<sup>th</sup> maximum concentrations below the older 75 parts per billion standard, and only one monitor has exceeded the 70 ppb standard. Pretty good public health news to report!

**Denver Metro/North Front Range Area - 2023 8-Hour Ozone Summary\***  
Through 09/04/2023

| Monitor                 | 1st Max<br>2023 | 2nd Max<br>2023 | 3rd Max<br>2023 | 4th Max        |      |      | 2021-2023<br>Estimated<br>Design Value^ |
|-------------------------|-----------------|-----------------|-----------------|----------------|------|------|---|
|                         |                 |                 |                 | 2023           | 2022 | 2021 |   |
| Aurora East             | 81<br>05/23/23  | 76<br>08/02/23  | 73<br>07/29/23  | 73<br>05/22/23 | 70   | 77   | 73                                      |
| Blackhawk               | 79<br>08/15/23  | 74<br>07/12/23  | 73<br>08/09/23  | 73<br>05/22/23 | 71   | 82   | 75                                      |
| Boulder Reservoir       | 81<br>08/17/23  | 71<br>08/23/23  | 71<br>08/20/23  | 69<br>08/15/23 | 72   | 82   | 74                                      |
| CAMP                    | 74<br>08/24/23  | 74<br>07/31/23  | 73<br>08/09/23  | 73<br>08/02/23 | 71   | 77   | 73                                      |
| La Casa                 | 73<br>05/22/23  | 72<br>08/02/23  | 71<br>08/24/23  | 70<br>07/31/23 | 72   | 83   | 75                                      |
| Chatfield               | 83<br>08/24/23  | 77<br>08/15/23  | 76<br>08/09/23  | 76<br>08/08/23 | 78   | 89   | 81                                      |
| Evergreen               | 79<br>08/24/23  | 76<br>08/09/23  | 75<br>08/15/23  | 73<br>05/22/23 | 74   | 79   | 75                                      |
| Fort Collins - CSU      | 78<br>08/17/23  | 68<br>08/15/23  | 67<br>05/22/23  | 67<br>07/12/23 | 70   | 76   | 71                                      |
| Fort Collins West       | 88<br>08/17/23  | 75<br>08/15/23  | 72<br>05/22/23  | 71<br>07/12/23 | 73   | 85   | 76                                      |
| Greeley Weld County     | 74<br>07/30/23  | 70<br>06/08/23  | 69<br>07/11/23  | 68<br>08/18/23 | 70   | 76   | 71                                      |
| Highlands               | 77<br>08/24/23  | 75<br>07/29/23  | 75<br>05/20/23  | 74<br>08/02/23 | 73   | 84   | 77                                      |
| NREL                    | 78<br>08/15/23  | 76<br>08/09/23  | 75<br>05/22/23  | 74<br>08/24/23 | 77   | 89   | 80                                      |
| Platteville Observatory | 70<br>07/30/23  | 68<br>08/15/23  | 68<br>05/23/23  | 67<br>05/22/23 | 73   | 83   | 74                                      |
| Rocky Flats North       | 83<br>08/17/23  | 78<br>08/15/23  | 77<br>08/20/23  | 74<br>07/12/23 | 78   | 87   | 79                                      |
| Welby                   | 74<br>08/15/23  | 73<br>08/02/23  | 70<br>08/24/23  | 70<br>05/23/23 | 75   | 79   | 74                                      |

[The latest ozone monitoring information](#) can be found here.



Date

The Honorable Michael Regan  
U.S. Environmental Protection Agency  
Office of the Administrator  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

Dear Administrator Regan,

On behalf of the North Front Range Metropolitan Planning Council (NFRMPO), in Northern Colorado, we are writing to ask for the Environmental Protection Agency's (EPA's) assistance, in collaboration with the greater Intermountain West Metropolitan Planning Organization group, in addressing the significant amount of non-locally controllable emissions contributing to high ozone levels in the Intermountain West. We are located within the Denver Metropolitan/North Front Range (DM/NFR) 8-hour Ozone Nonattainment Area, classified as Severe under the 2008 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) and Moderate for the 2015 8-Hour Ozone NAAQS.

The NFRMPO is a regional body that represents 15 member governments in both Weld and Larimer counties and addresses transportation and air quality issues. The NFRMPO actively participates in State Implementation Plan (SIP) developments and supports ozone reduction strategies through numerous outreach activities. We also prioritize transit and non-motorized forms of transportation and initiate and support transportation demand management (TDM) strategies.

We would like to discuss with EPA how to address high background ozone including, initial and boundary conditions, other states transport, Canada and Mexico transport, and fires and biogenic emissions contributing to high ozone levels at Intermountain West ozone monitors and for which the local area does not have the authority to control. We are asking that you partner with us in an effort being led by Maricopa Association of Governments (MAG) and outlined in a June 28, 2023, letter addressed to you to explore ways to address ozone contributions that are not locally controllable.<sup>1</sup>

The NFRMPO is committed to doing what we can to reduce ozone emissions and have worked with our partners at the Colorado Department of Public Health and Environment (CDPHE), Colorado Department of Transportation (CDOT), and the Regional Air Quality Council (RAQC) to implement very aggressive and innovative control measures, including a variety of first in the

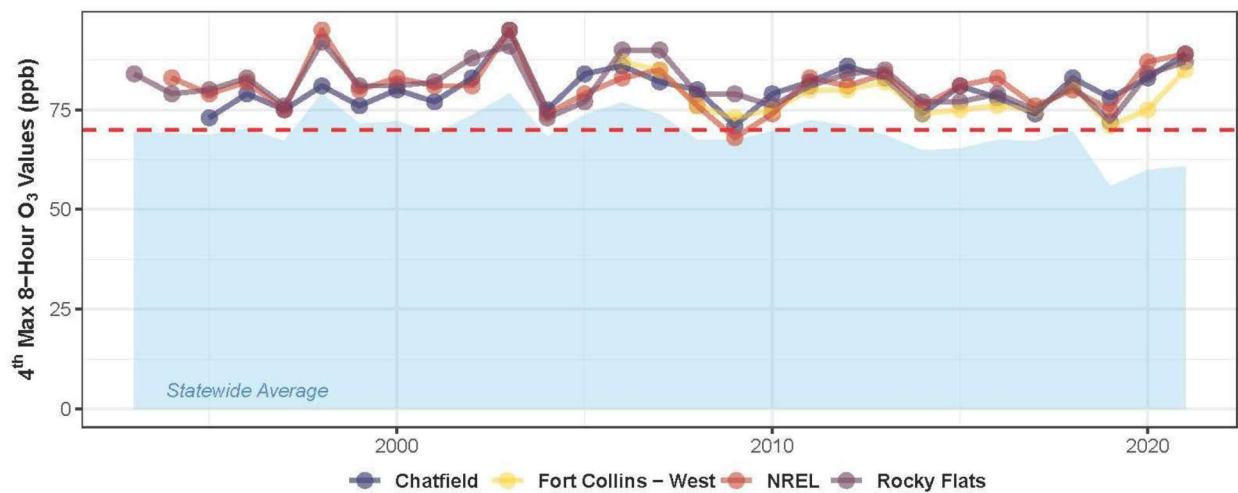
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<sup>1</sup> [cite 6/28/23 MAG letter to EPA Administrator Regan]



nation oil and gas regulations, transportation planning mitigation measures, financial incentives to drive voluntary actions, among others.<sup>2</sup> Colorado continues to develop new innovative reduction strategies in its efforts to meet both the 2008 and 2015 Ozone NAAQS, adopting regulations addressing medium-duty and heavy-duty vehicles and building energy performance standards in 2023, providing tax credits and rebates for electric vehicles and bikes in 2023, providing zero-fare public transit during the summers in 2022 and 2023, and more. The NFRMPO recognizes ozone has very real public health and welfare impacts and has played an active role in addressing man-made emissions from transportation, other non-road mobile sources other sources. While ozone emissions were trending downward in the DM/NFR Nonattainment Area from the early 2000's through 2019, more recent years have experienced higher ozone levels as summarized in **Figure 1** below.

**Figure 1- 4<sup>th</sup> Maximum 8-Hour Ozone Values at Key Ozone Monitors in the Denver Metropolitan/ North Front Range Ozone Nonattainment Area<sup>3</sup>**



To better understand what was contributing to higher ozone levels, NFRMPO evaluated 2023 local source apportionment modeling data products from EPA's *Good Neighbor Rule* that were developed in support of Colorado's Severe SIP under the 2008 Ozone NAAQS.<sup>4, 5</sup> To better understand the degree of locally controllable man-made emissions coming from within Colorado compared to emissions that are not locally controllable, the NFRMPO focused on the percentages

<sup>2</sup> See Colorado's Air Quality Control Commission's "Annual Report to the Public FY2021-2022", downloaded 8/31/2023 at: <https://cdphe.colorado.gov/aqcc-annual-report-to-the-public>

<sup>3</sup> Ibid at p. 11.

<sup>4</sup> See EPA's "Data File with 2016v3 Ozone Design Values and Contributions" spreadsheet published with EPA's "Air Plan Disapprovals; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards (88FR9336, 2/13/23), downloaded 1/31/23 from: <https://www.epa.gov/interstate-air-pollution-transport/final-disapproval-good-neighbor-state-implementation-plans#supporting%20documents>

<sup>5</sup> See "2023 Local Source Apportionment Analysis," (Ramboll/Alpine April 2021), downloaded 8/29/23 from: [https://raqc.egnyte.com/dl/VHRCCKBuru/Dashboard\\_LocalAPCA\\_mda8\\_v2021.03.17\\_\(1\).xlsx\\_](https://raqc.egnyte.com/dl/VHRCCKBuru/Dashboard_LocalAPCA_mda8_v2021.03.17_(1).xlsx_)



of emission categories shown through these analyses to contribute to ozone levels at these monitors rather than the 2023 ozone projections. This approach is similar to the approach taken in the July 21, 2023 Draft “Chapter 5 Attainment Demonstration and Weight of Evidence Analysis” developed in support of the 2008 Ozone Severe SIP. This Draft Chapter 5 presents data for the ozone monitor most challenged in meeting the 2008 ozone NAAQS (located at NREL) in terms of contributions to the 2023 projected maximum daily 8-hour average. Specifically, percentages of contributions attributed to boundary conditions, man-made emissions attributed to sources outside of Colorado but within the modeled 36/12/4-km grid domains, and emissions attributed to natural emissions were highlighted. The Draft Chapter 5 concludes, “Boundary Conditions... contribute approximately half of the total ozone at the NREL monitor with emissions outside of Colorado but within the CAMx 36/12/4-km domains contributing 10% and natural emissions contributing 9%.”<sup>6</sup> This is true for ozone monitors located in areas under the NFRMPO’s jurisdiction as well, where Boundary Conditions contribute more than 50 Percent, see **Table 1**. It should also be noted that the refined modeling discussed in the Draft Chapter 5 and EPA’s coarse modeling agree in terms of overall percentage of contributions to ozone levels at these monitors that are not locally controllable.

**Table 1 – Colorado’s 2023 Projected Ozone Values and Contribution Percentages at NFRMPO Monitors<sup>7</sup>**

| Monitor | Monitor ID | 2023 Projected Max Design Value (ppb) | Colorado Man-made (%) | Outside CO but within 36 km grid*(%) | Natural*(%) | Boundary Conditions^ (%) | Non-locally Controllable@ (%) |
|---------|------------|---------------------------------------|-----------------------|--------------------------------------|-------------|--------------------------|-------------------------------|
| RMNP    | 80690007   | 65.06                                 | 16                    | 9                                    | 10          | 64                       | 83                            |
| FCW     | 80690011   | 64.82                                 | 22                    | 10                                   | 12          | 55                       | 77                            |
| FTC     | 80691004   | 66.55                                 | 21                    | 10                                   | 12          | 56                       | 77                            |
| GRET    | 81230009   | 64.71                                 | 21                    | 11                                   | 11          | 56                       | 78                            |

\* Combines contributions from other states, and Internationally

\* Does not include contributions from Fire

^ Combines contributions from Initial Boundary Conditions and Boundary Conditions International

@ Sums contributions from Initial and Boundary Conditions, Boundary Conditions International, other states, Natural

While Colorado continues to reduce home-grown man-made emissions, developing new and innovative reduction strategies, reductions in emissions coming from outside Colorado’s borders, as well as the emissions that are non-locally controllable must be considered in terms of SIPs.

<sup>6</sup> See Footnote 5 at p. 5-34. [CHECK REFERENCE – SHOULD BE DRAFT CHAPTER 5]

<sup>7</sup> See Footnote 6.



Areas in the Intermountain West, with high ozone levels and limited state generated man-made emissions must focus on reducing their own man-made emissions to meet the NAAQS. This puts an unfair burden on local areas to shave emissions from the states' portion of man-made emissions within their authority to control, versus larger contributions that are not locally controllable. This burden is reflected in increased administrative costs, industrial costs, and Reasonably Available Control Measure (RACM) costs, Transportation Control Measures (TCMs), and more all born at the local level by local authorities, consumers, tax payers and industry in an effort to meet current ozone NAAQS.

These additional measures impact the economic viability of the area, and some do so without yielding much if any ozone benefit. For example, requirements to use reformulated gasoline or reduce vehicle miles traveled (VMT) in the DM/NFR Nonattainment Area when Colorado is implementing rules to transition toward electric vehicles and away from fossil-fuel fired vehicles have questionable benefit while incurring very real costs – and costs which may significantly impact disadvantaged populations located throughout the NFRMPO area, shown on **Figure 2** below, and likely further deepen the equity gap.<sup>8</sup>

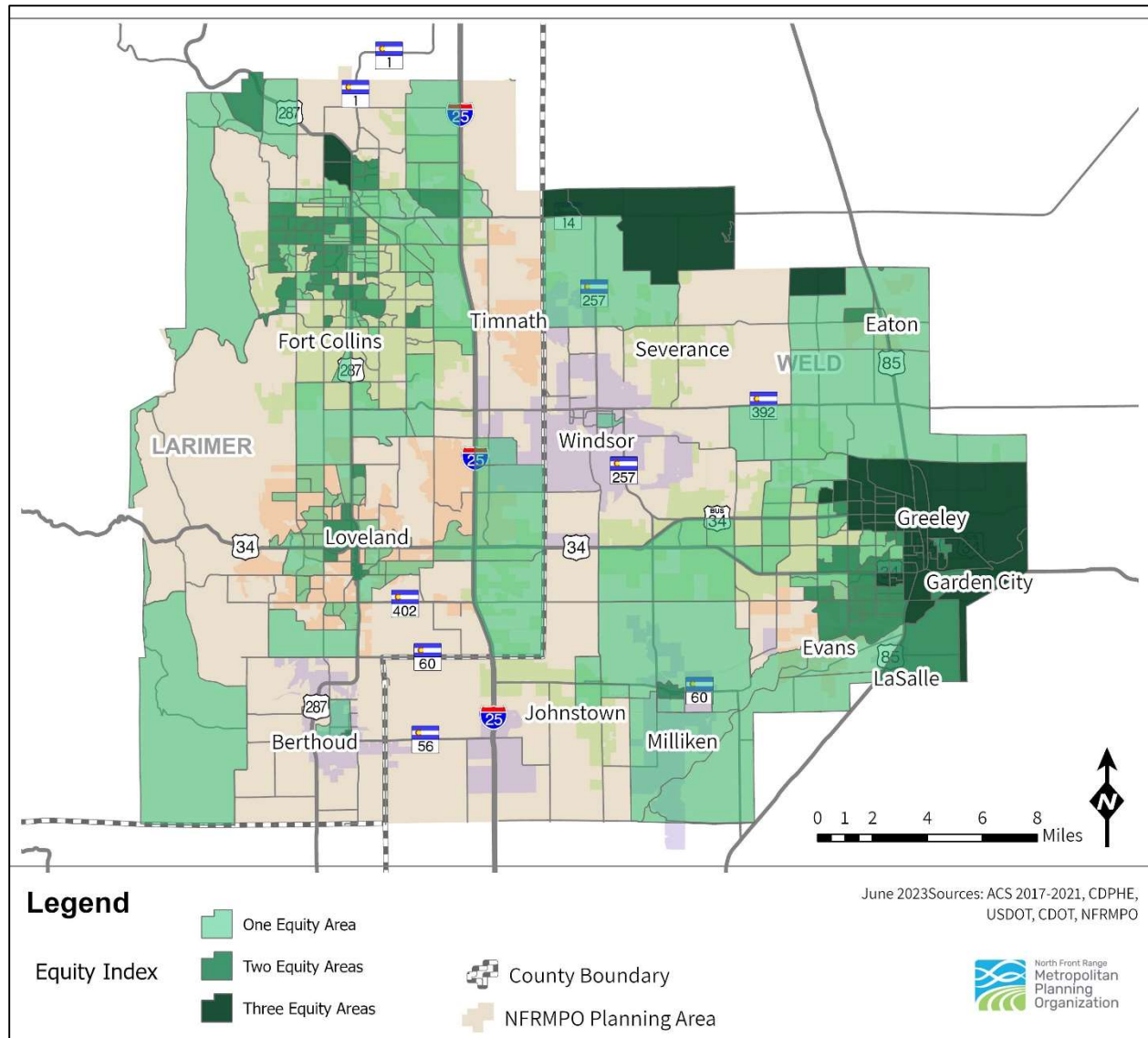
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<sup>8</sup> Cite Gov Polis' letter to EPA on RFG here?





**Figure 2 – NFRMPO's Equity Index Map**



Colorado law defines a **Disproportionately Impacted community** as census block groups where:

- More than 40 percent of the population are low-income (meaning that median household income is at or below 200 percent of the federal poverty line)
- 50 percent of the households are housing cost-burdened (meaning that a household spends more than 30 percent of its income on housing costs like rent or a mortgage)
- 40 percent of the population are people of color (including all people who do not identify as non-Hispanic white)
- 20 percent of households are linguistically isolated (meaning that all members of a household that are 14 years old or older have difficulty with speaking English)



- Census block groups that experience higher rates of cumulative impacts, which is represented by an EnviroScreen Score (Percentile) above 80. EnviroScreen Score is calculated using the 35 indicators which are grouped into two broad categories: Health & Social Factors and Pollution & Climate Burden.

NFRMPO **Environmental Justice (EJ)** areas are determined using American Community Survey (ACS) five-year averages at the census block group level. Using this data, a regional average for people who identify as minority and low-income households is calculated. Each census block group in the region is then determined to be EJ if it exceeds the regional average for minority, low-income, or both.

The NFRMPO has created an **Equity Index** of census block groups within the NFRMPO area which qualify as disadvantaged based on one or more of these equity areas. The Equity Index map illustrates the census block groups in the region which qualify as disadvantaged based on the overall Justice40, DI Community, or EJ definitions. Each qualifying census block group is given a score of one to three based on if it qualifies under one or more definition.

With the upcoming NAAQS standard review, it appears that we are setting the stage for continual downgrades with little hope of attaining, given the degree of non-locally controllable contributions. The NFRMPO would appreciate EPA's partnership with the Intermountain West MPO group in exploring: 1) development of an EPA approvable SIP that avoids further downgrades and sanctions; 2) options to reduce emissions regionally, nationally, and internationally so localized areas can account for these in their SIP planning; and 3) accounting for these options in any reconsideration of the ozone NAAQS, future implementation guidance, nonattainment designation and/or classification downgrades, and implementing policies.

The NFRMPO is committed to real ozone reductions. We are asking for your assistance in addressing this issue.

Sincerely,

Scott James  
NFRMPO Chair  
Weld County Commissioner

Suzette Mallette  
NFRMPO Executive Director

CC: Senator Michael Bennet  
Senator John Hickenlooper  
Representative Joe Neguse  
EPA Region 8 Administrator, KC Becker  
Garrison Kaufman, APCD





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