COLORADO
Air Pollution Control Division
Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

October 2026 Report from the Air Pollution Control Division to the North Front Range Transportation and Air Quality Planning Council Thursday, November 5, 2026

Air Pollution Control Division (Division) Public Participation Opportunities:

- **How to engage in a rulemaking 101:** Register to learn how you can participate in the rulemaking process before the Air Quality Control Commission. Join us to learn more and ask questions. Register to join an upcoming meeting:
    - Friday, Dec. 4, 12-1 p.m.
    - Wednesday, Dec. 9, 5:30-6:45 p.m.

Air Quality Control Commission (Commission) Updates:

October 14-15, 2026 Commission Meeting

- **Written Comment Rulemaking Hearing on Common Provisions:** The Commission approved revisions to the Common Provisions regulation to the state-only maximum civil penalty based on the percentage change in the United States Department of Labor's Bureau of Labor Statistics Consumer Price Index for Denver-Aurora-Lakewood from July 2025 to July 2026.
- **Written Comment Rulemaking Hearing on Regulation Number 6, Part A - Stationary Source Performance Standards:** The Commission approved revisions to Regulation Number 6, Part A New Source Performance Standards, to incorporate by reference changes the EPA made to its New Source Performance Standards, Emission Guidelines and Compliance Times, and performance specifications in Regulation Number 6, Part A.
- **Written Comment Rulemaking Hearing on Regulation Number 8, Parts A & E - Hazardous Air Pollutants Performance Standards:** The Commission approved revisions to Regulation Number 8, Parts A and E (MACT Standards) to incorporate by reference changes the EPA made to its National Emission Standards for Hazardous Air Pollutants rules. Specifically, the changes update citation dates throughout and incorporate by reference in full new and revised NESHAP and MACT standards.
- **Written Comment Rulemaking Hearing on Procedural Rules, Regulation Number 10 - Transportation Conformity:** The Commission approved the proposal to remove Part A of the procedural rules (which was obsolete) and approved the proposal to align notice requirements for special hearings with requirements already in the procedural rules. The Commission also denied the proposal to modify the conformity requirements in the procedural rules and Regulation 10. This maintains the current process for conformity determinations which requires the Commission's concurrence on non-routine conformity determinations.
- **Annual Report to the Public Briefing:** The Commission Administrator presented the final draft of the Annual Report to the Public and the Commission. The presentation gave an overview of the state's ongoing air quality planning efforts for ozone, greenhouse gases, transportation emissions, air toxics, and fees and permitting. The Commission approved the report for publication and distribution.
- **Review of 2026 Ozone Season Briefing:** The Division and the Regional Air Quality Council presented an overview of the 2026 ozone monitoring data and highlighted exceedances of the current ozone standard.
- **Conformity Determination Public Meeting:** The Commission reached concurrence on the conformity determination for the Denver Regional Council of Government's 2050 Metro Vision Regional Transportation Plan and 2029-2032 Transportation Improvement Program conform to the emissions budgets for ozone precursors.
- **Request for Rulemaking Hearing on Regulation Number 3 - Permitting and Emissions Reporting, Regulation Number 7 - Emissions Reporting:** The Commission set a hearing to consider revisions to Air Pollutant Emission Notice (APEN) requirements and fees. The proposed revisions would remove the period emissions-only APEN update requirements for many sources that are required to

submit emissions reporting notices. Additionally the Division is proposing to require sources to report all potentially emitting equipment, report start and shutdown for oil and gas sector turbines, and submit APENs for generator engines used at data centers, even if below the emissions reporting thresholds.

November 18-20, 2026 Commission Meeting

- **Request for Public Hearing on Particulate Matter ($PM_{2.5}$) and Sulfur Dioxide (SO_2) Infrastructure SIPs:** The Division will request that the Commission set a hearing to consider proposed elements to Colorado's infrastructure State Implementation Plans (SIPs) addressing the EPA's revised $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS) and SO_2 NAAQS. The proposal demonstrates that the state has specific regulations, personnel, funding, and legal authority to implement and enforce the revised $PM_{2.5}$ and SO_2 NAAQS.
- **Report on Regulation Number 9:** The Commission will consider projected costs for the Smoke Management Program. The Division will not propose raising Smoke Management Program fees at this time.
- **Rulemaking Hearing on Regulation Number 29 - Lawn and Garden Equipment Emissions Reductions:** The Commission will consider revisions to Regulation Number 29 to address commercial use restrictions. Currently Regulation 29 covers small equipment used by certain local governments, state agencies, and federal agencies during the summer months. The proposed revisions would expand Regulation 29 to also include commercial lawn and garden operations.

TWO ROADS ENVIRONMENTAL

Subject: Air Quality Related Activities Report to NFRMPO Council

Date: 11/3/26

Introduction:
Two Roads Environmental LLC (TRE) is providing a monthly report of air quality related activities to the North Front Range Metropolitan Planning Organization (NFRMPO) Council conducted by TRE in October 2026 for their November 4, 2026 meeting.

Summary:
In October 2026, TRE focused on jointly planning and hosting an intermountain west Fall 2026 ozone conference (now known as the Fall 2026 Ozone Exchange) with the NFRMPO and Pikes Peak Area Council of Governments (PPACG).

Air Quality Activities:
Fall 2026 Intermountain West (IMW) Ozone Exchange Conference:
We designed the Ozone Exchange with these goals, which we believe we met during the October 26-28, 2026 conference:

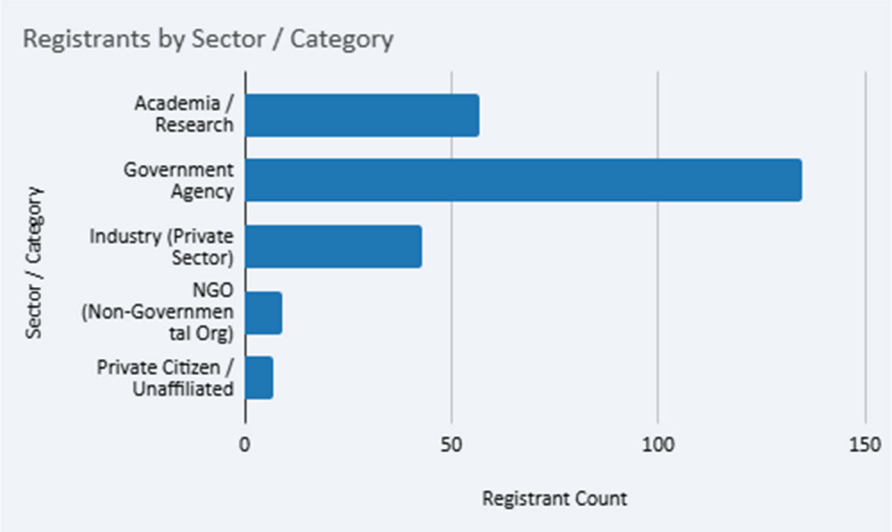
- ✓ Share information among IMW air quality agencies, metropolitan planning organizations, academic researchers, industry, local governments, community groups, and members of the public
- ✓ Educate on the EPA's State Implementation Plan process and Clean Air Act requirements and provisions
- ✓ Understand unique regional challenges and considerations faced in the IMW
- ✓ Discuss public communications challenges and ideas for improvements
- ✓ Discuss near-term and long-term solutions and identify research gaps

Conference details and presentation slides can be found at: https://ozoneexchange.org
A program is also attached to this report. In general the conference laid a foundation of air quality knowledge on Day 1 that framed very technical research efforts on Day 2. On Day 3, the conference transitioned into control strategies and ended with discussions on public communication and empowerment, along with research next steps.

High-level conference metrics include:

- 251 registered attendees, from 13 states, Washington D.C. and British Columbia;
- $19,635.00 approved stipends for presenters; and
- $34,875.00 approved scholarships for attendees.

Surveys were administered daily, and a post conference survey was shared with all attendees that will remain open through November 20, 2026. Attendees were asked about their trusted sources of air quality information and ultimately what they thought should come out of this conference. Generally, attendees came and stayed for three full days, during which they learned and shared perspectives, met and engaged with each other. Many highlighted the unique mix of attendees identified below, appreciating the diverse perspectives shared:



Intending that Ozone Exchange would be attended by a broad audience, all presenters/panel sessions were requested to use consistent title slides/content and final take aways for: 1) air quality experts, 2) local government officials, and 3) parents of asthmatic children. Consistently, we saw one key take away mentioned: know where to find reliable air quality information in your area.

Notably, EPA shared that ozone levels have flattened or are increasing despite precursor pollutant reductions not only throughout the intermountain west but nationally. Further, the poster session highlighted numerous recently funded research projects that have not yet kicked off, but are likely to inform ozone planning in the future. Other themes arose during the conference, including:

- We all care about breathing clean air
- Ozone is a complicated topic
- There are real challenges aligning research with the 1990 Clean Air Act (CAA) and implementing regulations
- We need consistent, easy, and understandable air quality messaging
- We all need to work together at bridging science, policy and public health

A more thorough report on the conference, including an analysis of survey responses will be completed upon close of the post conference survey. Conference details, metrics, and recommendations will be compiled into a report to Colorado's Air Quality Enterprise, due in June 2027.

<u>2026 Ozone Season Monitoring Data:</u>
No more ozone exceedances were experienced since the last report. During the summertime ozone season in 2026, each certified ozone monitor observed 8-hour in the area, as well as the remote Gothic monitor in Gunnison had 4th max 8-hour averages above 70 ppb (yellow). Several monitors experienced ozone levels above 75 ppb (orange). While some observed ozone levels may be associated with spring stratospheric intrusions and summer wildfires that may be considered as natural events that may qualify as an exceptional event, the sheer

number of exceedances decreases the likelihood that the exclusion of exceptional events would be sufficient to demonstrate attainment.

As of 9/28/26

2026 8-hour Ozone Levels (ppm) for Larimer and Weld Counties, Rocky Mountain National Park and Gothic Certified Ozone Monitors (as of 9/28/26)[1]

	RMNP	Gothic	Timnath	FTC	FCW	Fossil Cre	GRET	LaSalle	Mehaffey Pk
1st max	0.077	0.078	0.082	0.077	0.077	0.081	0.078	0.077	0.078
2nd max	0.074	0.072	0.076	0.076	0.076	0.081	0.077	0.075	0.077
3rd max	0.074	0.072	0.076	0.074	0.074	0.079	0.076	0.074	0.077
4th max	0.074	0.071	0.076	0.073	0.074	0.079	0.075	0.074	0.075
# exceeding 0.075ppı	1	1	5	2	2	10	3	1	3
# exceeding 0.070ppı	15	4	16	9	12	25	19	10	19

[1] Information is taken from EPA's AirNow "Download Daily Data" webpage. Selecting for ozone in 2026 from All Sites in Colorado, and screened for identified monitors, accessed 9/29/26 here: https://www.epa.gov/outdoor-air-quality-data/download-daily-data

This means that the Denver Metropolitan North Front Range (DMNFR) 8-Hour Ozone Nonattainment Area did not have a clean data year – at least one monitor exceeded the respective 75ppb and 70ppb standards. Further, the DMNFR ozone monitors also have observed three-year averages of the highest 4th maximum averages between 2024-2026, the timeframe used to determine if the area has met the standards by the respective 2027 attainment dates. Consequently, pending data QA/QC, it appears that the area will be downgraded to the next most stringent classification of Extreme, triggering additional requirements, as a result.

AQCC Activities:

A joint AQCC and Board of Health meeting was held in October. TRE provided an update during public comment on the Ozone Exchange to the AQCC and Board of Health. During public comment, Jeremy Nichols with Center for Biologic Diversity shared a joint letter from a group of non-governmental organizations dated October 14, 2026, which was sent to Governor Polis requesting that the Governor submit a request for voluntary reclassification to Extreme for the Denver Metropolitan North Front Range ozone nonattainment area under the 2008 75 ppb Ozone National Ambient Air Quality Standard.[2] Additionally, APCD and RAQC staff gave presentations on ozone and the 2026 ozone season.

Separately, the AQCC took action on the APCD's request to streamline Transportation Conformity requirements in Regulation 10, allowing the APCD to "provide concurrence" on all transportation conformity determinations. Notably, the AQCC disapproved the portion of request that removed the requirement for non-routine conformity determinations to be presented to the AQCC. This disapproval means that all transportation conformity determinations must continue to be formally approved by the AQCC.

[2] See October 14, 2026 joint letter to Jared Polis in the October 14-15, 2026 meeting materials, public comments folder, here: https://drive.google.com/drive/folders/1TYZJcUqSuTm9O-LbrUnRFa3qj_laKDKm

RAQC Activities
The RAQC Board met in September, discussing in part next steps in ozone SIP planning and the development of the Blueprint. The RAQC Board is scheduled to take action on the October 23, 2026 Blueprint at their November 5, 2026 meeting.[3]

Other Air Quality Activities:
In Congress, there has been no substantial movement related to Representative Evans' H.R. 6387 Fire Improvement and Reforming Exceptional Events Act or FIRE Act, or H.R.6409 Foreign Emissions and Nonattainment Clarification for Economic Stability or FENCES Act.[4,5] A related bill passed out of the Senate and has been sent to the House, S. 5045 – Wildfire Emissions Prevention Act or WEPA. [6]

CBD notified the EPA of their intent to sue for EPA's not acting to downgrade the DMNFR ozone nonattainment area under the 2015 Ozone NAAQS from Serious to Severe.[7] This notice puts EPA (and CO) on a timeline to resolve SIP deficiencies under the Clean Air Act.

Upcoming Activities:
TRE plans to attend meetings and track air quality related activities as follows, unless otherwise directed.

Meetings TRE Plans to Attend (or screen)
- 11/5/26 RAQC Board Retreat
- 11/19-20/26 AQCC Meeting

Other Anticipated Air Quality Activities
- Litigation on EPA's final action determining attainment for the Phoenix area under the 2025 Ozone NAAQS and the associated 179B Analysis
- EPA's proposed action determining attainment for the Wasatch Front in Utah under the 2025 Ozone NAAQS and the associated 179B Analysis
- EPA's proposed reconsideration of "leftover SIP provisions"
- EPA's Exceptional Events Guidance
- EPA's Ozone NAAQS Reconsideration
- EPA's Reconsideration of the PM2.5 NAAQS

Recommendations:

[3] See RAQC's October 23, 2026 "Control Strategy Blueprint for Developing Ozone Emission Reduction Measures," here: https://raqc.egnyte.com/dl/GChF3YQXBQM8/RAQC_Control_Strategy_Blueprint_2026_-_Nov_final_draft.pdf

[4] See Congress.gov for information on HR.6387 – FIRE Act (119th Congress, 2025-2026), here: https://www.congress.gov/bill/119th-congress/house-bill/6387

[5] See Congress.gov for information on H.R.6409 – FENCES Act (119th Congress, 2025-2026), here: https://www.congress.gov/bill/119th-congress/house-bill/6409

[6] See Congress.gov for information on S. 5045 – WEPA (119th Congress, 2025-2026), here: https://www.congress.gov/bill/119th-congress/senate-bill/5045

[7] See October 7, 2026 Center for Biologic Diversity letter to Lee Zeldin, EPA Administrator, here: https://www.epa.gov/system/files/documents/2026-10/2026-10-7-denver-ozone-finding-of-failure-to-submit-notice.pdf

- Track Colorado's next steps addressing ozone, including:
    - RAQC's Blueprint evolution
    - RAQC's modeling updates
- Track AQCC October rulemaking hearing specific to transportation conformity
- Track litigation on EPA's final action on their determination of attainment for:
    - Phoenix-Mesa ozone nonattainment area in Arizona
- Wasatch Front ozone nonattainment area in Utah
- Track NHSTA's final action on fuel economy standards (Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule III for Model Years 2022-2031 Passenger Cars and Light Trucks)

2026 Intermountain West Ozone Exchange Conference
October 26-28, 2026
Loveland, CO

ozoneexchange.org

Badge Pick Up all day on October 26 and 27, and through noon on October 28!

Day 1 - Monday, October 26

7:00 am - 8:00 am Breakfast Provided
7:30 am - 8:00 am Ozone Walk - Optional interactive activity
8:00 am - 8:15 am Welcome Remarks and Conference Logistics
Speakers: Commissioner Kristin Stephens, Larimer County, CO Andrew Gunning, Pikes Peak Area Council of Governments (PPACG) Elizabeth Relford, North Front Range Metropolitan Planning Organization (NFRMPO)
8:15 am - 9:15 am Session 1: Clean Air Act 101 & State Implementation Plan (SIP) Planning Realities
Chair: Ryan Bares, Utah Division of Air Quality (Utah DAQ) **Speakers**: Rylie Slaybaugh, Colorado Dep of Law | Yousaf Hameed, Clark County, NV | Mark Sghiatti, Utah DAQ
9:15 am - 10:30 am Session 2: State of the Ozone in the Intermountain West (IMW)
Chair: Matt Poppen, Maricopa Association of Governments (MAG)
Speakers: Dr. Dan Jaffe, University of Washington | Dr. Meiyun Lin, National Oceanic Atmospheric Administration (NOAA) Geophysical Fluid Dynamics Laboratory | Dr. Naghmeh Soltani, University of Arizona | Dr. Heather Simon, U.S. EPA Office of State Air Partnerships (OSAP)
10:30 am - 11:00 am Break
11:00 am - 12:15 pm Session 3: IMW Ozone Attainment Efforts
Chair: Josh Korth, Colorado DPHE
Speakers: Ryan Bares, Utah DAQ | Tom Moore, Regional Air Quality Council (RAQC) | Jodi Bechtel, Clark County, NV | Matt Poppen, MAG
12:15 pm - 1:15 pm Lunch Provided
1:15 pm - 2:50 pm Session 4: Research to Improve Our Understanding of Ozone in the IMW
Chair: Yousaf Hameed, Clark County, NV
Speakers: Dr. Rachel Edie, Utah DAQ | Dr. Brian Carroll, NOAA Chemical Science Lab (CSL)/Cooperative Institute for Research in Environmental Sciences (CIRES)/
University of Colorado - Boulder | Dr. Armin Sorooshian, University of Arizona | Dr. Jiajue Chai, State University of New York | Andrey Marsavin, Colorado State University (CSU)
2:50 pm - 3:20 pm Break
3:20 pm - 4:30 pm Session 5: Transportation Planning's Role in Air Quality Planning
Chair: Andrew Gunning, PPACG
Speakers: Becky Karasko, North Front Range Metropolitan Planning Organization | Doug Rex, Denver Regional Council of Governments | Stephen Patchan, Regional Transportation Commission of Southern Nevada | Kevin Feldt, Mountainland Association of Governments–Utah
4:30 pm - 4:50 pm Session 6: Flash Talks on Incentive Programs **OPEN TO THE PUBLIC**
Moderator: Elizabeth Relford, NFRMPO
Speakers: Robert Spotts, Power Ahead Colorado | Steph Gerakos-Rooker, Larimer County, CO | Dawn Leaper, Clark County, NV | Mike Silverstein, RAQC
4:50 pm - 5:00 pm Daily Download & Prizes
5:00 pm - 7:00 pm Electric Food Truck Event **OPEN TO THE PUBLIC**
7:00 pm End of Day 1

Day 2 - Tuesday, October 27

7:00 am - 8:00 am Breakfast Provided
7:30 am - 8:00 am Ozone Walk - Optional interactive activity
8:00 am - 8:15 am Summary of Day 1
Speaker: Dena Wojtach, Two Roads Environmental
8:15 am - 9:50 am Session 7: Wildfire Smoke Impacts to Ozone
Chair: Dr. Dan Jaffe, University of Washington
Speakers: Dr. Steven Brown, NOAA CSL | Dr. Piotr Nowinski, Clark County, NV | Nell Schafer, University of Colorado – Boulder | Dr. Jaron Hansen, Brigham Young University | Audrey Lyp, CIRES/University of Colorado - Boulder
9:50 am - 10:20 am Break
10:20 am - 12:10 pm Session 8: Unique Geographic Challenges for the IMW
Chair: Jessica Ferko, Colorado DPHE
Speakers: Dr. Marco Rodriguez, Ramboll | Dr. Fernando Chouza, NASA Jet Propulsion Laboratory | Dr. Jeff Peischl, NOAA Global Monitoring Laboratory/CIRES | Dr. Rainer Volkamer, University of Colorado - Boulder | Yifan Li, Princeton University | Dr. Colleen Baublitz, U.S. EPA OSAP
12:10 pm - 1:10 pm Lunch Provided
1:10 pm - 1:25 pm Round Table Discussion
1:25 pm - 2:45 pm Session 9: Emerging Methodologies
Chair: Dr. Armin Sorooshian, University of Arizona
Speakers: Kelley Grubbs, RAQC | Dr. Marco Rodriguez, Ramboll | Dr. Gabriele Pfister, NSF National Center for Atmospheric Research (NCAR)
2:45 pm - 3:15 pm Break
3:15 pm - 4:35 pm Session 10: Biogenic Emissions and Impacts
Chair: Sarah Downes, Colorado DPHE
Speakers: Tejas Shah, Ramboll | Dr. Detlev Helmig, Boulder A.I.R. | Patrick Reddy, University of Wisconsin | Dr. Mj Riches, CSU
4:35 pm - 4:45 pm Daily Download & Prizes
4:45 pm - 5:45 pm Buffet Dinner Provided
6:00 pm - 7:30 pm Poster Session **OPEN TO THE PUBLIC**
Light refreshments and snacks available to the public
Passport activity promoting engagement
Prizes available for participating in passport activity
Chair: Dr. Annareli Morales, Weld County, CO
Presenters: Scan QR Code to see list of posters
7:30 pm End of Day 2

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Day 3 - Wednesday, October 28

7:00 am - 8:00 am Breakfast Provided
8:00am - 8:15 am Summary of Day 2
Speaker: Dena Wojtach, Two Roads Environmental
8:15 am - 9:35 am Session 11: Human-Made Contributions to Ozone
Chair: Courtney Taylor, Ramboll
Speakers: Dr. Matti Maricq, Forest Glen Consulting | Rose Rossell, CSU | Piper Read, CIRES/University of Colorado - Boulder | Dr. Lauren Garofalo, CSU
9:35 am - 10:05 am Break
10:05 am - 11:25 am Session 12: Options for State Implementation Plan (SIP) Development
Chair: Laura Terlisner Mehew, Colorado Dept of Law
Speakers: Dr. Audrey Gaudel, CIRES/NOAA CSL | Chris Colclasure, Beatty & Wozniak | Jessica Ferko, CDPHE | Kimberly Butler, Maricopa County, AZ
11:25 am - 12:00 pm Ozone Trivia
12:00 pm - 1:00 pm Lunch Provided
1:00 pm - 2:20 pm Session 13: Improving Public Communication of Ozone Problem and Health Impacts
Chair: Dr. Annareli Morales, Weld County, CO
Speakers: Dr. Crystal McClure, Atmospheric Interdisciplinary Research Institute | Kelsey Simpkins, RAQC | Milena Guajardo, CSU | Allison Salamone, CSU
2:20 pm - 2:50 pm Break
2:50 pm - 4:10 pm --- CONCURRENT SESSION --- Session 14a: Discussion on Better Aligning Public Communication on Ozone
Goal: Empower the audience to find air quality information and take precautions by listening to panel discussion on sources of air quality information, actions to reduce ozone exposure, and opportunities to align public communications.
Location: Main Room
Moderator: Amber Mitchell, Colorado DPHE
Panelists: Nancy Fitzgerald, Denver LoveMyAir | Tom Gonzales, Larimer County, CO | Dr. Holly Olivarez, Climate Confluence | Dr. Meagan Weisner, Environmental Defense Fund | Kirsten Schatz, Colorado Public Interest Research Group (CoPIRG)
2:50 pm - 4:10 pm --- CONCURRENT SESSION --- Session 14b: Research Next Steps
Goal: Discuss research gaps and opportunities to collaborate.
Location: Side Rooms
Moderator: Dr. Joost de Gouw, CIRES/University of Colorado - Boulder
Panelists: Dr. Gabriele Pfister, NSF NCAR | Dr. Dan Jaffe, University of Washington | Dr. Armin Sorooshian, University of Arizona | Dr. Jeff Collett, CSU | Ryan Bares, Utah DAQ
4:10 pm - 4:20 pm Return to Main Room
4:20 pm - 4:40 pm Daily Download & Grand Prize Raffle
4:40 pm - 5:00 pm Wrap Up and Conference Closing Remarks
Speakers: Dena Wojtach, Two Roads Environmental | Andrew Gunning, PPACG | Elizabeth Relford, NFRMPO
5:00 pm End of Conference

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BEATTY & WOZNIAK ENERGY IN THE LAW

WASATCH FRONT REGIONAL COUNCIL

API American Petroleum Institute

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City of Fort Collins

Control Strategy Blueprint for Developing Ozone Emission Reduction Measures







PREPARED BY:

REGIONAL AIR QUALITY COUNCIL

FINAL DRAFT: October 23, 2026

Solving the Ozone Problem: Where We Are Now and a Path Forward

Denver Metro/North Front Range Nonattainment Status

Currently, the Denver Metro / North Front Range (DM/NFR) ozone nonattainment area (NAA) is in the Severe classification for the 2008 ozone National Ambient Air Quality Standard (NAAQS) and in the Serious classification for the 2015 ozone NAAQS. Ozone monitoring data continue to exceed both NAAQS on a consistent basis. The DM/NFR NAA Serious State Implementation Plan (SIP) developed in 2025 does not demonstrate attainment, and the NAA will not show monitored attainment within the required 2024–26 compliance period. The state has submitted a voluntary bump-up to Severe status to EPA that will push our 2015 NAAQS attainment year to 2033, to be based on attainment SIP projections to 2032 and clean monitoring data from 2030 through 2032 at all NAA monitoring sites.

There are two separate DM/NFR ozone NAAs. The 2008 NAAQS NAA boundary is smaller and is completely overlapped by the 2015 NAAQS NAA boundary. As the 2015 NAAQS is more stringent, that larger NAA is the controlling geographic area and level of NAAQS for air quality planning. The NAAs encompass a vibrant economy and growing population; the health burden of nonattainment on the populations living and vising these communities is significant. The NAA boundaries and the EPA-required programs and emissions standards are set and not subject to change under the current federal Clean Air Act (CAA).

Progress Toward Attainment Combines Emission Reductions and Cleaner Monitoring Data

Though numerous important climate and air quality strategies have been implemented in Colorado in recent years, the majority of implemented strategies have not focused specifically on ozone compliance and have not had the needed impact on precursor emissions within the federal CAA-specified timeframes to reduce ozone. Additionally, factors such as population and economic growth, wildfire smoke, local meteorology, and more have impacted emission levels in the region. Ozone levels have been stagnant, and a new focus is imperative.

The region is not bending the flat trend for monitoring data downward to cleaner air below the 70 parts per billion (ppb) NAAQS level, as shown in Figure 10 of this report: Ozone levels on peak ozone days are not consistently lower, and the number of days exceeding the NAAQS have not been reduced. In fact, the maximum 3-year Design Value trend since 2012 is almost flat, with peak values at monitoring sites remaining above ~75 ppb and up to ~85 ppb. Design Values are the EPA statistic used to assess progress toward the NAAQS for the NAA monitoring sites. All official NAA monitoring sites must individually have validated Design Values that comply with the ozone standards in order to reach attainment.

The Role of the Blueprint

Cleaner air is essential to the quality of life in the region and comes with numerous public health and environmental benefits. The Blueprint was developed in 2025 and improved in 2026 to provide

a framework for the additional actions needed to achieve cleaner air in the region after years of nonattainment.

The Blueprint is a strategic plan to inform additional efficient, effective, permanent, and verifiable local emission control measures for consideration starting in 2027. The Blueprint document includes:

- Extensive analysis of existing and new emission reduction strategies to consider for future implementation and accompanying policy recommendations
- New reports, such as the Future Ozone Impact Analysis report and a health impact analysis of the health burden of ozone pollution in the region
- Results from the RAQC's robust outreach and stakeholdering efforts in 2025 and 2026

The Blueprint is separate from the Severe ozone SIP that will be prepared in the 2028–29 timeframe. However, because the Blueprint informs the SIP, the Blueprint's content needs to be actively considered to ensure that the SIP shows attainment. The strategies and actions described in the Blueprint will also provide emission reductions that lead to meaningful local human health and environmental benefits regardless of the formal SIP context.

Blueprint Control Strategies

The control strategies included in the Blueprint focus either on new opportunities for reductions in ozone-forming emissions or on improvements to existing rules, emissions inventories, and data collection processes needed to improve the understanding of emissions at baseline. Rather than proposed regulations, the strategies in the Blueprint are intended to provide a one-stop shop for options for consideration and action between now and 2030 to reduce emissions that lead to ground-level ozone formation in summer. While implementing all or some of these strategies may or may not fully eliminate the ozone air quality problem in the DM/NFR region, the RAQC believes it represents a comprehensive, balanced summary of options to reduce local emissions causing ozone based on solid, defensible technical analyses in order to gain environmental and human health benefits.

As a strategic document, the Blueprint does not make determinations about the exact scope or cost of new strategies, as more input and analysis is needed to make these estimates. RAQC will conduct this next phase of analysis in coordination with the relevant state agencies. Strategies developed to date that are not currently established through the Colorado Air Quality Control Commission as a rule will require further evaluation before they can be considered for voluntary or regulatory implementation; once fully developed, strategies can come back to the RAQC Board in an efficient format for the Board's green light to pursue implementation.

Table 1 below lists the strategies included in the Blueprint by sector. Nearly all of these strategies are based on approaches that are already being implemented, represent expansions of existing rules or programs in Colorado, or draw on programs, regulations, and legislative efforts that have been implemented in other jurisdictions across the country. This existing body of strategies provides a foundation for assessing implementation considerations, potential impacts, and lessons learned. Only a limited number of the strategies explored in this Blueprint represent new approaches for which there are no directly comparable programs or regulatory frameworks to

reference. More information on each strategy, as well as the process for developing and evaluating them, is available in the "Emission Control Strategies" section of the Blueprint.

Table 1: Summary of Emission Control Strategies in the Blueprint

On-Road Source Strategies	**Non-Road Source Strategies**	**Point Source Strategies**
Indirect Sources Data Reporting	Landscape Maintenance Equipment Reductions	Electric Drill Rig and Frac'ing Engine Requirements
Summertime Free Fare Transit	Non-Road Engines Emission Targets	Reduce Wellsite Venting and Blowdowns Emissions
Continued Light Duty Vehicle Electrification Incentives	Zero-Emission Forklifts	AQCC's On-the-Books Upstream Oil & Gas NOx Intensity Rule
On-Road Vehicle Fleet Turnover and On-the-Books Colorado Clean Vehicles Regulations	**Non-Point Source Strategies**	Tightened Permit Limits for Largest Stationary Sources
Indirect Sources: Voluntary Facility Emission Reduction Plans	VOC Limits for Consumer Products	Daily Emission Limits for Large Point Sources During Ozone Season
Indirect Sources: Regulatory Facility Emission Reduction Plans	Changes in Design and Operation of Commercial Buildings	
Mobile Source Emission Reduction Credits	Charbroiler Requirements for Commercial Cooking	
Vehicle Registration/Emission Testing Compliance with Inspection/Maintenance Program		

Primary Goal of the Blueprint

The Blueprint's primary goal is to achieve attainment of the 70 ppb National Ambient Air Quality Standard for ozone in the 2030–32 period by proposing a viable and sufficient package of emission - reduction strategies and policies for implementation by 2030. Steps toward that goal include:

- Implementing control measures from the Blueprint and considering additional control measures toward reducing emissions by 2030
- Acquiring budget resources to enable technical support analyses and staff to support preparation of emission controls through regulations, incentives, and statutes
- Broadening the consideration and supporting analyses of control measures beyond "just enough" to options for new emission control measures options by 2030 to achieve sufficient total reductions to model attainment by 2032
- Implementing additional efficient, effective, permanent, and verifiable local emission reductions even as population, the economy, and vehicle miles continue to grow

Policy Recommendations

These recommendations highlight key actions necessary to execute further consideration of the Blueprint strategies and associated ozone NAAQS planning needs. The RAQC will take these actions, but they also require collaboration and support from partners and stakeholders to achieve success. More details on each recommendation are available in the "Policy Recommendations" section.

To continue Blueprint strategy development, analysis, and implementation, RAQC seeks to:

- Further develop the strategies currently in the Blueprint for implementation by 2030, aligned with SIP timelines
- Consider additional control measures for implementation by 2030
- Secure stable financial resources for effective planning and implementation
- Support additional ozone planning research and data collection and apply results
- Further consider how best to reduce health impacts and costs associated with non-action
- Brief the RAQC Board and AQCC regularly

RAQC also seeks to coordinate in an ongoing, timely manner with partners across state agencies, regional entities, and local government to:

- Conduct additional emission controls planning and tracking of strategies
- Gather input regarding Blueprint strategies as more information is available
- Support, integrate, and prioritize consideration of reducing air quality impacts that enhance the health and environmental benefits of cleaner air
- Conduct outreach on the efficacy of and opportunities to improve and/or expand existing air quality programs and incentives
- Coordinate and collaborate with other states on air quality planning and evaluation and implementation of strategies
- Support longer-term actions that reduce ozone precursor emissions to provide ongoing benefits to public health and environmental quality
- Anticipate, advocate for, and integrate impacts of federal policy changes on local air quality planning efforts

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Acronyms and Terms

Definitions of most acronyms and terms used in the Blueprint are found in the RAQC website glossary. Please note the terms "Measure(s)" and "Strategy(ies)" are used interchangeably in this document.

Policy Background on Achieving Ozone Attainment and Development of the Blueprint

This section provides an overview of air quality planning and policy considerations for achieving ozone attainment within the context of development of the Blueprint. For additional background information on air quality planning in the DM/NFR NAA, please refer to Appendix A.

RAQC and the Blueprint

Regional Air Quality Council

The Regional Air Quality Council is designated by Executive Order from each Governor to serve as the lead air quality planning agency for the nine-county DM/NFR ozone NAA. Members of our Board represent local governments and state agencies, business and industry, transportation and transit interests, environmental science, and citizens. RAQC's role is advisory, and recommendations

require action by others with the appropriate authorities, while also recognizing the CAA attainment timeline is in federal statute.

In close partnership with state agencies and local government organizations, RAQC is charged with developing the region's plans to comply with EPA health-based air quality standards. We collaborate with all stakeholders to improve air quality and protect health, environment, and economy in the region through air quality planning, emission reduction strategy development, and program implementation.

The Blueprint

Over the past 30+ years, RAQC has developed plans and programs in collaboration with the Colorado Department of Public Health and Environment's (CDPHE) Air Pollution Control Division (APCD) to meet EPA requirements. With continuing long-term nonattainment of the 2008 and 2015 EPA National Ambient Air Quality Standards (NAAQS) for summertime ground-level ozone for more than 20 years across the DM/NFR NAA, a new approach is needed. This "Control Strategy Blueprint" is a strategic framework for developing emission reduction approaches and air quality planning information for proposed action over the next few years. It compiles reports, data, and other documents for potential emissions-reduction measures in one place and maps a proposed path to cleaner air by 2030.

Though the Blueprint milestones are aligned with federal and state statutory attainment milestones to achieve critical air quality improvement, it is not a regulatory document, nor are its potential emission control options final and fully developed. The Blueprint provides initial evaluations of the timing, emission reductions, costs, benefits, feasibility, and other factors for numerous measures. More in-depth analyses, development, and implementation of these—and likely additional strategies not listed here—will be necessary to make our air cleaner and reduce summertime ozone by the early 2030s.

The Blueprint is a strategic plan to achieve attainment of the 70 ppb NAAQS for ozone in the 2030–32 period by proposing a viable and sufficient package of emission reduction policies for implementation by 2030. The strategies can be best management practices, voluntary measures, incentive-based approaches, or mandatory requirements through regulation. The 2027–28 timeframe is available to more fully develop strategies for funding, consideration, and adoption.

The 2028–29 timeframe is reserved for implementation of strategies, agency rulemakings, and simultaneous parallel production of the ozone "Severe" SIP, including testing and documenting the ozone reduction benefit in the SIP before 2030. By 2030 and beyond, the implemented strategies will reduce local anthropogenic emissions of ozone precursors and greenhouse gases to gain and maintain measured compliance with federal ozone health standards and achieve the environmental and human health benefits that come with air quality improvements.

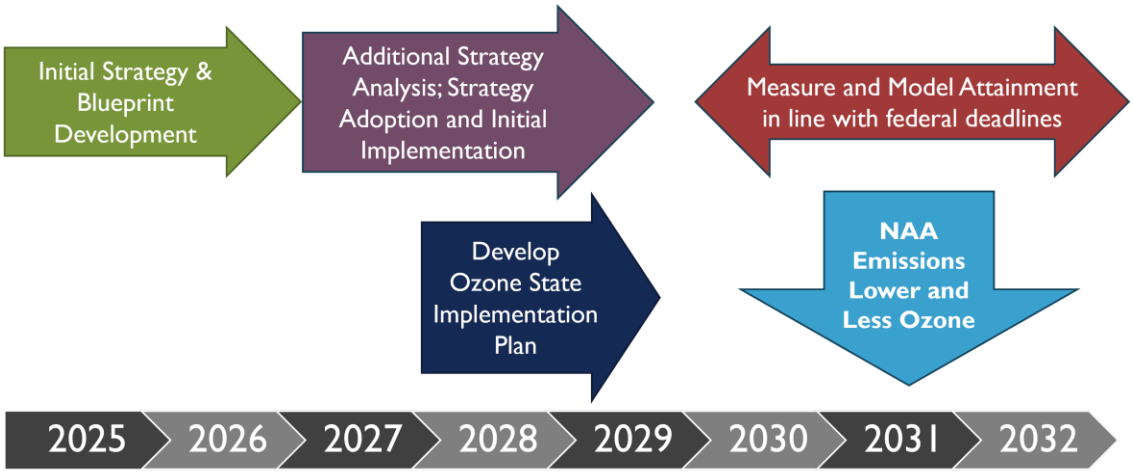


Figure 1: Timeline for development of Blueprint, Blueprint strategies, State Implementation Plan, and meeting attainment deadlines.

Resources necessary for Blueprint implementation

RAQC is the recipient of approximately $500,000 each year of state and local monies for air quality planning work and technical analyses. The majority of these welcome resources are devoted to supporting internal staff as we work with stakeholders to assess and develop emission-reduction approaches and prepare federally required ozone State Implementation Plans with our agency partners. RAQC recognizes that substantial emission reductions will be necessary for achieving ozone compliance and developing a successful ozone SIP by 2030. Additional resources are needed for this aggressive emission control strategy assessment effort to be successful. The number of strategies necessary to analyze and consider over the next three years in order to model attainment and the strategies' complexity is much more significant than what has been adopted in the past five years.

RAQC has concluded that an additional $2 million to $3 million over the next three years is required to implement the Blueprint, meaning to independently develop the appropriate emission reduction measures to achieve attainment. These resources would be used to build on the 2026 Blueprint, once it is endorsed by the RAQC Board, to fully develop an innovative operational program with state-of-the-art technology and analysis capability comprised of staff, tools, data, and evaluation methods to fully develop emission control strategy approaches.

The acquisition of these additional resources would fund:

- The hiring and training of additional RAQC staff and/or contractors
- Developing innovative assessment tools
- During 2027-29, evaluation, preparation, and delivery of multiple rounds of control strategy packages and preparing draft regulatory rulemaking proposals as needed
- Documenting and testing ozone control strategies in the SIP attainment modeling

This critical funding would allow RAQC to apply and deploy new, innovative technology approaches, including:

- Artificial intelligence and machine learning technologies

- State-of-the-art emissions data and economic modeling
- The latest air quality modeling tools to consistently and completely analyze and derive necessary control strategies for successful ozone attainment plans, with the associated reduction of particulate, toxics, and greenhouse gas emissions

More information on next steps to further develop and implement strategies once the 2026 Blueprint is finalized by the RAQC Board is available in the "Emission Control Strategies" section below. Additional resources could also be needed once strategies are fully developed to implement programs and deliver incentives where appropriate. The exact level of resources necessary for this stage is to be determined as strategies are refined and moved forward.

Relating the Blueprint to the State Implementation Plan Process

The Development Policy from the RAQC Board directs the Blueprint to serve as the strategic plan to achieve attainment of the 70 ppb NAAQS for ozone in the 2030–32 period through proposal of a viable and sufficient package of emission reduction policies for implementation by 2030. The SIP is then the formal required mechanism to apply selected emission reduction policies and forecast attainment at each monitoring site across the NAA. The SIP requires preparation of numerous technical analyses and work products, which are reported and endorsed or adopted in the SIP Chapters and Appendices using the required Clean Air Act format.

Table 2 below compares the estimates of anthropogenic tons of ozone precursor emissions per day from the current SIP modeling year of 2026 to estimates of the remaining emissions when the 2026 emissions are potentially reduced by different percentages, and those are compared to the effect of full implementation of Blueprint strategies. These various scenarios are useful for understanding the potential impact of the Blueprint strategies and/or the full magnitude of additional needed other emissions reductions in relation to analyzing the needed emissions to reach modeled 2032 attainment.

Table 2: Range of Anthropogenic Emission Reductions for SIP Analysis Consideration to approach modeled 2032 Attainment

Anthropogenic Ozone Precursor Emission Type	2026 Emission Estimate (tons/day)	Scenarios of Remaining Emissions (tons/day) if 2026 Emissions were reduced by % shown					Remaining Emissions Estimated after Full Implementation of Blueprint Strategies (tons/day)
		-20%	-25%	-30%	-40%	-50%	
NOx	146.3	117	110	102	88	73	58.5
VOC	253.5	203	190	177	152	127	196.1

How much do emissions need to be reduced to model attainment?

Consistently, the three highest NAA ozone monitoring sites are Rocky Flats North (RFNO), the National Renewable Energy Laboratory (NREL), and Chatfield State Park. Modeled 2032 attainment at these sites will also bring all other NAA sites into modeled compliance with the 2015 NAAQS, recognizing that all sites need be individually have modeled ozone levels below the standard. Currently the Chatfield site has the highest Future Design Value used for ozone attainment planning.

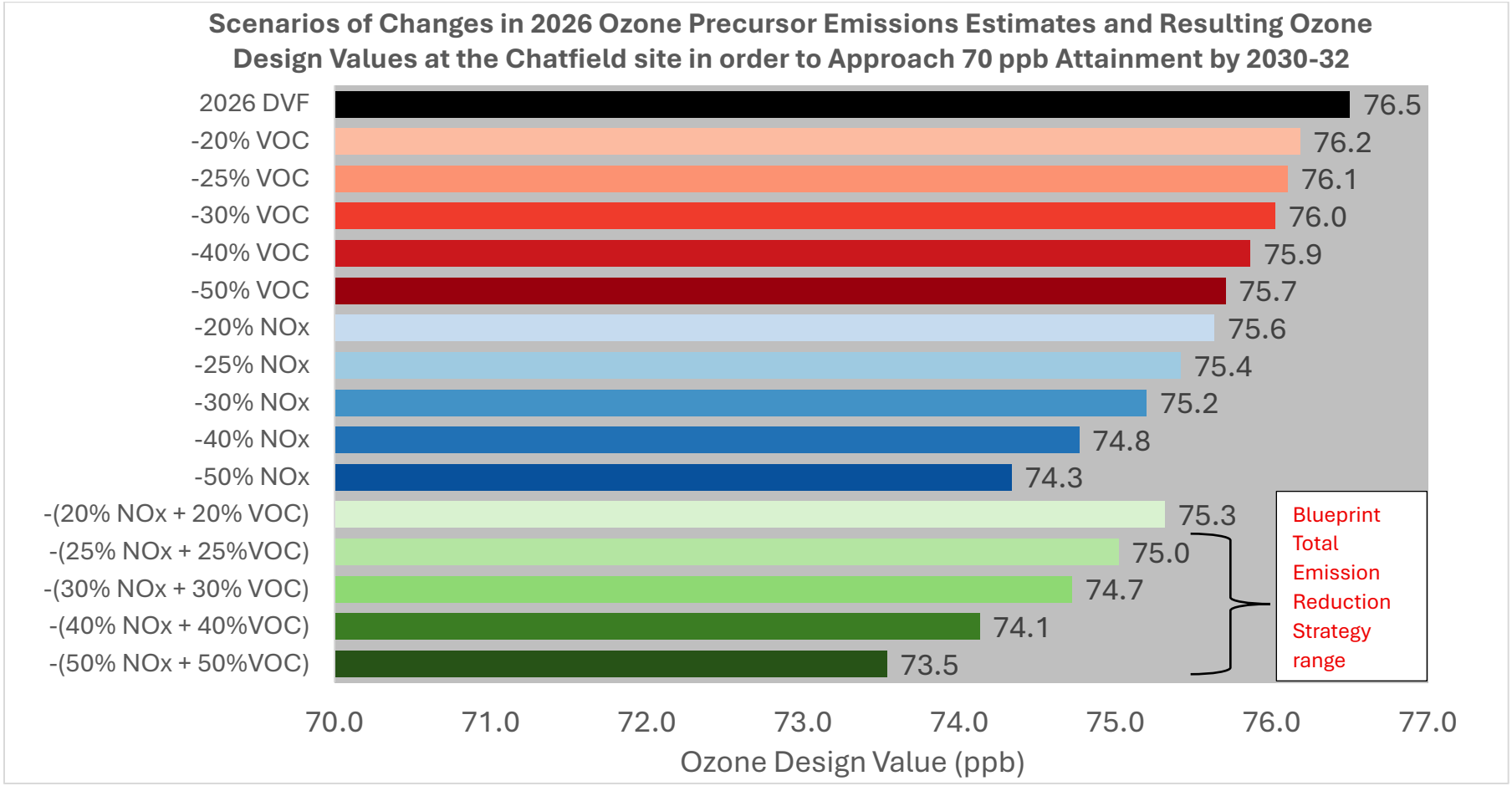


Figure 2: Emission reduction scenarios of ozone precursors within the NAA and estimated future design value changes at the Chatfield State Park site.

Using the Decoupled Direct Method (DDM) analysis tool described in Appendix B, 2026 emissions were reduced for NOx only, VOC only, and NOx + VOC by 20%, 25%, 30%, 40%, and 50% each to estimate outcomes toward future modeled 2015 ozone NAAQS attainment at the Chatfield site. These percentage reduction amounts characterize the extent of needed reductions within the NAA for this highest site, separate from analysis of specific control strategies. The reductions from Blueprint strategy implementation (described in the Strategy Summary Tables below) are in the range of ~25% for VOC combined with over 50% for NOx emissions. Similar results for the NREL and RFNO sites are presented in Appendix B. The DDM tool will be applied to evaluate additional strategies beyond those in the Blueprint to reduce emissions enough to model attainment, a Clean Air Act SIP requirement.

The Blueprint provides a thorough but high-level plan about three key areas of planning ozone attainment:

1) **Emission reductions from Blueprint control strategies:** Building from the set of control measures listed in the 2025 Blueprint and after conducting further analyses in 2026, the future ozone reductions from the individual and collective effect of the possible measures are estimated; those are reported later in this document under "Future Ozone Impact Analysis report overview" and found in Appendix D. Supporting Documents for the Blueprint: Quick Links. The methodology and analysis tool are in place and tested, ready to use to continue work to improve estimates of effects on future ozone from the listed possible measures, as well as any changes to those, and additional new measures as they are developed.

2) **Technical work needed to support a successful SIP:** To support a successful SIP to submit in 2030, analyses of inputs required by the Clean Air Act (CAA) for the SIP must be addressed before the SIP analysis is completed. As discussed in Appendix B. Preparing and Planning for a State Implementation Plan that Shows Attainment and Appendix C. Improving Understanding of Estimates of Background Ozone and Transport affecting the DM/NFR NAA in more detail, defensible analyses are needed to:

    a. Evaluate baseline ozone monitoring data averages that use CAA options to estimate an alternative baseline(s) through screening and removal of the effect of smoke and stratospheric ozone intrusions on local ozone;

    b. Analyze and present public policy choices about sorting ozone data for planning purposes, i.e., selecting days to model when local emission controls can produce measurably lower ozone; and

    c. Gain a better documented understanding of background ozone and ozone precursor contributions transported into the NAA on high ozone days, for Ozone SIP purposes.

3) **Exploration of additional strategies not currently in the Blueprint:** With the estimates from the current list of possible measures producing relatively small changes in future modeled ozone, there will need to be an immediate and more exhaustive search and consideration of substantial and "new-to-Colorado" emission control options to successfully achieve enough reductions in the SIP and supporting analyses by 2030. The

Blueprint identifies why, when, what, and which emission source categories need to be reduced to produce a successful SIP, but does not prescribe how to get those effective, efficient, verifiable, and permanent local emission reductions in place even as population, the economy, and vehicle miles driven continue to grow. Attainment planning requires looking at all possible measures and options to get to attainment.

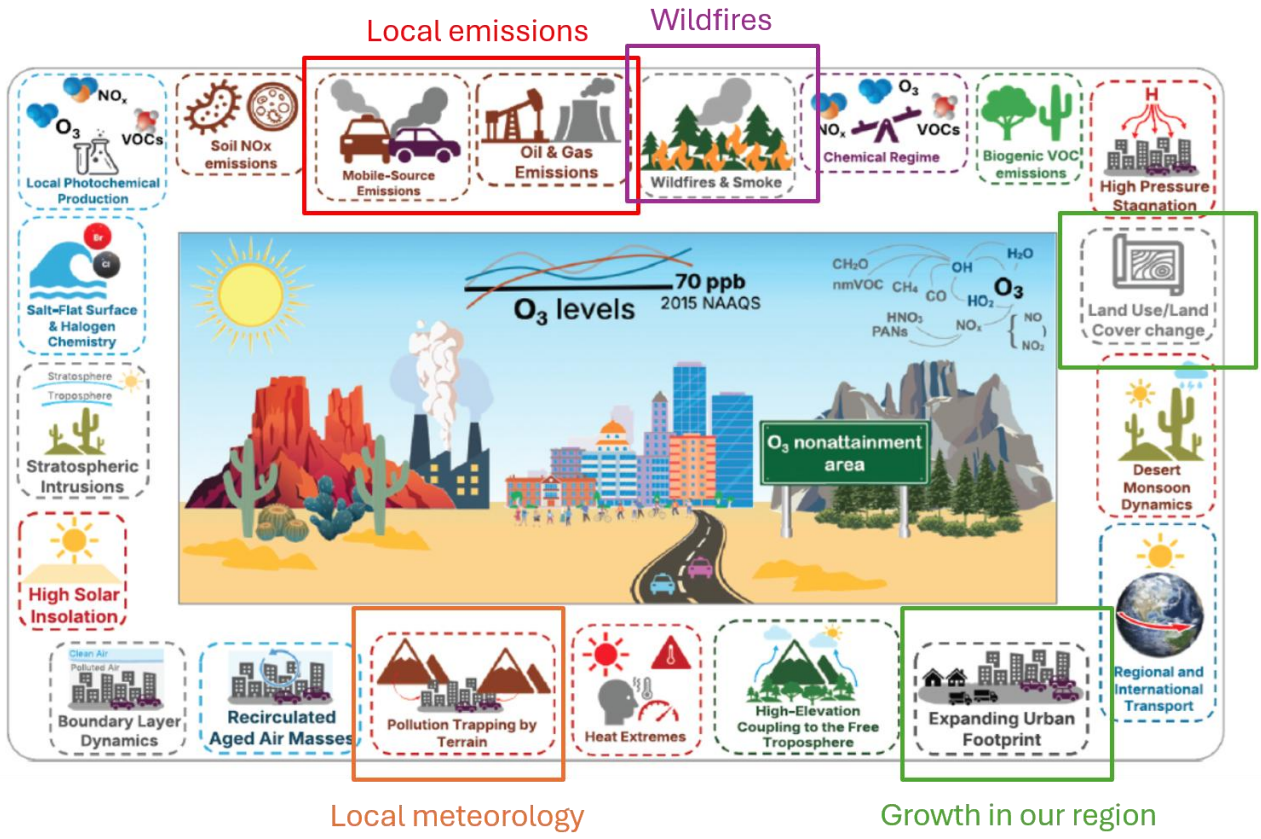


Figure 3: Visual depiction of the factors influencing ozone that are both unique and shared across the four nonattainment areas of Phoenix-Mesa, AZ; Denver Metro/North Front Range, CO; Las Vegas, NV; and Wasatch Front, UT.

Ozone and ozone precursor emissions transported to the DM/NFR NAA

In addition to estimates of emissions within the NAA, both ozone and ozone precursors (NOx and VOCs) occur upwind of the NAA and are transported into the DM/NFR region, varying by hour, day, wind direction, and concentration.

- Those pollutants are not measured at upwind monitoring sites as they are measured within the NAA, in terms of characterizing the pollutant contributions from outside the NAA. Both upwind ozone and its precursors are not easily or accurately tracked with measurements due to their ubiquitous chemical profiles that do not allow the distinction between local and transported pollution.
- Modeling tools are used to estimate transport into the NAA, but there are no measurements to directly verify those modeled contribution estimates. Transported pollution estimates rely on inventory estimates by outside-of-Colorado agencies and organizations.

The recent paper "Urban ozone nonattainment: Interconnected challenges in the Intermountain Western U.S." by Robinson et al. describes the DM/NFR NAA and other urban ozone NAAs in the intermountain West U.S., in terms of their similarities and difference. Figure 3 above from that paper illustrates the many causal factors affecting ozone planning, both within and outside all NAAs. The mobile source and oil and gas emissions are the two factors that we can control locally through air quality planning, while all other factors affect measured ozone data and/or modeling results to varying degrees in our DM/NFR NAA region. Wildfire smoke, both within and transported from outside of the NAA, is a factor whose influence and contributions to precursor pollutants and ozone levels has grown in recent years as the frequency and severity of fires has increased. More information about transport of background emissions and ozone is presented in Appendix C.

Key Supporting Documents for the Blueprint

During the process of developing the Blueprint, RAQC staff worked with partners to develop several documents that supplement the main Blueprint. Key takeaways from several of these documents are provided below and others are described within the relevant section of the Blueprint. Additionally, links to all supporting documents are compiled in Appendix B for ease of reference.

Blueprint Development Policy

In September 2025, the RAQC Board approved the "Policy on Creation of the Control Strategy Blueprint 2030" to lay out the overarching goal, method, and process for creating the Blueprint and developing the strategies within it and for the Board to consider the Blueprint going forward. The policy called for the Board to provide an initial endorsement of the Blueprint's direction, shape, and scope in fall 2025 and for staff to bring a refined, further developed version of the Blueprint back to the Board in 2026. The policy also provides guidance on the process for Board consideration of additional Blueprint updates, including if more control strategies are put forward for potential inclusion, and for final recommendation of fully developed control strategies prior to seeking a path for their implementation. More details are available in the policy document.

The initial Blueprint was endorsed by the RAQC Board on November 7, 2025, with the following resolution: *The November 2025 Control Strategy Blueprint is endorsed by the RAQC Board*. As laid out in the Board-approved Blueprint Development Policy, this endorsement of the overall Blueprint, not any particular strategy, will be followed by subsequent work further developing the Blueprint, as well as supporting planning, outreach, and analysis processes and revisiting of the Blueprint by the RAQC Board in 2026 and beyond. The Board reserves the right to update the policy document as its work supporting the RAQC's Blueprint implementation efforts evolve.

Health Impact Assessment takeaways and implications

The RAQC commissioned a public health study to better understand the health burdens and associated health costs of ozone in the region. Public health researchers Dr. Sheryl Magzamen, formerly a professor of epidemiology at Colorado State University and the Colorado School of Public Health, and Dr. Jonathan Samet, past dean of the Colorado School of Public Health and professor of Epidemiology and of Occupational and Environmental Health, completed a new study in 2026 entitled "Ozone in the Denver Metro North Front Range: A Health Impact Assessment." The report is an analysis of the health costs of high levels of ground-level ozone on residents and

communities in the DM/NFR ozone NAA that will inform the Regional Air Quality Council's Control Strategy Blueprint process.

Their report is a health impact assessment, or HIA, a scientific tool used by public health experts to develop approximations of outcomes based on observed data. While the HIA does not specifically look at the health impacts of individual emission control strategies, it provides critical context on the costs and benefits to local community health of action and inaction on when it comes to pursuing emission reductions and the Blueprint's goal and recommendations.

The authors used local ozone data from the DM/NFR and well-established modeling tools and methods to assess the health impacts of high ozone on residents of the NAA. Analysis of health impacts included asthma-related visits to the emergency department, respiratory hospitalization, minor restricted activity days, and non-accident mortality, as well as the associated costs. Their assessment estimated the attributable burden of morbidity and mortality in three scenarios in comparison to recent observed ozone values: One scenario brings the region into compliance with federal ozone standards, one examines a reduction, and the third examines an increase in ground-level ozone in the NAA:

- Scenario 1 models avoided health impacts and costs under a reduction of ozone exposure with no daily average values above 65 ppb over a 5-year period, which is 5 ppb below the current federal standard.
- Scenario 2 models avoided health impacts and costs when eliminating days with no daily average ozone exposure above 70 ppb over a 5-year period. In Scenario 2, the region would come into compliance with federal ozone standards.
- Scenario 3 models additional health impacts and costs under a 10 ppb increase over the observed ozone levels over the previous 5 years.

Key findings include:

- Both the magnitude and frequency of elevated ozone concentrations are important determinants for health impacts.
- Eliminating the days with ozone levels over 70 ppb over a five-year period leads to the following estimated benefits including reduction of:
    - 120 excess asthma emergency department visits;
    - 390 excess respiratory hospitalizations;
    - 440 excess minor restricted activity days due to asthma;
    - 35,140 excess missed days of school due to asthma; and
    - 170 excess non-accidental deaths.

The HIA found that by meeting the 70 ppb ozone standard over the next five years, the communities in the nonattainment area could save an estimated $211 million to $580 million annually (in 2024 dollars) in costs associated with the health burden of ozone.

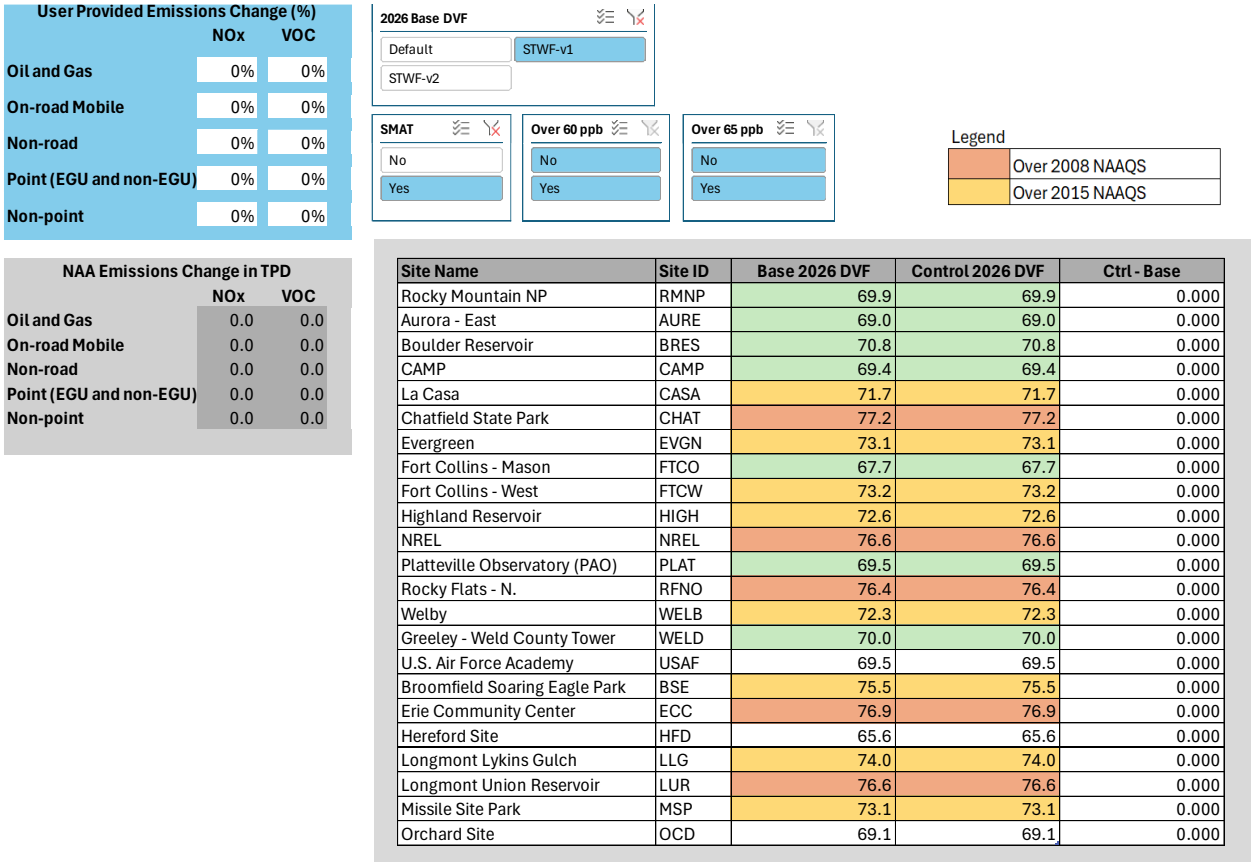
Future Ozone Impact Analysis report overview

Air quality planning for the ozone standards under the Clean Air Act requires the use of regional gridded photochemical models, described further in Appendix B. These models integrate meteorological data with emissions inventory data from anthropogenic and natural sources and

transported background ozone estimates, using chemical mechanisms to estimate the contributions to resulting air quality concentrations within the DM/NFR NAA. In consultation with the APCD, RAQC contracts and manages expert consultants to do this work based on analysis and projections to 2026 from the 2022 historic year for the DM/NFR NAA. That work was carried out in 2024–25 and completed in October 2025. This work would be extended to 2032 emissions and air quality modeling projections, including effects of controls strategies, in the 2028-29 SIP process.

The 2022-based photochemical grid model (PGM) modeling platform was developed for the DM/NFR NAA using the Comprehensive Air-quality Model with extensions (CAMx) and was extensively tested and used for the 2026 Serious 70 ppb SIP planning efforts in 2024–25; those reports and results are found at Emissions Analysis and Ozone Modeling in an expandable box named "Modeling Reports and Dashboards for 2026 Serious 70 ppb SIP Planning Efforts."

In support of developing the 2026 Control Strategy Blueprint, the RAQC and APCD contracted with Ramboll Americas to conduct a Future Ozone Impact Analysis (FOIA) to further analyze the series of control measures from the 2025 Blueprint for sources in the DM/NFR NAA and estimate their potential NOX and VOC emission reductions beyond 2026 in a series of future years (e.g., 2030, 2035, and after 2035). The expected emission reduction effects of each Blueprint strategy are conservatively estimated to avoid overcontrolling sources, since they are not yet fully-developed regulations or programs.



User Provided Emissions Change (%)	NOx	VOC
Oil and Gas	0%	0%
On-road Mobile	0%	0%
Non-road	0%	0%
Point (EGU and non-EGU)	0%	0%
Non-point	0%	0%

NAA Emissions Change in TPD	NOx	VOC
Oil and Gas	0.0	0.0
On-road Mobile	0.0	0.0
Non-road	0.0	0.0
Point (EGU and non-EGU)	0.0	0.0
Non-point	0.0	0.0

Site Name	Site ID	Base 2026 DVF	Control 2026 DVF	Ctrl - Base
Rocky Mountain NP	RMNP	69.9	69.9	0.000
Aurora - East	AURE	69.0	69.0	0.000
Boulder Reservoir	BRES	70.8	70.8	0.000
CAMP	CAMP	69.4	69.4	0.000
La Casa	CASA	71.7	71.7	0.000
Chatfield State Park	CHAT	77.2	77.2	0.000
Evergreen	EVGN	73.1	73.1	0.000
Fort Collins - Mason	FTCO	67.7	67.7	0.000
Fort Collins - West	FTCW	73.2	73.2	0.000
Highland Reservoir	HIGH	72.6	72.6	0.000
NREL	NREL	76.6	76.6	0.000
Platteville Observatory (PAO)	PLAT	69.5	69.5	0.000
Rocky Flats - N.	RFNO	76.4	76.4	0.000
Welby	WELB	72.3	72.3	0.000
Greeley - Weld County Tower	WELD	70.0	70.0	0.000
U.S. Air Force Academy	USAF	69.5	69.5	0.000
Broomfield Soaring Eagle Park	BSE	75.5	75.5	0.000
Erie Community Center	ECC	76.9	76.9	0.000
Hereford Site	HFD	65.6	65.6	0.000
Longmont Lykins Gulch	LLG	74.0	74.0	0.000
Longmont Union Reservoir	LUR	76.6	76.6	0.000
Missile Site Park	MSP	73.1	73.1	0.000
Orchard Site	OCD	69.1	69.1	0.000

Figure 4: CAMx 2026 Decoupled Direct Method (DDM) NOx and VOC emissions ozone sensitivity tool used in FOIA.

Results from a CAMx 2026 Decoupled Direct Method (DDM) NOx and VOC emissions ozone sensitivity simulation completed in 2025 were used to construct a Future OZone Impacts Estimator (FOZIE) tool that calculates the effects of user-selected Blueprint control measures on projected future year ozone future design values (DVFs) in the DM/NFR NAA. The report describes the Blueprint control measures, how their emission reductions were calculated for several future years, and the development and example results from the FOZIE ozone DVF Dashboard. Figure 4 above showcases the FOZIE dashboard with 2026 modeling results. Users can adjust emissions changes to see their estimated impacts on ozone levels at NAA monitoring sites based on modeling results.

Blueprint Control Strategy Emission Reduction Estimates

The Fall 2025 Blueprint control measures were distributed across five emission sectors for the FOIA report analysis. Measures for on-road mobile, non-point, non-road, stationary sources, and oil & gas sector emission reduction measures were considered and analyzed as presented in summary fashion in Chapter 2 and included with more detail with data and calculations as Emission Reduction Methodologies (ERM) in the Appendix to the FOIA report. The evaluation of the measures does not comprise all the factors necessary to prepare or consider the measures for regulatory adoption. The information in each ERM was folded into an updated associated briefing paper for each measure and includes some level of assessment of other factors such as feasibility, cost, implementation method, impact on disproportionately impacted communities, etc., for review and comment at RAQC workshops during summer 2026 and are now included in the Fall 2026 Blueprint.

The Future Ozone Impact Analysis Report and Future OZone Impacts Estimator Excel Dashboard completed in June 2026 are available on the RAQC website and linked in Appendix D. The dashboard accompanies the report and allows users to explore the modeled emission reductions and ozone levels from groupings of strategies at a selection of monitoring sites in the region. This file is an Excel workbook tool and should be downloaded to be viewed and explored; the online version will not display properly.

Blueprint Development Process Document

The RAQC worked with the APCD in 2026 to develop the "Blueprint Emissions Control Strategy Development Process: RAQC Guiding Principles", a document that describes the working relationship between these entities and other state agencies for the development of emission control strategies over the next few years under the Blueprint. The document describes roles, responsibilities, and expectations between the organizations, and provides a structured, consistent approach for the implementing agency or office to receive information and provide feedback to RAQC, continuing the active communication between RAQC and affected agency or office, which the RAQC Board has requested throughout the Blueprint development process. The document clarifies the roles in RAQC's Blueprint and control strategy development processes so that feedback can be appropriately addressed, enough time is allotted for agency or office review and input, and expectations are better understood. RAQC is to then consider the implementing agency's or office's input and inform the RAQC Board on areas of agreement and concern.

Stakeholder engagement on the Blueprint

The RAQC conducts extensive stakeholdering with broad and varied groups impacted by ozone levels and by potential emission reduction actions, engaging stakeholders early in and throughout the strategy development process, providing resources such as quantitative and qualitative analyses for stakeholders to consider, and through consideration of and responses to comments received during RAQC processes. The following summarizes the RAQC's efforts to conduct outreach to hundreds of relevant stakeholders and provide opportunities for input and discussion on drafts of the Control Strategy Blueprint and the control strategies in the Blueprint. In addition to the specific meetings and public comment opportunities discussed below, the RAQC:

- Utilized existing RAQC meetings, such as Board meetings, Control Strategy Committee meetings, and Indirect Source Technical Work Group meetings, to share information on the Blueprint and gather feedback
- Conducted targeted outreach and met with relevant stakeholders on specific strategies
- Held meetings in 2025 and 2026 with individual or small groups of stakeholders if requested, as feasible
- Sought out existing external meetings with relevant stakeholder groups at which to share information about the Blueprint and offer opportunities for discussion
- Shared information about the Blueprint and opportunities to engage via various mailing lists
- Took all oral and written comments into consideration when developing iterative versions of the Blueprint and supporting materials and took steps to address comments where relevant and appropriate

Additional, detailed information on stakeholder engagement in the Blueprint development process is available in the supplemental Stakeholder Engagement Information document.

Highlights from 2025 Outreach & Public Input

To obtain broad input, the RAQC conducted a pair of in-person facilitated workshops to present and discuss the content of this Control Strategy Blueprint to assure and document public involvement in the July through August 2025 timeframe. Group Memory documents from the July workshop and August workshop comprehensively summarize the discussions and input collected at these meetings from over 60 participants representing a variety of stakeholders across government, industry, transportation planning and environmental organizations, and more. A Final Report and Recommendations for Moving Forward was also prepared to summarize the July and August workshops.

Workshop participants, Board members, and other stakeholders were also encouraged to provide additional review and comment, leading to the submission of 16 sets of written comments as of August 29, leading to the September 5 Blueprint version. Nine sets of comments were then received by September 19 on the September 5 Blueprint version, leading to the October 3 Blueprint version. Four sets of comments were received by October 24, leading to the November 7 Blueprint version.

Highlights from 2026 Outreach & Public Input

The RAQC held three virtual public workshops on the strategies in the Control Strategy Blueprint to gather stakeholder feedback in the July and August 2026 timeframe, as well as a virtual public pre-meeting to share results from supplemental reports and gather stakeholder questions and comments. The Summer 2026 Blueprint Workshops Summary document serves as a comprehensive summary of the conversations and input collected at these meetings. These meetings were attended by over 55 participants representing a variety of stakeholders across government, industry, transportation planning environmental organizations, and more.

Workshop participants, Board members, and other stakeholders were also encouraged to provide additional review and comment, leading to the submission of seven sets of written comments as of August 21 on the draft control strategies, leading to the September preliminary draft Blueprint version. Three sets of comments were then received by September 21 on the September draft Blueprint, leading to the October updated draft Blueprint version. Five sets of written comments were then received on the October draft Blueprint, leading to the November final draft Blueprint version. A total of 15 written comments were received on the 2026 drafts of the Blueprint.

Emission Control Strategies

The Regional Air Quality Council, the Air Pollution Control Division, and other stakeholders and partners have a long history of analysis, regulation development, and subsequent implementation of emission control rules within the state of Colorado and the DM/NFR NAA. Many resources exist to understand this history of past analyses and actions, including: the Reasonably Available Control Measures chapter, most recently prepared for the Severe State Implementation Plan (SIP) for the 75 ppb Ozone Standard; the Reasonably Available Control Technology Analysis chapter from the recent Serious State Implementation Plan for the 70 ppb Ozone Standard; existing Air Quality Control Commission regulations; and a record of current and past control strategy work groups on the RAQC website.

The Blueprint is a new approach that provides a broader, more complete strategy framework for future action. This section of the Blueprint focuses on consideration of additional control strategies to augment existing efforts for regional reductions of ozone forming emissions.

Emissions Control Strategy Development & Evaluation

Numerous control strategies were reviewed for potential inclusion in the Blueprint based on staff analysis and historical and ongoing discussions with partners and stakeholders. These strategies focus either on new opportunities for reductions in ozone-forming emissions or on refinements to existing rules, emissions inventories, and data collection processes needed to improve the understanding of emissions at baseline. The Blueprint focuses on evaluating a suite of strategies, recognizing that adoption and implementation of separate individual strategies will not markedly reduce ozone at the regional scale. However, as strategies move towards potential implementation, individual, tailored action on each strategy will be required.

Selection of Strategies and Initial Evaluation

Strategies are selected with a suite of factors in mind, such as :

- Reducing ozone precursor emissions
- Technologic and economic feasibility
- Implementation considerations and timeframes
- Whether strategies are quantifiable, enforceable, and/or need statutory authorization
- Stakeholder engagement
- Impact in disproportionately impacted communities

More information on these types of considerations is available in the briefing paper overview documents for each strategy linked in the table below.

Refinement of Strategies through the Blueprint Development Process

Potential strategies were vetted through Control Strategy Committee meetings and workshops held in 2025 and 2026, providing opportunities for stakeholder input and refinement. Additionally, the RAQC conducted work in 2026 to estimate the potential for emission reductions and changes to future regional ozone levels from each strategy, aligned with the Blueprint Development Policy. Please see the "Stakeholder engagement on the Blueprint" and "Future Ozone Impact Analysis report overview" sections of the Blueprint for more information.

The Blueprint Development Policy lays out a few factors for which RAQC staff should have a moderate degree of confidence for the strategies in the Blueprint as strategies are further developed in 2026. Staff have striven to ensure that the strategies meet this level of confidence and that strategies are worth the next level of analysis as follows:

- **Legal path to success and feasibility:** While RAQC has not conducted a detailed legal or feasibility analysis for most of these strategies at this stage, the vast majority of potential new strategies are either expansions of existing regulations or programs, or are based on strategies implemented in other states. For the few completely new strategies, RAQC has proposed ideas that have been under discussion previously and/or would work in a similar format to existing programs. Additionally, in some cases RAQC has acknowledged multiple potential pathways for implementation of strategies, allowing flexibility if legal or feasibility roadblocks present themselves during more detailed analysis.
- **Costs, while possibly higher than prior-adopted strategies, are not extravagant:** Estimating costs is difficult without having a full scope for a strategy (e.g., applicability thresholds, exact reporting requirements, implementation and enforcement plans), and the strategies in the Blueprint are currently not fully scoped out. However, the fact noted above that most strategies in the Blueprint are expansions of existing regulations or programs or are based on strategies implemented in other states provides a moderate degree of confidence that these strategies could be implemented without extravagant costs in the DM/NFR NAA. RAQC acknowledges that some strategies may have higher costs than previously adopted strategies to achieve remaining achievable reductions beyond existing regulations, which is aligned with the acknowledgment of this reality in the Blueprint Development Policy. For completely new strategies, again, the multiple pathways for implementation built into each strategy at this stage allows for flexibility to design detailed versions of strategies in a way that costs are not extravagant.

Strategy Development Next Steps

Strategies developed to date that are not currently established through Air Quality Control Commission as a rule will require further evaluation before they can be considered for voluntary or regulatory implementation. The full list of information that the RAQC will attempt to assess and document in the next stage of detailed strategy analysis and concept refinement following finalization of the Blueprint, as captured in the Strategy Development Process document, is:

- The scope of the strategy, presenting a narrative of the proposal, an overview of the universe of affected sources, industries, communities, and/or activities
- The proposed time for strategy adoption and implementation
- The potential ozone precursor emissions reductions, including co-pollutants. Any air quality modeling of the emission reduction impacts will also be documented.
- The economic/cost estimates associated with implementation and annual compliance
- The health benefits and associated costs avoided based on strategy implementation
- The engagement with stakeholders during the vetting of the measure and development of the strategies
- Legal analyses that present the authorities, or lack thereof, for the subject emission reduction approach
- Regulatory, legislative, and/or policy language necessary for the approach
- Reporting requirements and process(es) by which the information would be collected and managed
- The impacts on the affected agency(ies) or office(s) responsible for implementation and partnership

This information also aligns with the requirements of strategy refinement laid out in the Blueprint Development Policy. The RAQC will complete additional analysis in collaboration with any relevant potential implementing agency as laid out in the Strategy Development Process document. Agency input will be important to fully understand and define the exact proposed program scope and integrate the expected costs of implementation.

What level of additional analysis the RAQC is able to complete, and for how many strategies, will depend on the resources available for this work, as described under "Resources necessary for Blueprint implementation." Recommended choices of strategy options to pursue will need to balance further improvements in air quality and the additional costs and requirements on individuals, governments, and businesses in the region, in alignment with the Blueprint Development Policy and Strategy Development Process document.

The RAQC and its partners will need to analyze and consider additional strategies not currently identified in the Blueprint to achieve sufficient reductions by 2030. For example, the Division recently put forward a surface coating requirements rule concept that would update AQCC Regulation 25 and would reduce ozone precursor emissions in the NAA. This emerging strategy could be relevant for ozone planning purposes. Any strategies recommended for consideration and/or implementation by the RAQC would also be subject to the initial requirements and next

steps laid out here and in the Blueprint Development Policy and Strategy Development Process document.

Potential Pathways to Implementation

If and when a strategy and/or a package of strategies is ready to return to the RAQC Board with a recommendation that it is ready for implementation, and the Board approves pursuing implementation as laid out in the Blueprint Development Policy, strategies can proceed through three different paths. Some strategies could proceed through only one of the following pathways based on their specific parameters. Others could be implemented under multiple paths, and which path they ultimately follow will depend on the recommendation of RAQC staff and the support of the RAQC Board, as well as available resources and ability to partner with the relevant state agencies and/or regulatory body. Regardless of the pathway, the RAQC will keep relevant agencies apprised of recommendations from the RAQC Board and the rationale for those recommendations.

1. **Regulatory action:** Requires a strategy-specific evaluation and a formal rulemaking process with stakeholder engagement and regulatory approval, during which the exact rule language could evolve further and a formal economic impact analysis would be prepared. Regulatory action could be proposed via:
    - Submission of a proposed strategy to the relevant state agency (e.g., the APCD), which could choose to bring it forward to the relevant regulatory body (e.g., the AQCC) with the support of the RAQC, or,
    - Direct proposal of a strategy by the RAQC to the relevant regulatory body, based on direction of the RAQC Board.

    For an example of the robust level of information and the process steps required for a proposed regulatory action, please see the most recent versions of AQCC's Procedural Rules and Rulemaking Hearing Guidebook.

2. **Legislative action:** Requires action at the Colorado state legislature to provide a policy requirement and/or establish resources for implementation of a strategy. In some cases, legislative action may in turn require regulatory action as a next step; in others, it may allow implementation of a program based on funding and resource allocation to proceed.

3. **Voluntary, incentive-based program:** Potential implementation through establishing a program at the RAQC or another entity that does not require regulatory or legislative action. This would require obtaining funding and resources to implement such programs and, where relevant, provide incentive funding to achieve emission reductions.

For all strategies that move to implementation, the RAQC sees it as important to set up strategies in a way that enables tracking emissions reductions data and establishing metrics to the degree possible, as well as analyzing data over time to more formally and consistently evaluate rule and program effectiveness. This will allow for determining what is and is not working well and for modifying rules and program implementation accordingly to maximize their impact.

Control Strategies Proposed for Consideration of Future Implementation

Strategy Summary Descriptions

The following strategies include evaluation of the impact of existing AQCC regulations (denoted with "on-the-books" in their titles), potential updates to existing regulations, and conceptual strategies that could be established as regulation or potential voluntary programs. Conceptual strategies and updates to existing regulations require further analysis and impact assessment, and their estimated emission reductions are based on the best available data and should be considered preliminary estimates.

The strategy summaries provide overviews of the goals of each strategy under consideration in the Blueprint. Additional details on each Blueprint control strategy are available in a linked briefing paper summary. The strategies are grouped by source category (**oil & gas** pre-production and production, **stationary sources** (smokestacks) requiring APCD permits to operate, emissions from **on-road vehicles** and off-road equipment (**non-road engines**), and smaller sources present across the NAA (e.g., gas stations, personal care products, commercial kitchens), and those counted at the county level (**non-point sources**).

All strategies are proposed for implementation in the DM/NFR ozone nonattainment area. Strategies primarily focus on reducing emissions during the ozone season rather than year-round, depending on relevant implementation considerations.

Oil & Gas Source Sector:

- **Reduce Wellsite Venting and Blowdowns Emissions:** This strategy would reduce emissions by requiring well production facilities to route gas from venting and blowdowns to sales pipelines, emissions control devices, or other beneficial uses. Where these options are unavailable, atmospheric venting would be limited to after 6 p.m. if possible.
- **AQCC's On-the-Books Upstream Oil & Gas NOx Intensity Rule:** This strategy requires upstream operators to meet NOx Intensity Targets (Targets) through 2030, which are defined as the ratio of ozone season NOx emissions to total oil and gas production volume in barrels of oil equivalent, under AQCC Regulation 7. The Targets are set separately for "Majority" and "Minority" operators. Emission reductions will be operator-specific and depend on annual oil and gas production.
- **Electric Drill Rig and Frac'ing Engine Requirements:** This strategy would reduce emissions from drill rig and hydraulic fracturing engines used during pre-production activities. Compliance could be achieved through a phased transition to use zero-emission technologies and energy sources or by scheduling drilling and hydraulic fracturing activities outside the ozone season.

On-Road Source Sector:

- **Indirect Sources Data Reporting:** This strategy would have selected indirect sources (facilities that attract and generate a significant amount of vehicle trips) report operational and emissions-related data to establish baseline conditions and evaluate potential emission reduction strategies. Reported information could include vehicle activity, fleet composition, trip lengths, and on- and off-site emissions reductions for facilities. The data would support future

feasibility and benefit assessments and inform potential voluntary or regulatory programs for these sources.

- **Indirect Sources Voluntary Facility Emission Reduction Plans:** This strategy would establish a voluntary emission reduction program for high-trip-generating indirect sources, including warehouses, entertainment venues, airports, and/or universities. Participating facilities would develop individualized plans using established best management practices (BMPs), report progress and emissions reductions, and receive technical assistance and potentially financial incentives. BMPs would target reductions in vehicle trips, on-site emissions, and local off-site emissions.
- **Indirect Sources Required Regulatory Facility Emission Reduction Plans:** This strategy would establish mandatory emission reduction requirements for high-trip-generating facilities, informed by results from data collection and voluntary reduction programs. Covered facilities, potentially including warehouses, entertainment venues, airports, and universities, would be required to develop and implement Emission Reduction Plans using approved best management practices. Plans could target vehicle-trip reductions, on-site emission controls, or off-site mitigation, with facilities required to submit baseline data and annual reports documenting implementation and achieved emission reductions.
- **Summertime Free Fare Transit:** This strategy would eliminate public transit fares during the summer ozone season in the DM/NFR ozone NAA to encourage a shift from personal vehicle use to public transportation. By reducing vehicle travel, the strategy aims to lower emissions. It would build on programs that have already been implemented across the DM/NFR area.
- **Vehicle Registration/Emissions Testing Compliance with Inspection/Maintenance (I/M) Program:** This strategy would evaluate and identify changes that could be implemented before 2030 and 2035 to DM/NFR NAA light-duty vehicle I/M program to achieve greater on-road emission reductions. A comprehensive assessment in 2027 would identify measures such as expanded testing and registration enforcement, increased testing stringency, improved repair compliance, expanded testing boundaries, and remote-sensing or heavy-duty vehicle testing.
- **Continued Light Duty Vehicle Electrification Incentives:** This strategy would assess the effectiveness of continued financial incentives for light-duty electric vehicle (EV) adoption in achieving light duty fleet vehicle turnover from gasoline. The assessment would consider long-term EV market penetration, technological advancements, and potential diminishing emissions benefits as adoption increases.
- **On-Road Vehicle Fleet Turnover and On-the-Books Colorado Clean Vehicles Regulations:** Colorado's Clean Vehicle Standards complement federal vehicle emissions standards by accelerating the adoption of low- and zero-emission light-, medium-, and heavy-duty vehicles. The standards include LEV, ZEV, Clean Cars, and Clean Trucks requirements, along with programs that support clean vehicle adoption. This strategy looks at the effects of both continued natural fleet turnover and the effects of Colorado Clean Vehicles regulations.
- **Mobile Source Emission Reduction Credits:** This strategy would expand Colorado's existing emission reduction credit (ERC) program to allow stationary sources to generate voluntary, permanent NOx or VOC emission reduction credits through the electrification of mobile-source fleets. This approach would include both on-road and non-road vehicles, providing additional opportunities to generate, trade, and use emission credits while reducing emissions from gasoline- and diesel-powered engines.

Non-Road Source Sector:

- **Landscape Maintenance Equipment Reductions:** This strategy would expand Colorado's Regulation 29 to restrict the use of small gasoline-powered commercial lawn and garden equipment (LME). Measures include phased-in seasonal use restrictions currently going through a rulemaking process at the AQCC and, in a potential second phase under exploration by the RAQC, requirements for electric-only LME sales or use, with implementation potentially beginning by summer 2028. sales or use, with implementation potentially beginning by summer 2028.
- **Non-Road Engines Emission Targets:** This strategy would establish progressively stronger non-road emission reduction targets, beginning with a 10% reduction from 2026 emission levels by 2030 and an additional 10% reduction every five years through 2050. Potential measures include green infrastructure requirements for construction projects and seasonal ozone-period restrictions on non-road engine use through best management practices.
- **Zero-Emission (ZE) Forklifts:** The proposed strategy would phase out fossil-fueled Class IV and V large spark-ignited forklifts and transition to ZE forklifts. The rule would establish fleet reporting and compliance requirements, prohibit sales of new fossil-fueled forklifts during the initial phase-in period, and phase out existing forklifts over 10 years beginning after 2030.

Stationary Sources:

- **Tightened Permit Limits for Largest Stationary Sources:** This strategy would review and revise emissions permits for the largest non-EGU point sources in the (DM/NFR NAA to achieve additional NOx and VOC reductions. Facility-specific and source-category assessments would establish more stringent, achievable emission limits based on actual operating conditions, historical emissions, and available control technologies.
- **Daily Emission Limits for Large Point Sources During Ozone Season:** This strategy would assess the feasibility of establishing daily or seasonal total emission limits for large industrial facilities during the ozone season (June 1–August 31) in the DM/NFR NAA. A five-year analysis of historical emissions would identify peak emission periods and inform potential limits, with consideration of operational constraints and the need for electric generating units to maintain grid reliability.

Non-Point Source Sector:

- **Charbroiler Requirements for Commercial Cooking:** This strategy would establish emission control requirements for commercial charbroilers. Initial requirements would target chain-driven charbroilers, for which cost-effective control technologies are available. Potential controls include catalytic oxidizers, ceramic filters, UV systems, and activated carbon absorbers.
- **VOC Limits for Consumer Products:** This strategy is an existing AQCC regulation that establishes VOC content limits for consumer products in the DM/NFR NAA and also explores potential additional requirements based on more recent California Air Resources Board rulemakings. The regulation covers products such as air fresheners, personal care products, fragrances, and insecticides, with additional emission reductions potentially occurring as the more stringent California standards influence nationally distributed product formulations. The

existing regulation is not yet in effect but would take effect as a contingency measure if Colorado fails to attain the 2008 ozone NAAQS.

- **Changes in Design and Operation of Commercial Buildings:** This strategy would evaluate commercial building emissions and assess how building design, energy systems, and operational practices can reduce NOx emissions, expanding on the work behind the already-adopted AQCC Regulation 28. The analysis would review current emissions inventory methods, existing state and local policies, building performance standards, and energy codes to identify effective approaches and opportunities for broader application. Potential future measures could include incentives for low-NOx technologies, ozone-season operational practices, and recognition programs for high-performing buildings.

Strategy Summary Tables

Table 3 provides an overall summary of total potential emission reductions from all Blueprint control strategies described above by source sector. This table shows the total potential emission reductions for all strategies combined at the time of their full emission reduction potential for NOx and VOC., e.g., at the point of peak expected compliance and full implementation for strategies that where reductions would be phased in over time. These strategies are further organized and discussed based on their emissions benefits and implementation timing in Appendix E. There, each strategy is ranked by emission benefits in various timeframes as well as ranked by potential speed of implementation.

Table 3: Potential Emission Reductions from Blueprint Control Strategies

Source Sector Category	Number of Strategies	NOx Reduction at Full Implementation (TPD)	VOC Reduction at Full Implementation (TPD)
On-Road	8	26.5	14.9
Non-Point	3	0.9	3.5
Point	2	8.6	1
Non-Road	3	13.3	33.7
Oil & Gas	3	38.4	4.3
Total Reductions		87.7	57.4

Table 4 below provides information on proposed timeframes for assessment and implementation of the Blueprint control strategies described above.

Table 4: Summary Table of All Blueprint Control Strategies

Target Year for Implementation	Source Sector Category	Strategy Name	Steps	Anticipated Implementation Options	Incentives Helpful?
2027	On-Road	Indirect Sources Data Reporting	Assess Data Collection Options and Costs, Implement Reporting	Voluntary Programs and/or New Rule	Yes
2027 or 2028	On-Road	Summertime Free Fare Transit	Assess Cost, Implement, Assess Benefit	Voluntary Programs and/or New Statutory Action	Yes
2027	On-Road	Continued Light Duty Vehicle Electrification Incentives	Assess Strategy Cost and Benefits, Assess Funding Options and Expansion	Legislative Action	Yes
2027	On-Road	On-Road Vehicle Fleet Turnover and On-the-Books Colorado Clean Vehicles Regulations	Track progress and emission reductions from the adopted rule	Existing Rule	No
2028	On-Road	Indirect Sources Voluntary Facility Emission Reduction Plans	Assess Data Collected, Determine Program Structure, Implement Later	Voluntary Programs	Yes
2030 to 2035	On-Road	Indirect Sources Regulatory Facility Emission Reduction Plans	Assess Previous Strategies, Assess Strategy Options, Propose Rule	New Rule	Yes
2028	On-Road	Mobile Source Emission Reduction Credits	Assess Strategy Potential, Update on-the-books AQCC regulation	Modify Existing Rule	Yes
2030	On-Road	Vehicle Registration/Emission Testing Compliance with Inspection/Maintenance (I/M) Program	Assess Strategy Options, Propose Potential Changes to Existing Program	Modify Existing Rule / Potential Legislative Action	Yes
2026 and 2028	Non-Road	Landscape Maintenance Equipment Reductions (phased strategy)	Assess Data from Upcoming AQCC Rulemaking, Assess Additional Strategy Options	Existing Rule / Modify Existing Rule	Yes

Target Year for Implementation	Source Sector Category	Strategy Name	Steps	Anticipated Implementation Options	Incentives Helpful?
2030	Non-Road	Non-Road Engines Emission Targets	Assess Strategy Options & Data Collection, Propose Potential Regulation	Voluntary Programs and/or New Rule	Yes
2032	Non-Road	Zero-Emission (ZE) Forklifts	Adopt New Rule	Voluntary Programs and/or New Rule	Yes
2027	Non-Point	VOC Limits for Consumer Products	Assess Existing Rule Effects, Implement AQCC Rule	Existing Rule / Modify Existing Rule	No
2028 to 2030	Non-Point	Changes in Design and Operation of Commercial Buildings	Assess Existing Rule Effects, Assess Additional Strategy Options, Implement Later	Voluntary Programs and/or New Rule	Yes
2030	Non-Point	Charbroiler Requirements for Commercial Cooking	Assess Strategy Options, Adopt New Rule	Voluntary Programs and/or New Rule	Yes
2029 and 2031	Oil & Gas	Electric Drill Rig and Frac'ing Engine Requirements (phased strategy)	Assess Strategy Options, Propose Potential Regulation	New Rule	Yes
2029	Oil & Gas	Reduce Wellsite Venting and Blowdowns Emissions	Assess Strategy Options and Cost, Propose Potential Regulation	Modify Existing Rule	No
2030	Oil & Gas	AQCC's On-the-Books Upstream Oil & Gas NOx Intensity Rule	Assess Existing Rule Effects	Existing Rule	No
2030	Stationary Sources	Tightened Permit Limits for Largest Stationary Sources	Assess Strategy Options and Cost, Propose Potential Regulation	New Rule	No
2030	Stationary Sources	Daily Emission Limits for Large Point Sources During Ozone Season	Assess Strategy Options, Implement Later	Voluntary Programs and/or New Rule	Yes

Blueprint Goal and Policy Recommendations

Primary Goal

Achieve attainment of the 70 ppb National Ambient Air Quality Standard for ozone in the 2030-32 period, by proposing a viable and sufficient package of emission reduction policies for implementation by 2030.

The Control Strategy Blueprint is the region's first comprehensive, strategic approach outlining emission reduction strategies for action, adoption, and implementation by the early 2030s to reverse the lack of progress in achieving the Ozone NAAQSs. As a strategic plan, the Blueprint outlines 19 emission control strategies for further consideration. The RAQC staff believe that the ozone NAA will need to achieve this additional cumulative level of emission reduction, or more, to bring the area into compliance with the 2008 and 2015 Ozone NAAQS; if not from these strategies, then from other reduction efforts. This goal and recommendations and the Blueprint control strategies will shape RAQC air quality planning support work for the next few years.

Policy Recommendations

These recommendations highlight key actions necessary to execute consideration of the Blueprint strategies and associated Ozone NAAQS planning needs. Once the Board deems the Blueprint finalized, RAQC staff will move forward with implementation of the recommendations in 2027. These are actions that the RAQC will take, but that also require collaboration and support from partners and stakeholders to achieve success.

To continue Blueprint strategy development, analysis, and implementation, RAQC seeks to:

- **Further develop the strategies currently in the Blueprint for implementation by 2030, aligned with SIP timelines:** Continue to analyze and develop the current set of Blueprint strategies as required to move them forward for potential implementation, better understand the impacts of on-the-books and evolving state regulations and legislation. It is important to implement strategies by 2030 to take credit for resulting emission reductions in the modeling and analysis for the next ozone SIP, as well as to actually lower future emissions to produce cleaner air by and within the 2030-32 monitoring compliance period. As existing strategies are updated, the RAQC commits to conduct additional outreach to stakeholders to gather input.
- **Consider additional control measures for implementation by 2030:** Determine if additional strategies are needed, with the goal of ensuring that the NAA achieves enough total local emission reductions by 2030, including in the context of regional growth and development. The current set of proposed strategies will make valuable progress, but more action will very likely be needed to achieve attainment of the ozone standards, as well as to maintain attainment over time. As new strategies are developed, the RAQC commits to conduct outreach to stakeholders to gather input.
- **Secure stable financial resources for effective planning and implementation:** Executing the Blueprint recommendations and further developing strategies will require additional funding for analysis and incentive programs, staff resources to run programs, etc., between now and 2030. Regulatory and/or legislative actions, applications to existing enterprises, other

actions to seek funding, etc., will also be needed. The number of existing and new strategies that can be fully developed and implemented and whether it is possible to meet proposed timelines will depend on the level of resources acquired.

- **Support additional ozone planning research and data collection and apply results:** Continue to refine the understanding of the complex processes that form ozone locally and of current emission levels, and therefore what emission reduction actions will be most effective to reduce ozone levels in our region. This includes the RAQC serving as the lead and/or a key partner on research and data collection efforts or utilizing others' efforts to refine its own modeling and analyses for planning and for SIP work to achieve NAAQS compliance and could include exploration of emission control measure options that are new to Colorado. One key area of study is refining our understanding of the contribution of background ozone and transport to our local ozone levels and clearly articulating the meaning of those influences on attainment planning for federal, state, regional, local, and stakeholder interest groups. Similarly, continuing to deepen our understanding and clearly defining the impacts of wildfire smoke on local ozone levels for planning purposes is another area of interest.
- **Further consider how best to reduce health impacts and costs associated with non-action:** RAQC intends to keep consideration of health impacts and costs central to its consideration of and proposed next steps on how and when to move forward with control strategy analysis and implementation, building on the Health Impact Assessment. Reducing the negative health impacts of ground-level ozone is a key reason for the Clean Air Act's NAAQS requirements, and therefore seeking to better understand these local impacts and costs and striving to meet requirements within federal attainment deadlines is central to the RAQC's mission and Colorado's responsibilities to achieve the NAAQSs.
- **Brief the RAQC Board and AQCC regularly**: Share progress reports with key updates on the process of further developing Blueprint strategies and any additional control strategies, including any that might come before the Board and/or AQCC for action. Share progress updates on implementation of Blueprint policy recommendations and, where relevant, Blueprint strategies.

RAQC also seeks to coordinate in an ongoing, timely manner with partners across state agencies, regional entities, and local government, to:

- **Conduct additional emission controls planning and tracking of strategies:** To achieve reduced ozone levels by 2030, this work should be addressed in a timely, coordinated, and consistent manner in all activities of state agencies and regional entities.
- **Gather input regarding Blueprint strategies as more information is available:** Successful consideration and implementation of strategies requires that state agencies provide timely estimates of adoption evaluation inputs as requested and forecasts of their implementation resource needs, i.e., staffing, analysis costs, computing needs, etc.
- **Support, integrate, and prioritize consideration of reducing air quality impacts and enhancing the health and environmental benefits of cleaner air**: Coordination and collaboration across Colorado state and local government and the RAQC across collective state government activities is needed, including as growth in population, the economy, vehicle

miles traveled, etc., continue to impact the region's emission levels. State agencies and commissions must continue to take near-term actions to continue reducing ozone precursor emissions through 2030, with support via action by local government agencies. Reductions of other air pollutants and greenhouse gases with negative environmental and health benefits that are aligned with other state goals often come alongside ozone precursor emissions, meaning that consideration and evaluation of cumulative impacts and co-benefits of these strategies is another important opportunity for collaboration. Results-oriented data and metrics as to how potential programs and policies are evaluated and how programs are set up and/or implemented are also necessary.

- **Conduct outreach on the efficacy of and opportunities to improve and/or expand existing air quality programs and incentives:** Leverage RAQC, APCD, EPA, and other agencies' outreach and promotion of existing air quality programs and incentives in the context of the strategies in the Blueprint to encourage participation and consideration of greater emission reductions. This includes programs that reduce emissions from commercial sources as well as programs focused on actions that individuals can take to reduce their emissions.
- **Coordinate and collaborate with other states on air quality planning and evaluation and implementation of strategies**: Those also experiencing ozone issues can share valuable best practices, lessons learned, etc., to determine how they could be adapted to the Colorado context. Additionally, modeling for the DM/NFR region estimates impacts of ozone and ozone precursors that comes into the region from neighboring states and other upwind areas, meaning that any emission reductions achieved in the broader region and even across the country may have positive impacts to reduce local ozone levels.
- **Support longer-term actions that reduce ozone precursor emissions to provide ongoing benefits to public health and environmental quality:** While the Blueprint and the RAQC's work are primarily focused on relatively near-term actions to achieve attainment, there are many policy actions that will provide valuable emission reductions in the medium to long term. When/if the ozone NAAQS is attained in the early 2030s, per capita emissions will have to continue to decline given inevitable population growth in order to maintain compliance with the ozone NAAQS. Given uncertainties about how emission levels and ozone levels will continue to change over time within a changing climate, population, and economy, and relevant co-benefits of longer-term actions that reduce ozone, it is worthwhile to work with partners to support actions such as: community/city/transit planning that focuses on mixed-use, transit-oriented housing development and increased transit service and multimodal infrastructure within the NAA and Colorado; while leadership on climate mitigation/adaptation/resilience, including wildfire mitigation and resilience; and additional actions, education, and outreach to support longer-term behavior change and cultural shifts to reduce emissions are needed on at least an intermountain West regional basis to address the scale of those problems that inherently impact the NAA.
- **Anticipate, advocate, and integrate impacts of federal policy changes on local air quality planning efforts:** Federal policies also impact state emission levels, particularly in areas where the federal government has jurisdiction. The RAQC and partners can seek to advocate for local air quality planning needs where possible in federal processes, and to track and analyze the impacts of these actions on priorities for control strategy consideration and implementation in

order to seek emission reductions. One of many examples is the federal government's current proposals to rescind previous mobile source emission control regulations and attempts to rescind previously approved California §177 waivers already adopted by the Colorado AQCC, cancelling those authorizations using the Congressional Review Act. If legal challenges by California, Colorado, and other states to those proposals do not succeed, it would mean that the DM/NFR region will make less progress in reducing on-road emissions 2027 through 2032, without having current Colorado fleet turnover requirements for zero-emission cars and trucks that are based on those California standards.

Appendices

Appendix A. Regional Air Quality Planning Background

RAQC Efforts to Mitigate and Reduce Air Pollution

The RAQC provides a service to all of the communities in the DM/NFR 9-county region by meeting and engaging with the state, local governments, community groups, industries and residents to create and consider control strategy options and prepare Colorado's State Implementation Plan (SIP) to reduce ozone pollution and attain federal ozone standards.

With summer high ozone days impacting human health and environmental quality, both RAQC and CDPHE provide resources for more information; the RAQC's Simple Steps, Better Air program advertises to residents about what individual actions can reduce ozone pollution and CDPHE's Colorado Air Quality Advisory website provides daily air quality forecasts. Further, RAQC provides additional programs targeted to reduce ozone-causing emissions and improve air quality (Clean Air Auto Repair (CAAR), Engines Off!, Mow Down Pollution Lawnmower Exchange Program, and Accessible Bikes for Community (ABC)). These different RAQC programs provide grants for local governments, small businesses, and individuals to replace gas and diesel-powered equipment of all kinds, with electric alternatives.

RAQC's Role and Partnership with the Air Pollution Control Division and Other State and Federal Agencies

The RAQC's role is primarily advisory in nature. The RAQC's Board does not directly take regulatory actions, but rather makes recommendations for consideration by other relevant state bodies.

The RAQC partners closely with Colorado Department of Public Health and Environment's Air Pollution Control Division (APCD) on its planning work. APCD enforces the state's air pollution laws and implements its plans, including SIPs, works to improve air quality, and provides air quality data, forecasts, and alerts for the public and for the SIP planning process. The Air Quality Control Commission serves as the regulatory body for air quality rules in the state of Colorado, meaning that any air quality regulatory programs proposed by the APCD or other bodies must go through their rulemaking and approval processes. The RAQC briefs the Air Quality Control Commission periodically on its work to develop control strategies, SIPs, and monitor and model ozone levels.

The RAQC works with other state agencies on its planning efforts where relevant, such as the Colorado Energy Office and Colorado Department of Transportation that run numerous programs and implement policies that affect ozone precursor emissions and the Colorado Energy and Carbon Management Commission that regulates oil and gas development and production.

The State Implementation Plan must be submitted to the U.S. Environmental Protection Agency (EPA) regularly, so the RAQC also coordinates with EPA staff on SIP requirements.

Current State Air Quality Regulations and Programs

Colorado currently has a robust set of air pollution control regulations that seek to promote clean and health air for Colorado's residents and visitors, protect Colorado's scenic and natural

resources, and promote statewide greenhouse gas pollution abatement. These regulations cover a variety of air pollutants, including ozone, and sectors, from oil and gas emission controls to vehicle emissions to lawn and garden equipment to consumer products. The full list of regulations is available on the AQCC website.

The AQCC regularly updates existing rules in addition to approving new regulations. For example, the AQCC took action to update several rules in November 2025, alongside the Serious SIP chapters for the 70 ppb Ozone Standard. Additional details on these actions are found in a November 2025 press release and November rulemaking hearing materials.

The APCD develops and implements air pollution control measures and programs, including those related to ozone. They serve as staff to the AQCC and bring forward proposed state regulations in line with state goals and legislative actions and federal laws and regulations. APCD acknowledges that there is a need to develop more control strategies in the coming years in order to demonstrate attainment with the 70 ppb standard.

As noted in the previous section, other state agencies also run and implement air quality programs and policies. Additionally, Colorado has several enterprise funds that collect and provide specific incentive, programmatic, and/or research funding to support air quality initiatives. These include the Air Quality Enterprise, the Nonattainment Area Pollution Mitigation Enterprise, the Clean Fleet Enterprise, and more.

Ozone Formation

Ambient ground-level (tropospheric) ozone is formed within the NAA region through reactions between sunlight and ozone precursors, e.g., nitrogen oxides (NOx) and volatile organic compounds (VOCs) as illustrated in Figure 5. Elevated levels of tropospheric ozone in the NAA primarily occur between mid-May and mid-September. NOx emissions have many differing source types associated with products of fossil fuel combustion, but have other sources such as reactions that form NOx from lightning activity and fertilizer application. Anthropogenic VOC emission examples are byproducts of leaks and venting processes from fossil fuels used in industrial processes and engines, and from operation of motor vehicles. Biogenic VOCs, primarily in the form of isoprene, come from trees and plants. Ozone and ozone precursors are also transported into the NAA. This high-level description is included as a reference for more detailed aspects of ozone precursors, formation, and transport described later.

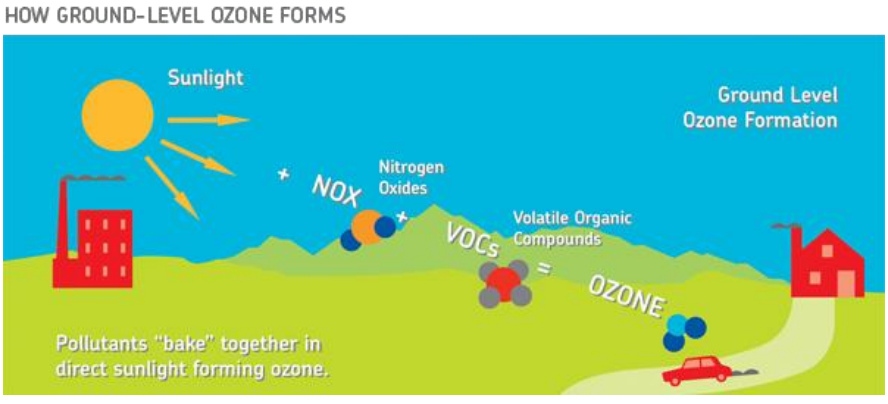


Figure 5: Ground-level ozone simplified formation schematic.

Appendix B. Preparing and Planning for a State Implementation Plan that Shows Attainment

The Control Strategy Blueprint is not a regulatory document, nor is it a final, fully developed version of potential control strategies. However, Blueprint milestones are aligned with federal and state statutory attainment milestones to achieve critical air quality improvement. Therefore, this appendix provides context as to where we are today in relation to the federal ozone standards and what is needed to reach attainment in the context of the process to develop the next federally-required State Implementation Plan, which is due for local and state approval by late 2029 and EPA review toward approval beginning in 2030. Figure 6 presents the 2025-33 timeline of analysis, planning, and SIP preparation and adoption activities.

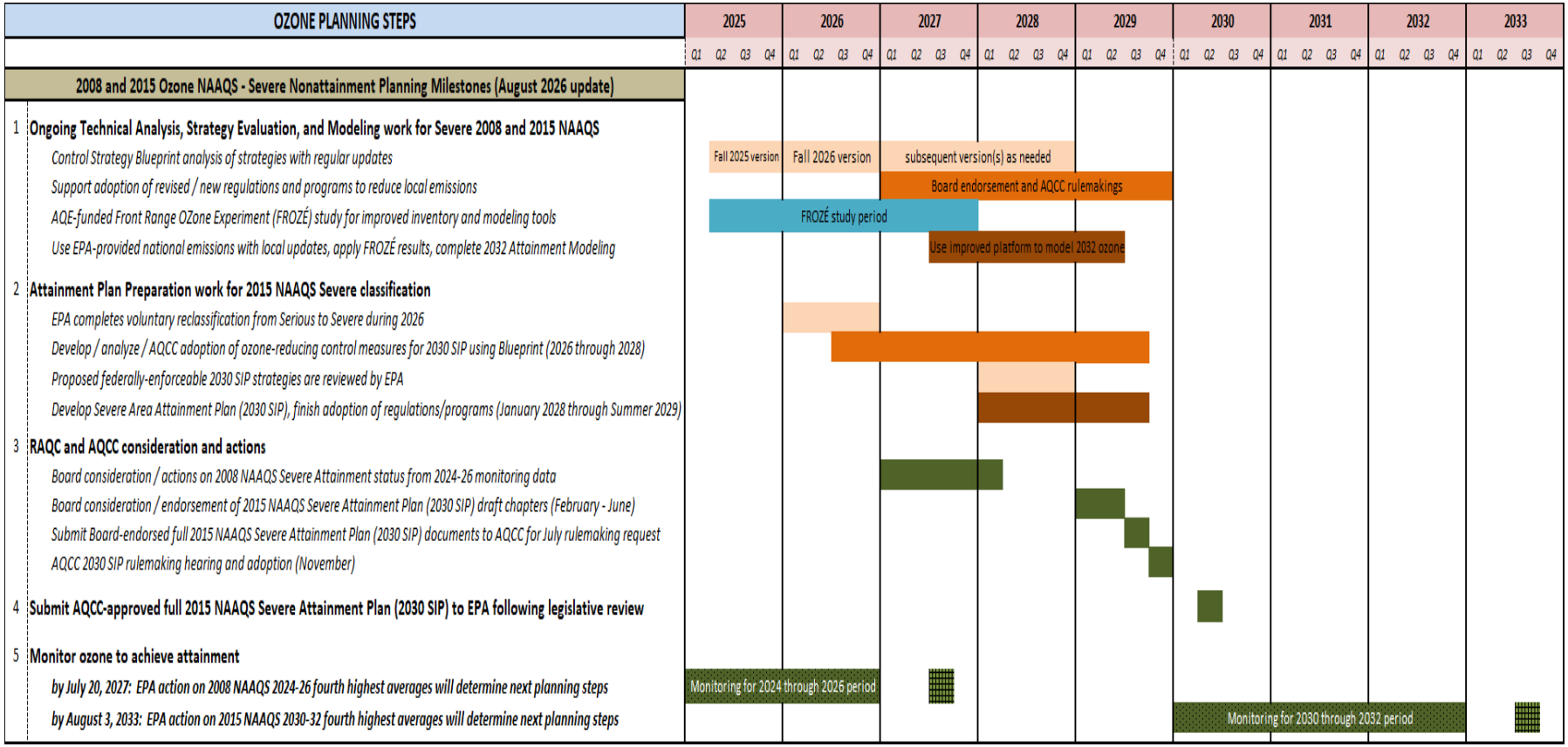


Figure 6: Timeline for Severe SIP planning

As shown in the planning timeline above, there is a well-defined and documented process to plan the reduction of emissions to successful reach (attain) and maintain compliance with the ozone standards in the future, using analytical methods to estimate the effect on future ozone levels, to meet statutorily mandated milestones in the federal Clean Air Act. Numerous state agencies, local and federal government agencies, and regional organizations spanning state, local, and federal interests are involved in preparing the ozone air quality plan, called the State Implementation Plan (SIP). SIP preparation involves significant public outreach and review and comment processes to determine what emissions reductions are needed, considering policy-relevant timing, feasibility, and cost of control, among other factors.

To support a successful SIP forecasting attainment of the ozone NAAQS by 2032, to be submitted in 2030, analyses of CAA-required inputs to the SIP, in addition to local emission controls discussed elsewhere in this document, must also be addressed before the SIP analysis can be completed. For example, an analysis to gain better understanding of background ozone and ozone precursor contributions transported into the NAA on high ozone days; evaluation of alternative baseline ozone monitoring data averages that use federal Clean Air Act options to estimate an alternative baseline(s) through screening and removal of the effect of smoke on local ozone; and public policy choices about sorting ozone data for planning purposes, i.e., selecting days to model when local emission controls can produce measurably lower ozone.

Overview of showing attainment through Clean Air Act planning requirements

To return to attainment, or clean air status for an area designated as violating a NAAQS, monitoring data below the level of the NAAQS must be measured for the 3-year monitoring compliance period specified by EPA and continue to be below the NAAQS beyond that period. All monitoring sites in the DM/NFR NAA will need to have fourth highest monitored values that average less than 71.0 ppb for 3 years in a row no later than 2030-32. The APCD operates the monitors[1] that are used to assess compliance and reports those data to EPA. The federal Clean Air Act does allow "clean year" exceptions to add an additional year to the mandatory 3-year period, i.e., when two of the three monitoring compliance years are below the NAAQS and one was not, an additional year of monitoring can be allowed. That exception can be granted up to two times, must be requested, and must be approved by EPA.

An attainment plan[2] is a parallel federal Clean Air Act requirement and necessitates the projection of future year emissions, review and verification of applicable emission control programs, and air quality modeling to demonstrate each monitoring site is forecast to be below the NAAQS by a specific future year. The attainment plan development process for the DM/NFR region requires 2 or more years to complete, is complex and includes many work products requiring public involvement. The federal Clean Air Act's SIP requirements[3] have been tested by decades of case law and have numerous mandatory steps, for the SIP to eventually be approved by EPA

[1] Air monitoring in Colorado | Colorado Department of Public Health and Environment, accessed August 25, 2026

[2] State Implementation Plan (SIP) Attainment Demonstration Guidance | US EPA, accessed August 25, 2026

[3] Applying or Implementing Ozone Standards | US EPA, accessed August 25, 2026

Implementation of Regulatory and Incentive-Based Emission Controls

Emission control regulations affecting the DM/NFR NAA are adopted by the state Air Quality Control Commission[4] (AQCC), comprised of volunteer experts appointed by the Governor. The state Air Pollution Control Division[5] (APCD) of the Department of Public Health and Environment (CDPHE), funded through an annual appropriation by the legislature and grants from EPA and other sources; staffs the AQCC and implements their regulations, along with many other duties under state and federal statutes. Incentive-based emissions reduction programs are usually authorized through state statute or are funded by federal grants; both of those kinds of programs are administered by state agencies. Also, the legislature has created a number of fee-payer enterprises to fund projects or programs to directly or indirectly reduce emissions[6, 7, 8, 9]. A number of incentive-based emission reduction programs[10] are operated by the RAQC in concert with state agency partners, serving the NAA. The RAQC also implements Supplemental Environmental Projects[11] to reduce NAA emissions when awarded those projects.

Emission reduction requirements and current precursor emission levels for the NAA

Federal Clean Air Act and SIP process factors: The Clean Air Act and the SIP process intend for emission reductions to lead to cleaner air as measured at monitoring sites. There are many regulatory control programs and emission standards that are required by federal and state regulations. The emission sources analyzed for ozone attainment planning are controlled in the SIP through specified federal and state regulations. For state regulations, in order for those reductions to count formally toward the SIP attainment demonstration, the state regulations must be deemed federally enforceable, i.e., the EPA could enforce them if the state does not. The EPA has to agree that which of the state regulations included in the ozone SIP modeling are acceptable as federally enforceable. In the detailed timeline presented in Figure 6, consultation between RAQC, APCD, and EPA is planned between late 2026 and mid-2029 to discuss federal enforcement of state regulations and will include evaluation of Blueprint measures. Many effective state regulations that reduce emissions will not be deemed federally enforceable for various reasons, but the estimated emissions reduction from those “state-only” regulations will be part of the analysis called “weight-of-evidence” for the SIP attainment demonstration; that is allowed by EPA regulation and guidance. All applicable federal regulations reducing emissions count toward the SIP attainment demonstration. There are federal level policy uncertainties and evolution over time from executive branch initiatives, statutory changes, and legal decisions, but this document focuses on what emission controls strategies are or will be possible to implement at the state and local levels.

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[4] Air Quality Control Commission | Colorado Department of Public Health and Environment

[5] Air Pollution Control Division | Colorado Department of Public Health and Environment

[6] Enterprise boards at the Colorado Department of Public Health and Environment

[7] Clean Transit Enterprise at the Colorado Department of Transportation

[8] Nonattainment Area Air Pollution Mitigation Enterprise at the Colorado Department of Transportation

[9] Community Access Enterprise at the Colorado Energy Office

[10] RAQC Programs

[11] Supplemental Environmental Projects | Colorado Department of Public Health and Environment

Finally, some emission source categories are pre-empted in the federal Clean Air Act from direct state or local emission control measures. Examples of pre-empted categories include emission rate limits on airplanes, trains, and ships that can only be regulated by federal agencies. State and local regulations can restrict the in-use timing and encourage cleaner versions of these sources within the NAA, often through voluntary incentive equipment replacement programs as well as supporting regulations. Finally, some large stationary sources are located outside the NAA boundary footprint and are not subject to NAA requirements from the federal Clean Air Act, but their emissions do reach the NAA. These sources have enforceable permitted emission limits from APCD and the emissions from those sources are fully evaluated in SIP ozone attainment modeling.

With the challenges listed in the preceding context description in mind, all monitoring sites in the NAA are required to have a fourth-highest value that averages 70.9 ppb or less over the 2030-2032 ozone seasons in order to attain the NAAQS. The 2030 SIP will also include modeled projections representing the 2030-32 future design values (DVFs) at each site and each site must model 70.9 ppb or less, based on both existing and new emission controls specified in the 2030 SIP. Figure 7, Figure 8, and Figure 9 below present the most recent emission estimates and provide starting points for emissions reduction planning.

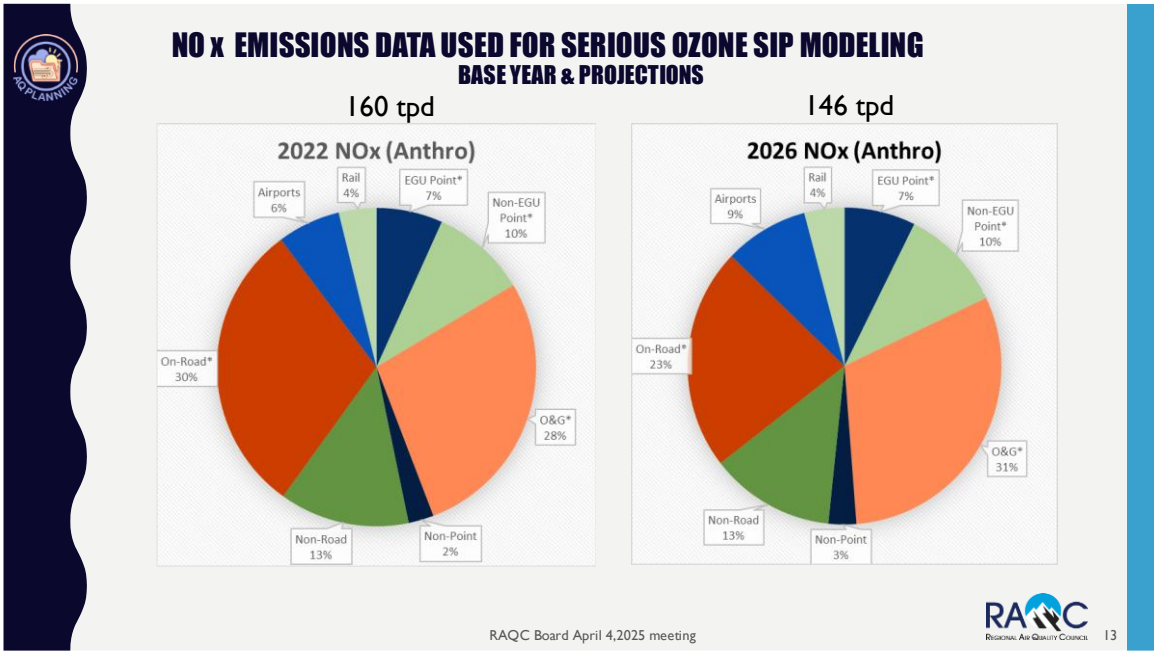

Figure 7: Anthropogenic NOx emissions by source category for 2022 and 2026.

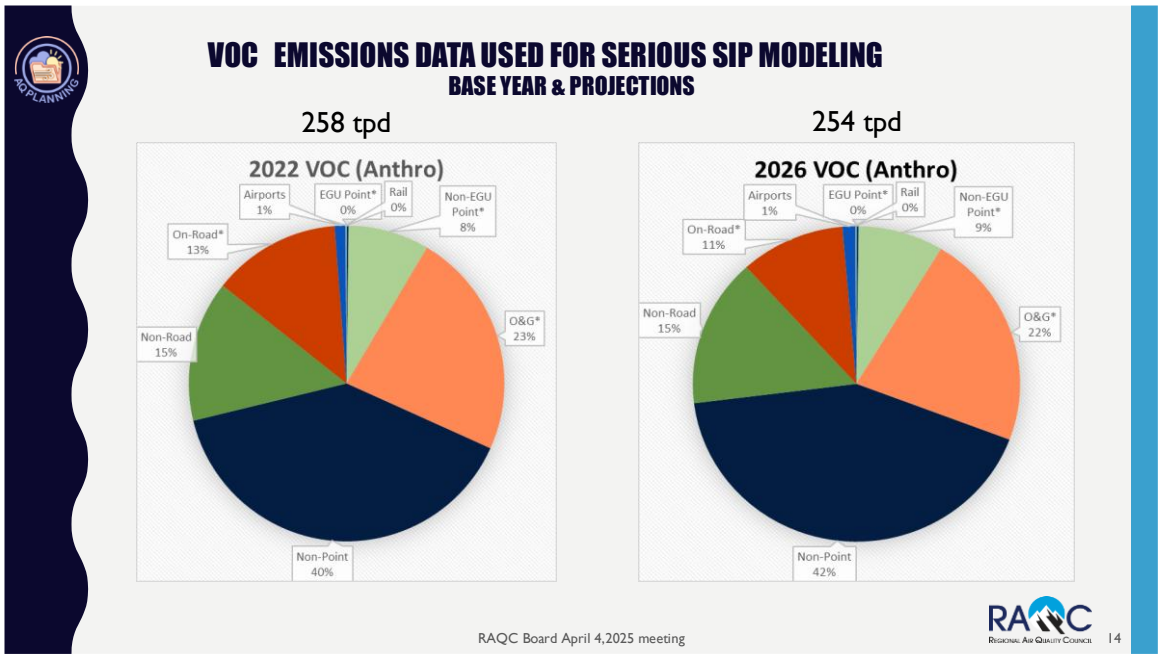

Figure 8: Anthropogenic VOC emissions by source category for 2022 and 2026.

OZONE PLANNING EMISSIONS DATA USED IN SERIOUS SIP MODELING

Tons per Summer Ozone Season Day (9-county NAA)	NOx			VOC		
Source Sector*	**2022**	**2026**	**%Diff**	**2022**	**2026**	**%Diff**
EGU Point**	10.8	10.7	-0.2%	0.6	0.6	0.4%
Non-EGU Point**(held constant)	15.5	15.5	0.0%	21.4	21.4	0.0%
O&G**	44.5	45.1	1.4%	59.8	56.0	-6.3%
Non-Point	4.1	4.2	1.9%	101.7	107.2	5.5%
Non-Road	21.1	18.8	-11.0%	37.2	38.6	3.8%
On-Road**	47.8	33.2	-30.5%	33.9	26.3	-22.4%
Airports	10.3	12.7	23.7%	2.9	3.2	12.9%
Rail	6.1	6.0	-0.9%	0.2	0.2	-0.8%
Natural (held constant)	14.8	14.8	0.0%	238.8	238.8	0.0%
Total (Anthro)	**160.1**	**146.3**	**-8.7%**	**257.5**	**253.5**	**-1.6%**
Total (Anthro + Natural)	**175.0**	**161.1**	**-7.9%**	**496.3**	**492.3**	**-0.8%**

%Diff = (2026-2022)/2022

*most data are from national emissions modeling platform, **indicates sectors that are updated based on local information.

Figure 9: NOx and VOC emissions by source category for 2022 and 2026 and % change.

Takeaways from recent SIP emissions data: For the source categories with larger anthropogenic emissions, the NOx estimated for On-Road and Non-Road declined from 2022 to 2026 by over 10%. Source categories with smaller emissions estimates such as Airports increased from smaller baseline TPD values by a notable percentage, but those kinds of increases do not add a large amount of NOx to the estimated NAA total. For VOC emission estimates, On-Road and Airports are again notable for their changes from 2022 to 2026 but overall, NAA VOC emissions are flat. Emission estimates for Natural Sources such as wildfire and biogenics are best estimates but are more uncertain than Anthropogenic Sources and are held constant in the modeling to minimize their effect on future ozone DVFs.

Expected changes for the next round of SIP modeling: For the 2015 Severe NAAQS SIP milestone year of 2032, projected changes in total and individual source category emission estimates within the NAA from 2022 to 2032 will be larger due to a longer timeframe, reflecting factors like growth in the NAA population and the economy, and the effect of emission standards already in place provide lower per unit emissions for new equipment and improved processes. There will be both increases and decreases relative to 2022 and 2026 estimates and will likely produce greater changes than were estimated previously, for modeled 2032 ozone DVFs. Options for emission reduction measures defined in the Blueprint are focused on reducing the largest source categories: On-Road, O&G, Non-Road, and Stationary Sources (EGU and non-EGU) with permits from APCD. Reductions in those source categories will have the largest impact on lowering modeled 2032 future ozone DVFs.

Monitoring Attainment

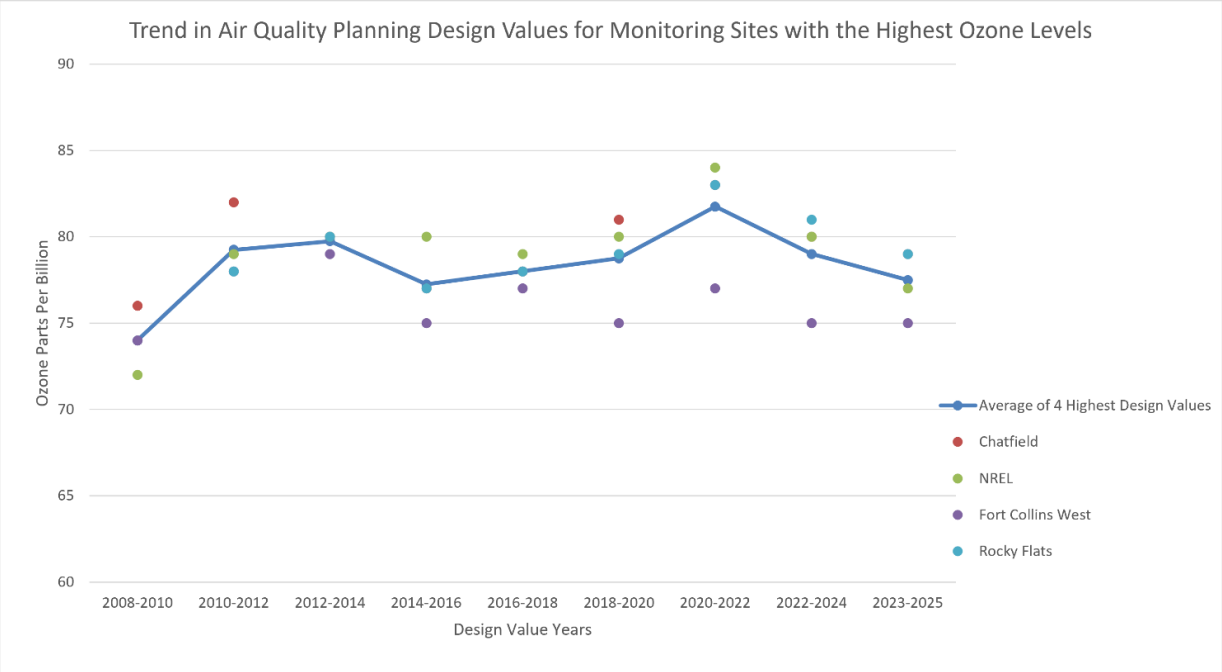

Figure 10: Long-term trends in the rolling 3-year 4th high ozone data Design Value averages (ppb) used for EPA compliance in the DM/NFR NAA for the 4 highest monitoring sites (blue line) and the rolling 3-year 4th high ozone data averages (ppb) (colored circles) at the historically highest ozone monitoring sites (Rocky Flats North [RFNO], Chatfield State Park [CHAT], Fort Collins West [FTCW] and National Renewable Energy Lab [NREL) within the NAA from 2008 through 2025. No data in these DVs has been screened to remove medium or high probability days for smoke impacts or stratospheric intrusion events identified by the APCD.

These data from the highest sites over the past 16 years in the DM/NFR NAA clearly show peak monitored ozone Design Value statistics required for use in the SIP process have been relatively flat with no trend, with some amount of variation between the 3-year averages, and in the past 5 years trending slightly downward from the highest 2020-22 Design Values. Future 3-year monitored Design Values have to be consistently reduced by 10% to 15% from current levels by the time of the 2030-32 3-year compliance period and beyond, in order to measure attainment of the 2015 NAAQS, and maintain compliance going forward, while also considering year-to-year variation.

Because wildfire smoke contributes to ozone, ozone precursors, and other NAAQS pollutant levels, in consultation with APCD, the RAQC has developed the Smoke IMpact Assessment System (SIMAS[12]) to classify ozone data since 2020 from each site on each day (a site-day) as a smoke impact probability of None, Low, Moderate, or High. RAQC uses SIMAS to screen High and Moderate impact site-days from the monitored ozone data used in the dataset applied to evaluate monitored NAAQS compliance as well as to calculate the Baseline Design Values (DVB) at each site for SIP analysis. This sorting of monitored data allows compliance tracking and planning efforts to focus on the site-days' data without significant uncontrollable smoke impacts. Air quality was still poor on high ozone days affected by smoke.

In addition to SIMAS, EPA offers methods to exclude the smoke-impacted days from the official calculations of compliance values used in SIPs, both for monitored and modeled attainment. EPA recognizes in these methods that smoke-impacted site-days have poor air quality and health effects but cannot be used effectively in planning ozone reductions caused by local NAA anthropogenic emissions.

EPA's Exceptional Events Rule (EER[13]) procedures would be used to prepare technical demonstrations and would be submitted to EPA by APCD. SIMAS results can be used by APCD to assist in that work. EER demonstrations require extensive evidence and if concurred with by EPA, allow the site-days' data to be officially flagged as an Exceptional Event. Approval to flag Exceptional Event site-day data can only be done for "regulatorily-significant" actions under the federal Clean Air Act; those are limited to an attainment/nonattainment (re)designation or a reclassification of an existing NAA, i.e., from Serious to Severe. Currently, there are no monitoring data periods before 2024 in the DM/NFR NAA that are eligible for consideration as Exceptional Events.

EPA also offers a method for Atypical Events[14] data identification. That method also requires technical documentation by the state agency and is applied to assist in a demonstration to EPA that supports a SIP-related planning analysis. The example cited identifies site-days for "data exclusion" over multiple years. This method, combined with an ozone SIP demonstrating attainment, could be used for the DM/NFR NAA.

Modeling 2032 Ozone Air Quality Attainment

Preparation of an attainment SIP has many technical documentation and analytical requirements and uses regional photochemical modeling tools to estimate future Design Values (DVF), following EPA guidance[15] and technical requirements. The model is applied to evaluate the change in modeled ozone at each monitoring site location in a relative manner using the Relative Response Factor to estimate the change in modeled ozone from the DVB to the DVF as described next.

The EPA- recommended modeled attainment test in its simplest form, which directly applies for ozone, as applied for each NAA monitoring site is:

$$(\mathrm{DVF})_i = (RRF)_i * (DVB)_i$$

[12] Smoke IMpact Assessment System v2 final report, February 2026, RAQC, Ramboll, and Air Sciences, Colorado Air Quality Enterprise project.

[13] Treatment of Air Quality Monitoring Data Influenced by Exceptional Events | US EPA, accessed August 25, 2026

[14] Technical Support Document for Review of Atypical Events in 2015 8-Hour Ozone Phoenix-Mesa, AZ Nonattainment Area, EPA-R09-OAR-2025-2833-0006_attachment_2

[15] Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze, US EPA, 11-29-2018, 454-R-18-009

where:

- DVFi is the estimated design value for the future year in which attainment is required at monitoring site i
- RRFi is the relative response factor at monitoring site i; and
- DVBi is the base design value monitored at site i.

The "relative response factor" (RRF) is the ratio of the future year modeled ozone values against the base year modeled ozone values at each monitoring site. The RRF thus uses the modeled ozone results in a relative, not absolute sense, to estimate the DVF used to demonstrate attainment. EPA has developed the Software for Modeled Attainment Test-Community Edition (SMAT CE) tool to process the data used in the text and enable completion of the modeled attainment tests for ozone. SMAT can be found on the EPA's Support Center for Regulatory Atmospheric Modeling (SCRAM) website.

Several factors influence the DVF values that are used in a modeled ozone attainment demonstration:

- The accuracy of base year emissions estimates and future year emissions projections from the base year used in the modeling. Underestimated emissions within the NAA cause the model to produce less local ozone and the modeling may not match the observed ozone, which has been seen in DM/NFR NAA model performance evaluation results.
- The monitored DVB values are the starting point to calculate the modeled DVF values. The higher the historical DVB at a monitoring site, the more the RRF ratio for that site has to be below 1.0 to model future attainment of the NAAQS. Emissions in the NAA are expected to be less in the future so less ozone would form. If there is little change from the base year modeled ozone to the future year modeled ozone, for example the RRF is 0.98, then the DVF will be ~2% lower. If the RRF is 0.92 for example, then the resulting DVF would be ~8% lower. Currently DVB values in the DM/NFR NAA are 10% to 15% over the 70 ppb NAAQS so a DVF would have to be based on an RRF of 0.9 to 0.85 to demonstrate attainment, a significant change from past attainment SIP analyses.
- A weight of evidence (WOE) determination in the attainment SIP may examine results from a diverse set of analyses, including the outcome of the primary modeled attainment test, and attempt to summarize the results into an aggregate conclusion with respect to whether a chosen set of control measures are likely to result in an area attaining the NAAQS by the applicable attainment date, notwithstanding what the air quality modeling may suggest in isolation.

Key "Probing Tools" for Ozone Modeling Results

Source apportionment

- The Anthropogenic Precursor Culpability Analysis (APCA)[16] tool was used in the NAA modeling analysis. APCA re-allocates ozone production in the SIP ozone modeling to the controllable precursors that participated in ozone formation with the non-controllable precursor. For example, when ozone formation is due to biogenic VOC and anthropogenic NOx under VOC-limited conditions (a situation where OSAT would attribute ozone production to biogenic VOC), APCA attributes ozone

[16] Comprehensive Air quality Model with eXtensions (CAMx) User's Guide, Version 7.30, camxusersguide_v7.30.pdf, Accessed September 23, 2026.

production to the anthropogenic NOx present. Using APCA instead of the Ozone Source Apportionment Tool results in more ozone formation attributed to anthropogenic NOx sources and less ozone formation attributed to biogenic VOC sources.

- To produce results of anthropogenic source contributions of ozone precursor emissions from outside of the nonattainment area and out of state, expensive effort and significant assumptions through computationally-intensive work would need to be done and documented in order to greatly reduce uncertainty in modeling and local ozone reduction effects of options for local control strategy(ies). The analysis done by RAQC and APCD to date did not quantify or break out contributions from specific states or international anthropogenic sources.
- The sophisticated and efficient Decoupled Direct Method for Sensitivity (DDM) analysis tool was used for the first time for ozone planning in the recent NAA modeling analysis. DDM has been employed for model performance evaluation and emission control strategy design. The simplest approach to sensitivity analysis, often referred to as the "brute force" approach, involves changing a model input parameter, rerunning the model, and then evaluating the change in model output for each parameter to be investigated. Control strategy evaluation estimates of VOC and NOx emissions reductions assist in determining and ranking strategies that are most effective in reducing ozone. Below is the relationship between Source Apportionment and the 2 modeled sensitivity analysis approaches. The DDM approach was applied to support strategy evaluation for the Blueprint.

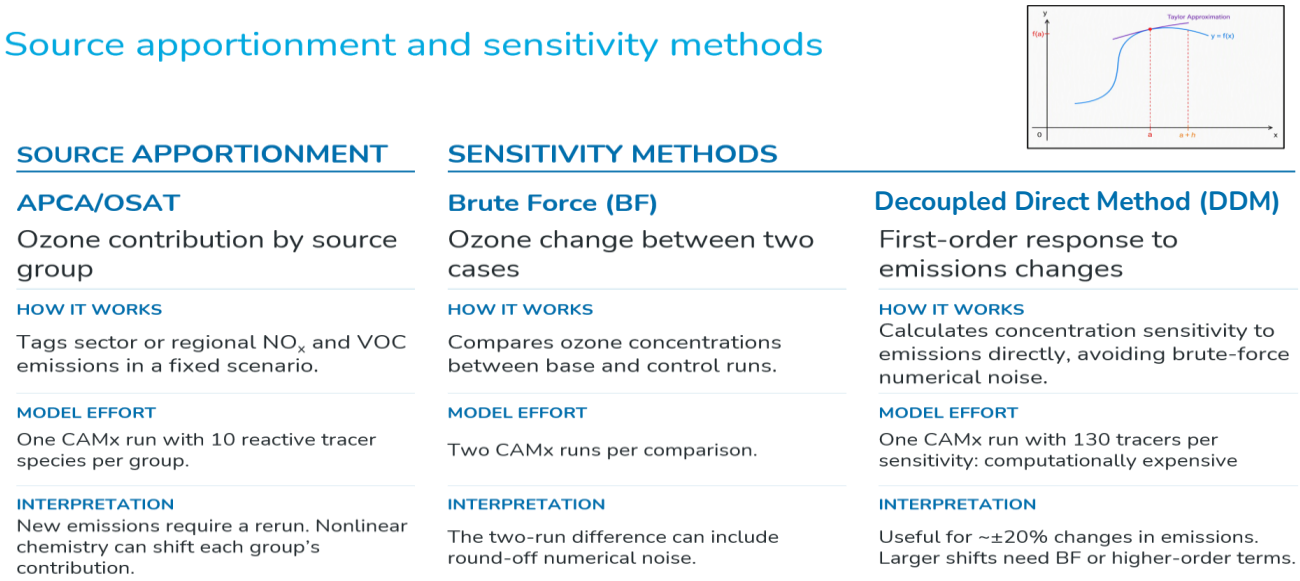

Figure 11: Overview of source apportionment and sensitivity methods for ozone modeling.

Emission reductions needed for modeled attainment

Estimates of overall % emission reductions of NOx and/or VOC were made to test the DVF ozone response, in order to achieve 70.9 ppb or less measured ozone at each site by 2030 were calculated and are displayed in the following table. The figures then following below show the modeled DVF responses to those emission changes at the National Renewable Energy Laboratory and Rocky Flats North monitoring sites.

Table 5: Range of Anthropogenic Emission Reductions for SIP Analysis Consideration to Approach Modeled 2032 Attainment

Anthropogenic Ozone Precursor Emission Type	2026 Emission Estimate (tons /day)	Scenarios of Remaining Emissions (tons/day) if 2026 Emissions were reduced by % shown					Remaining Emissions from 2026 Estimates after Full Implementation of Blueprint Strategies (tons/day)
		-20%	-25%	-30%	-40%	-50%	
NOx	146.3	117	110	102	88	73	58.5
VOC	253.5	203	190	177	152	127	196.1

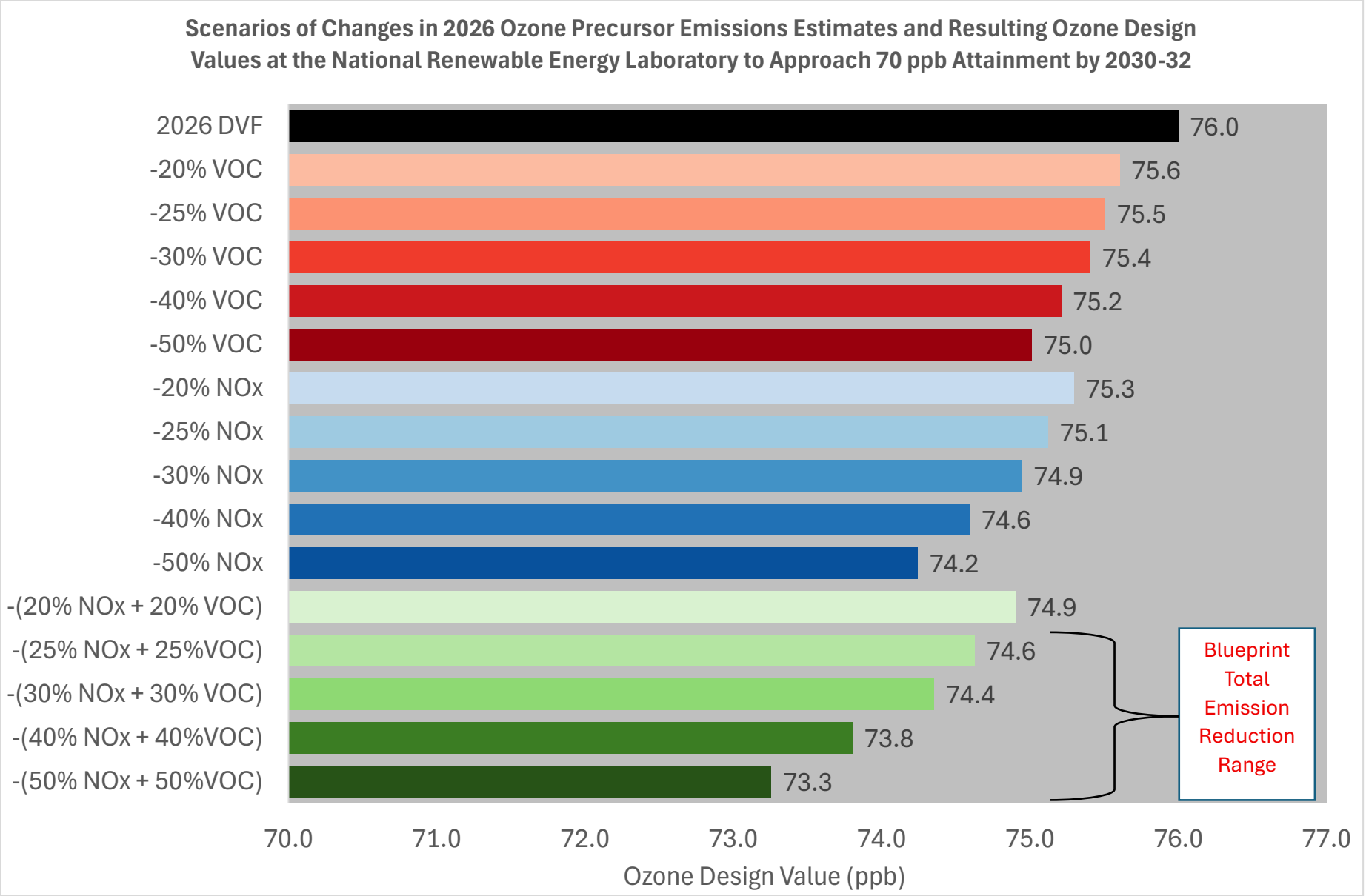

Figure 12: Emission reduction scenarios of ozone precursors within the NAA and estimated future design value changes at the National Renewable Energy Laboratory site.

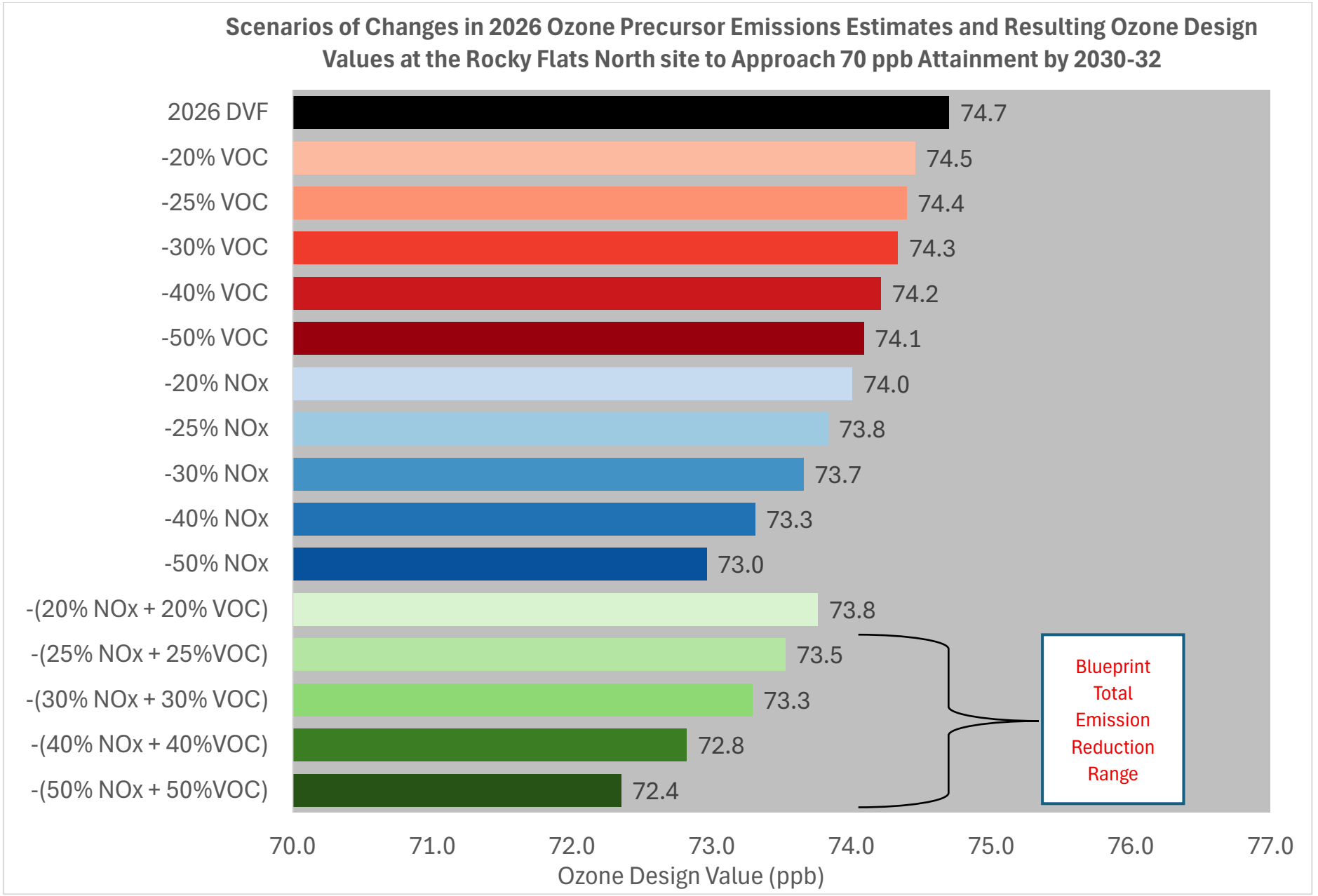

Figure 13: Emission reduction scenarios of ozone precursors within the NAA and estimated future design value changes at the Rocky Flats North site.

Appendix C. Improving Understanding of Estimates of Background Ozone and Transport affecting the DM/NFR NAA

Specific modeled concentrations or source apportionment allocations that estimate background and transported ozone cannot be verified with monitoring data for the reasons mentioned in the Ozone and Ozone Precursor Emissions section above: 1) Those pollutants are not measured at upwind monitoring sites as they are measured within the NAA, in terms of characterizing the pollutant contributions from outside the NAA; 2) Both upwind ozone and its precursors are not easily or accurately tracked with measurements due to their ubiquitous chemical profiles that do not allow the distinction between local and transported pollution; and 3) Modeling tools can be and are used to estimate transport into the NAA, but there are no measurements to directly verify those modeled contribution estimates, as well as the transported pollution estimates rely on inventory estimates by outside-of-Colorado agencies and organizations. The RAQC, with Ramboll Americas and the University of Wisconsin as collaborators, have an active study proposal to improve lateral boundary conditions estimates used in ozone SIP modeling[17].

Another approach to characterize ozone available to be transported is to look at the magnitude and trends of monitored ozone data from remote rural sites such the 3 shown in Figure 14 below. Those are Gothic, CO, Dinosaur National Monument, UT, and Centennial, WY. These sites are upwind of source regions in the prevailing meteorology during the summer ozone season.

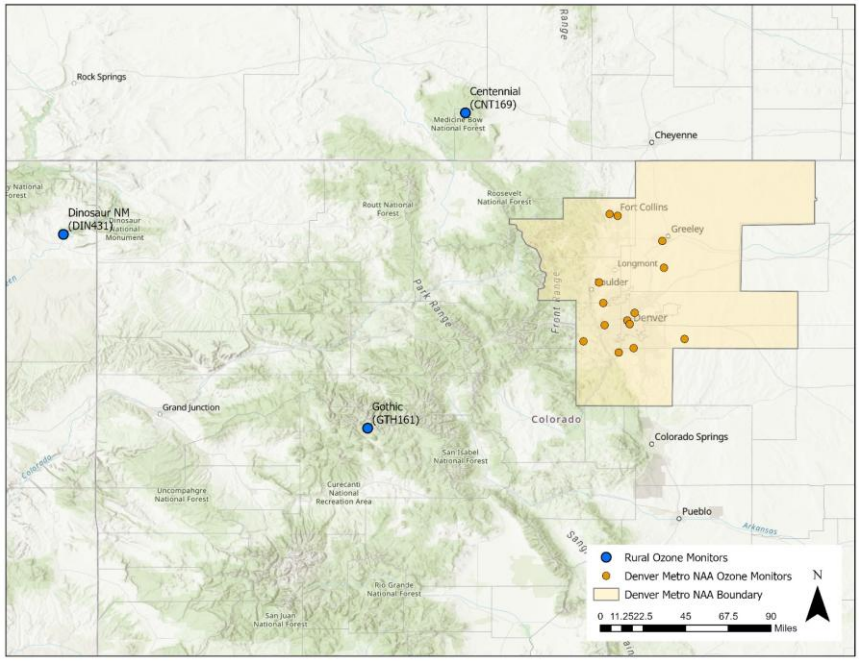

Figure 14: The DM/NFR NAA boundary footprint, the monitoring sites within the NAA used to track compliance with the Ozone NAAQS, and 3 upwind rural remote ozone monitoring sites with little-to-no local emission sources of consequence.

[17] Robust, Multifaceted, and Satellite-Informed Evaluation of Lateral Boundary Conditions to Support Photochemical Grid Modeling Improvements for Evaluating Air Pollution Mitigation Strategies in Colorado

To characterize ozone precursors with the potential in the region available to form regional ozone that may be transported to the DM/NFR NAA on the highest NAA ozone days, Figure 15 shows the 18-year trend in estimated annual emissions data for Colorado alone as well as the overall total for the AZ, CO, ID, NM, NV, UT, and WY region is broken out by source category and also as total annual NOx and VOC emissions estimates. These emissions data are the same as used in ozone modeling. The trends of monitored data over 18 years for the average of the 10 highest 8-hour ozone values by day each year at the three rural sites mapped in Figure 14 above is also presented.

These data show generally flat trends for the 10 highest day averages at these 3 remote rural sites, with some year-to-year variation, is less than ±10%. The monitoring data is the same in all 6 panels. The estimated anthropogenic NOx emissions trend in Colorado as well as in the upwind seven intermountain West states shows a steady decline with little impact from fire. In contrast, the estimated VOC emissions trend is much flatter and varies greatly year-to-year due to fires, both in Colorado and across the surrounding, frequently upwind seven-state region. The lower right panel captures the relationship between the relatively flat rural ozone site data trend and the trend and regional variation in both estimated total NOx and VOC emissions. The availability of VOC emissions and a lack of downward trend, with a still substantive amount of regional NOx emissions suggests that the photochemical potential for ozone formation in remote rural areas remains relatively consistent and offsets the NOx emissions decline.

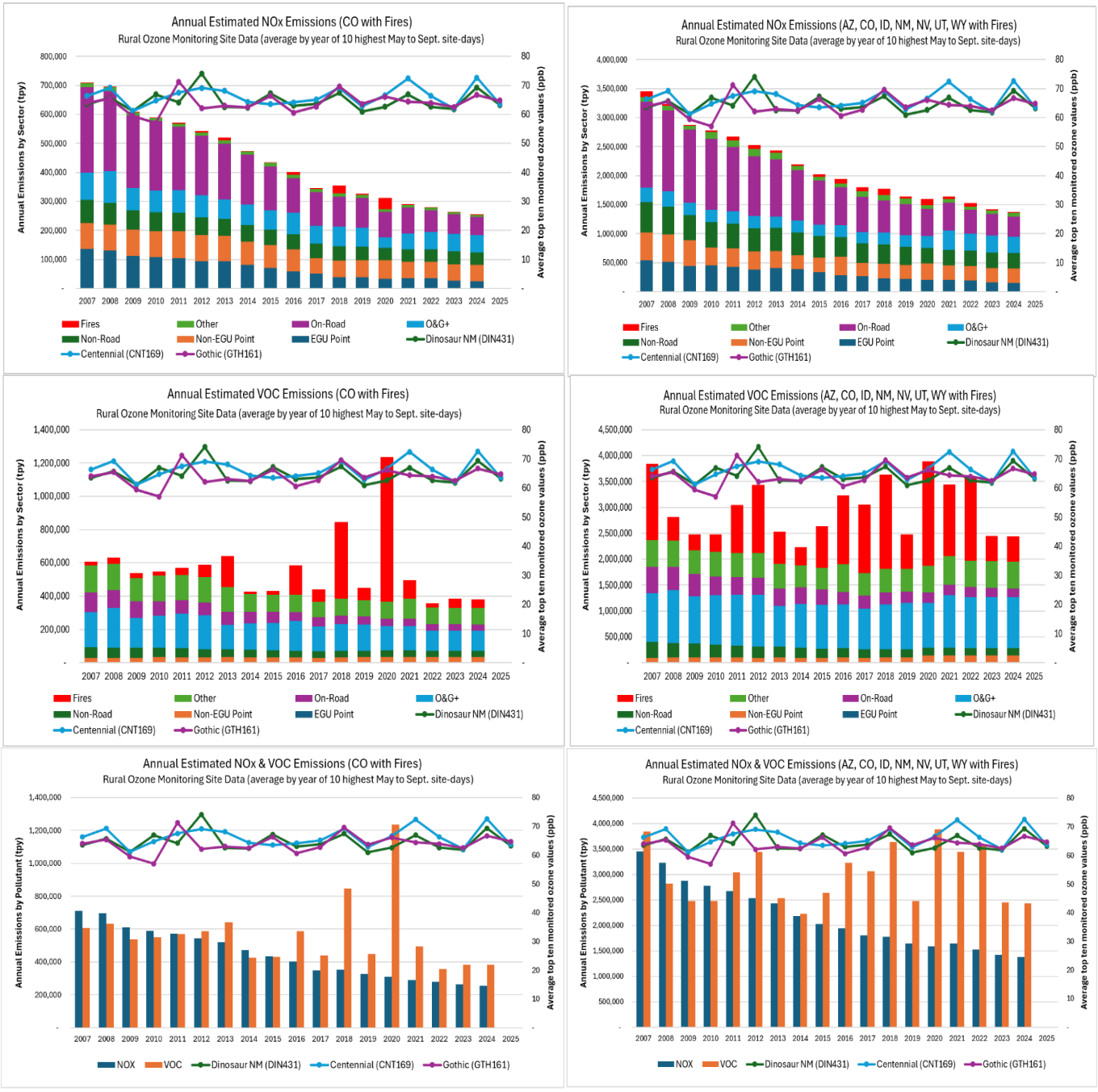

Figure 15: 18-year trends in annual statewide emission estimates for NOx and VOC by source category, and total NOx and VOC trends compared to the 18-year record of the average of the 10 highest 8-hour ozone values by day each year at the 3 sites. The emissions data presented are for Colorado alone as well as for the overall total for AZ, UT, CO, NM, NV, WY, and ID. Please note the difference in the Y axis scales for Colorado versus the 7-state region.

Appendix D. Supporting Documents for the Blueprint: Quick Links

The following documents are referenced throughout the Blueprint, but also linked below for ease of reference to a comprehensive list of key supporting content to the main Blueprint document. All documents were developed in the 2025-2026 timeframe within the context of the development of the Blueprint.

- Control Strategy Briefing Papers - Please refer to the Strategy Summary Table earlier in the Blueprint or the list of briefing papers linked on the Control Strategy Blueprint webpage.
- Stakeholder Engagement Information Document
- Blueprint Development Policy
- Health Impacts Report
- Future Ozone Impact Analysis Report & Future OZone Impacts Estimator Excel Dashboard
- Air Pollution Control Division-RAQC Strategy Development Process

Appendix E. Emission Control Strategy Analysis Tables

The following tables summarize the estimated emissions reductions associated with the proposed control strategies identified in the Blueprint and rank the strategies based on total ozone precursor emissions reductions (NOx + VOC). The four tables are organized by:

1. **Table 6:** The anticipated timing of emissions reductions, including the period of full implementation or maximum potential emissions benefits from each strategy, meaning the point in time when the strategy produces the greatest emissions reductions possible.
2. **Table 7:** The 2030–2032 timeframe corresponding to the 2015 ozone nonattainment area monitoring period used to demonstrate compliance.
3. **Table 8**: The anticipated benefits beyond 2032. Some control strategies are phased with different emission benefits year over year.
4. **Table 9**: The anticipated benefits for strategies already under implementation and therefore not considered for ranking of additional ozone precursor emissions that new, not-yet-implemented strategies could provide.

Within each timeframe, strategies are presented in order from the greatest to the least total ozone precursor emissions reduction.

Please note the following when reviewing these tables:

- The magnitude of ozone precursor emissions reductions does not necessarily correspond directly to the potential for ozone reduction.
- The potential ozone benefit depends on the relative reductions in NOx and VOC and their contribution to ozone formation, which can vary among monitoring locations.
- The estimates presented in these tables are based on the best available data and should be considered preliminary, as additional analysis and refinement will be necessary as the strategies are further developed.
- The tables are intended to provide a snapshot of the potential emissions benefits associated with the proposed strategies within the ozone nonattainment area and are not intended to represent a definitive assessment of their overall ozone-reduction potential.

Table 6: Strategy Planning Analysis Summary Table - Total Ozone Precursor Emission Reductions at Full Implementation

This table ranks each strategy from greatest potential emission reduction at full implementation of the individual strategy to least, based on the amount of ozone precursors reduced in total tons per day.

Target Year for Initial Implementation	Year for Full Emission Reduction Impact	Source Sector Category	Strategy Name	Ozone Precursors (TPD)	NOx (TPD)	VOC (TPD)
2029 and 2031	2031	Oil & Gas	Electric Drill Rig and Frac'ing Engine Requirements (Phased Strategy)	28.89	25.13	3.76
2030	2050	Non-Road	Non-Road Engines Emission Targets	25.43	8.3	17.13
2030	2030	Stationary Sources	Daily Emission Limits for Large Point Sources During Ozone Season	7.37	6.86	0.51
2030	2035	On-Road	Vehicle Registration/Emission Testing Compliance with Vehicle Inspection/Maintenance (I/M) Program	3.58	2	1.58
2030 to 2035	2035	On-Road	Indirect Sources: Regulatory Facility Emission Reduction Plans	3.56	1.99	1.57
2030	2030	Stationary Sources	Tightened Permit Limits for Largest Stationary Sources	2.24	1.73	0.51
2028	2030	On-Road	Indirect Source: Voluntary Facility Emission Reduction Plans	1.78	0.99	0.79
2028 to 2030	2040	Non-Point	Changes in Design and Operation of Commercial Buildings	0.93	0.93	0
2032	2044	Non-Road	Zero-Emission Forklifts	0.89	0.76	0.13
2029	2030	Oil & Gas	Reduce Wellsite Venting and Blowdowns Emissions	0.5	0	0.5
2030	2030	Non-Point	Commercial Cooking Requirements	0.21	0	0.21
2027 or 2028	2027	On-Road	Summertime Free Fare Transit	0.041	0.019	0.022
2027	2027	On-Road	Indirect Sources Data Reporting	0	0	0
2028	2030	On-Road	Mobile Source Emission Reduction Credits	Pending Evaluation	NA	NA

Table 7: Strategy Planning Analysis Summary Table - Total Ozone Precursor Emission Reductions for 2030 to 2032 Period

This table ranks strategies from greatest to least ozone precursor reductions in tons per day for the monitoring period of 2030 to 2032. Not all strategies are producing reductions by this timeframe and some are phased strategies that will produce reductions but not their potential maximum reductions within this timeframe.

Target Year for Initial Implementation	Target Year for Full Emission Reduction Impact	Source Sector Category	Strategy Name	Ozone Precursors (TPD)	NOx (TPD)	VOC (TPD)
2030	2050	Non-Road	Non-Road Engines Emission Targets	25.43	8.3	17.13
2029 and 2031	2031	Oil & Gas	Electric Drill Rig and Frac'ing Engine Requirements (Phased Strategy)	22.11	19.23	2.88
2030	2030	Stationary Sources	Daily Emission Limits for Large Point Sources During Ozone Season	7.37	6.86	0.51
2030	2035	On-Road	Vehicle Registration/Emission Testing Compliance with Vehicle Inspection/Maintenance (I/M) Program	3.58	2	1.58
2030	2030	Stationary Sources	Tightened Permit Limits for Largest Stationary Sources	2.24	1.73	0.51
2028	2030	On-Road	Indirect Source: Voluntary Facility Emission Reduction Plans	1.78	0.99	0.79
2029	2030	Oil & Gas	Reduce Wellsite Venting and Blowdowns Emissions	0.5	0	0.5
2030	2030	Non-Point	Commercial Cooking Requirements	0.21	0	0.21
2027 or 2028	2027	On-Road	Summertime Free Fare Transit	0.041	0.019	0.022
2027	2027	On-Road	Indirect Sources Data Reporting	0	0	0
2028	2030	On-Road	Mobile Source Emission Reduction Credits	Pending Evaluation	NA	NA

Table 8: Strategy Planning Analysis Summary Table - Total Ozone Precursor Emission Reductions After 2032

This table ranks strategies by their ozone precursor emissions reduction totals in tons per day, only looking at the reductions generated after 2032.

Target Year for Initial Implementation	Target Year for Full Emission Reduction Impact	Source Sector Category	Strategy Name	Ozone Precursors (TPD)	NOx (TPD)	VOC (TPD)
2029 and 2031	2031	Oil & Gas	Electric Drill Rig and Frac'ing Engine Requirements (Phased Strategy)	28.89	25.13	3.76
2030	2035	On-Road	Indirect Sources: Regulatory Facility Emission Reduction Plans	3.56	1.99	1.57
2032	2044	Non-Road	Zero-Emission Forklifts	0.89	0.76	0.13

Table 9: Strategies Already Under Implementation and Not Considered for Ranking

This table lists the strategies that are already under implementation in Colorado and therefore were not included in any of the previous ranking tables shown above.

Target Year for Initial Implementation	Target Year for Full Emission Reduction Impact	Source Sector Category	Strategy Name	Ozone Precursors (TPD)	NOx (TPD)	VOC (TPD)
2027	2040	On-Road	On-Road Vehicle Fleet Turnover and On-the-Books Colorado Clean Vehicles Regulations	35.79	23.43	12.36
2026 and 2028	2030	Non-Road	Landscape Maintenance Equipment (LME) reductions (Phased Strategy)	20.72	4.24	16.48
2030	2030	Oil & Gas	AQCC's On-the-Books Upstream Oil & Gas NOx Intensity Rule	13.25	13.25	0
2027	2027	Non-Point	VOC Limits for Consumer Products	3.33	0	3.33
2028 to 2030	2040	Non-Point	Changes in Design and Operation of Commercial Buildings	0.93	0.93	0
2027	2027	On-Road	Continued Light Duty Vehicle Electrification Incentives	0.22	0.1	0.12

Table 10 and Table 11 summarize the proposed control strategies identified in the Blueprint and categorize them based on their projected speed of implementation.

- The purpose of this assessment is to provide an initial indication of which strategies may be the simplest and/or fastest to implement based on currently available information.

- The implementation timing reflects the anticipated timeline for initiating implementation and the potential relative ease of moving a strategy forward, rather than the timeframe required to achieve the strategy's full projected emissions reduction.
- The assessment is based on the best available information and does not consider the costs associated with achieving implementation.
- For many of the potential strategies, additional analysis will be necessary to fully understand the regulatory, technical, administrative, and other steps required for implementation.
- Accordingly, the implementation rankings should be considered preliminary and are intended to provide a general indication of the relative implementation timelines among the proposed strategies.

Table 10: Strategy Planning Analysis Summary Table Ranked by Timeline to Implement

Target Year for Initial Implementation	Source Sector Category	Strategy Name	Anticipated Implementation Options
2027	On-Road	Indirect Sources Data Reporting	Voluntary Programs and/or New Rule
2027 or 2028	On-Road	Summertime Free Fare Transit	Voluntary Programs and/or New Statutory Action
2028	On-Road	Indirect Sources: Voluntary Facility Emission Reduction Plans	Voluntary Programs
2028	On-Road	Mobile Source Emission Reduction Credits	Expansion of Existing Rule
2029	Oil & Gas	Reduce Wellsite Venting and Blowdowns Emissions	Modify Existing Rule
2030	Stationary Sources	Daily Emission Limits for Large Point Sources During Ozone Season	Voluntary Programs and/or New Rule
2030	On-Road	Vehicle Registration/Emission Testing Compliance with Vehicle Inspection/Maintenance (I/M) Program	Regulatory Implementation/ Potential Legislative Action
2030	Stationary Sources	Tightened Permit Limits for Largest Stationary Sources	Potential New Rule
2030	Non-Point	Commercial Cooking Requirements	Voluntary Programs and/or New Rule
2029 and 2031	Oil & Gas	Electric Drill Rig and Frac'ing Engine Requirements (Phased Strategy)	New Rule
2030	Non-Road	Non-Road Engines Emission Targets	Voluntary Programs and/or New Rule
2030 to 2035	On-Road	Indirect Sources: Regulatory Facility Emission Reduction Plans	Potential New Rule
2032	Non-Road	Zero-Emission Forklifts	Voluntary Programs and/or New Rule

Table 11: Strategies Already Under Implementation and Not Considered for Ranking

This table lists the strategies that are already under implementation in Colorado and therefore were not included in any of the previous ranking tables shown above.

Target Year for Implementation	Source Sector Category	Strategy Name	Anticipated Implementation Options
2027	On-Road	Continued Light Duty Vehicle Electrification Incentives	Legislative Action, currently funded
2027	Non-Point	VOC Limits for Consumer Products	Existing Rule
2026 and 2028	Non-Road	Landscape Maintenance Equipment (LME) reductions (phased strategy)	Existing Rule, Potential New Rule
2027	On-Road	On-Road Vehicle Fleet Turnover and On-the-Books Colorado Clean Vehicles Regulations	Existing Rule
2030	Oil & Gas	AQCC's On-the-Books Upstream Oil & Gas NOx Intensity Rule	Existing Rule
2028 to 2030, Full impact as of 2035 but reductions will continue	Non-Point	Changes in Design and Operation of Commercial Buildings	Voluntary Programs and/or Regulatory

Statewide Transportation Advisory Committee (STAC) Meeting Minutes

Date/Time: October 1, 2026; 8:30 a.m. – 11:30 a.m. Location: Virtual Meeting

Attendance:

Central Front Range: Leo Evans
Eastern: Gary Beedy (STAC Chair)
Grand Valley: Dana Brosig
Denver Area: Emily Baer and Jacob Riger
Gunnison Valley: Michelle Haynes
Intermountain: Tom Gosiorowski
North Front Range: Kristin Stephens, Elizabeth Relford, Becky Karasko, and Bill Jenkins Timnath
Northwest: Jennifer O'Hearon and Brian Cerkvenik
Pikes Peak Area: Josh Squires, Holly Williams (STAC Vice Chair), John Liosatos, and Danelle Miller
Pueblo Area: Eva Cosyleon, Wendy Pettit, and Ted Hernandez
San Luis Valley: Vern Heersink
South Central: Mitch Wardell and Brian Blasi
Southeast: Ron Cook
Southwest: Shak Powers and Heather Alvarez
Upper Front Range: Elizabeth Relford and Evan Pinkham
Southern Ute: Mandy Brown
Ute Mountain Ute: Bernadette Cuthair
Federal Transit Administration: Emma Belmont

Welcome and Roll Call - Gary Beedy, STAC Chair

- The meeting commenced at approximately 8:35 a.m. with Chair Gary Beedy welcoming attendees. Roll call was conducted via TPR reports.

Public Comment

- No comment

Approval of the August 2026 Meeting Minutes - Gary Beedy, STAC Chair

- Chair Beedy requested a motion to approve the August 2026 STAC meeting minutes.
- **STAC Action:** STAC members approved the August 2026 meeting minutes following a motion for approval.

Transportation Commission Report - Gary Beedy, STAC Chair

- August meeting was fairly light, focusing on wildfire mitigation project updates regarding tree removal along state highway corridors to improve fire breaks.
- Bridge and Tunnel Enterprise (BTE) budget workshop covering preventative maintenance programs to extend bridge deck life and upcoming bonding transaction plans.

- September bus tour to Pueblo and Salida highlighting projects across Regions 1, 2, and 5, including multimodal improvements in Salida supported by MMOF, TAP, and Main Street grants.
- Tour of the Federal Railroad Administration Transportation Technology Center in Pueblo to view track and equipment testing, emergency response training, and the new Amtrak RTT train.
- Condemnation workshop held for upcoming regional projects.
- Preparatory budget workshop for the upcoming fiscal year in advance of the November in-person review.

Transit and Rail Advisory Committee (TRAC) Report - Ann Rajewski, TRAC Chair and CASTA Executive Director

- CASTA Fall Conference summary: hosted around 400 attendees (up from the typical 230) and included the Southwest Regional Transit Association two-day leadership lab and the State Partnerships Conference, featuring leadership from AASHTO, APTA, CTAA, U.S. DOTs, and 10–15 FTA regional and headquarters staff (including 5339 discretionary program managers).
- FTA office hours provided local agencies direct networking opportunities with federal leadership, and attendees toured the new Summit Stage facility.
- TRAC meeting updates covered the new NASPO price agreement and general transit procurement training.
- Clean Transit Enterprise (CTE) reported 75% of FY26 formula funding has been executed, with 39 applications received for FY27 funding.
- Passenger rail updates were presented along with photos of the new Bustang Broomfield Thornton Mobility Hub and public feedback on North and South Line fall service optimization planning.

TPR Representative and Federal Partners Reports - STAC Members and Federal Partners

- **Central Front Range:** No substantial action since last meeting; next meeting in two weeks to review TAP for the next 3 years and Safe Routes to School grant programs.
- **Grand Valley MPO:** Approved a letter of support and hosting a driving session for seniors at the Senior Expo next week in partnership with the Grand Junction Police Department, funded by the Highway Safety Office.
- **Denver Regional Council of Governments:** Approved 2026–2029 TIP policy amendments, 2026–2027 UPWP amendments, federal performance targets for traffic congestion reductions, RTOT project funding recommendations for 2027 and 2028, PowerHead Colorado Community Engagement Grant Program policy; received informational briefings on the 2050 RTP update, emerging mobility planning, 2029–2032 TIP development, the RTD CONNECT study, and the GOTOBER 2026 employer/commuter challenge; noted excitement for the Colorado 7 Mobility Hub.

- **Gunnison Valley TPR:** No meeting since last STAC; next meeting scheduled for October 29th.
- **Intermountain TPR:** No meeting since last STAC; canceled the October meeting due to lack of urgent business, with a possibility to reschedule in November if needed depending on MMOF updates.
- **North Front Range MPO:** Received US 34 corridor presentation from Region 4; approved Transfort FY26 Program of Projects and FY25 POP revisions; approved PM3 federal system performance targets jointly with CDOT; submitted comments to RAQC on the control strategy blueprint; co-hosting the 2026 Intermountain West Ozone Conference Oct 26–28 in Loveland with late registration starting October 5th.
- **Northwest TPR:** Canceled the October meeting due to a lack of agenda items; CDOT will provide an update on projects via email; next meeting scheduled for January.
- **Pikes Peak Area Council of Governments:** Thanked Shane Ferguson and Shoshana Liu; held ribbon-cuttings for the I-25 Fillmore to Garden of the Gods lane widening and Peterson Air Force Base West Gate access bridge interchange; approved a TIP amendment and Public Participation Plan updates.
- **Pueblo Area Council of Governments:** Passed resolutions updating the Title VI Plan and Public Participation Plan; Bike/Ped Master Plan out for public comment; I-25/US 50B interchange sound wall going up with girder placement expected late Oct/early Nov; Exit 108 working toward final office review; board champion leading creation of an RTA steering committee.
- **San Luis Valley TPR:** Nothing major to report other than receiving recent rain.
- **South Central TPR:** Moved October meeting from the 22nd to the 29th; received CDOT updates on paving projects and a presentation from Luis Lopez on the Colorado Connector future outlook.
- **Southeast TPR:** No major report; next meeting set for October 22nd.
- **Southern Ute:** Andrew Gallegos appointed as STAC representative with Mandy Brown as alternate effective August 11, 2026; responding to substantial rain with emergency responses and intergovernmental coordination.
- **Southwest TPR:** No meeting since last STAC; next meeting scheduled for October 8th.
- **Upper Front Range TPR:** Met September 3rd; reviewed TAP and Safe Routes to School updates; discussed bundling several years of Jonathan Bein funding for CMAQ grant awards targeted for December decisions; received a presentation from Elizabeth Relford on the 2026 Ozone Conference.
- **Ute Mountain Ute:** Transportation Planner position is vacant; Bernadette Cuthair stepping in temporarily until departing in December or January; working on Long Range Transportation Plan; managing local flooding by cleaning culverts and spillways in anticipation of upcoming rain and heavy snow.

- **Eastern TPR:** Met September 14th; reviewed local MMOF projects and STIP engagement; noted major contractor issues causing delays on HWY 94 repaving (asphalt mix approval issues) and concrete paving projects on I-70 near Seibert (preparing for winter closure without concrete) and HWY 6 near Sterling (may require tearing out and re-doing concrete).
- **Federal Partners:** No representatives present from FHWA or FTA to provide updates.

Legislative Report - Jamie Grim and Emily Haddaway, CDOT Office of Government Relations

Federal Legislative Update:

- 33 days until midterms with upcoming federal transitions.
- Passed a continuing resolution extending surface transportation reauthorization through December 11.
- Build America bill pending committee/appropriations action in the House.
- Senate leadership drafting reauthorization language, but text is not yet public.
- Moratorium placed on proposed OMB grant distribution rule through December 11 following nearly 500k public comments.
- The Administration announced adjustments lowering vehicle CAFE fuel efficiency standards.

Discussion

- Kristin Stephens raised permitting reform concerns; CDOT noted permitting packages typically impact energy/utilities more than transportation, but will review potential NEPA implications for next meeting.

State Legislative Update

- Legislative proposals were held on pause until after the gubernatorial election.
- Initial state budget released Nov 1, followed by a revised budget from the new governor in January.
- The Colorado Legislature is managing an estimated $1.5 billion state deficit necessitating cuts.
- Anticipate priority discussions surrounding autonomous vehicles, e-bikes, and SB 24-175 funding/referred ballot components.

Multimodal Transportation & Mitigation Options Fund Update - Medora Bornhoft, DTD and Bethany Nicholas, DAF

- Local MMOF relies on state sources (SB 18-001/21-260, general fund transfers, retail delivery fees, interest) and COVID stimulus (ARPA, HB 21-1466), which expires December 31, 2026.
- Revenues peaked at $76M in FY20 and FY22 ($100M stimulus in FY21), fell to $0 in FY23–24, hit $17M last year, and are projected at $9–$19M annually over the next 4 fiscal years.
- Project statuses: 108 completed ($61.7M spent), 110 active ($108.5M budgeted), and 50 pending awards ($53.8M total).

- HB 24-1398 and HB 24-1399 cut funding by 48% over 3 years; CDOT is using FY30–31 forecasted revenues to backfill and keep local awards whole.
- Cash management prioritizes ready projects to draw down fund balances regardless of original award years.
- Because MMOF requires annual legislative spending authority and FY27 authority is ~$15M below the fund balance, no spending authority is available to budget new project phases this fiscal year.
- CDOT will post a project funding schedule ranking the 50 pending projects by readiness; sponsors should demonstrate project readiness to CDOT managers.

Discussion:

- **John Liosatos:** Asked about provisions for ongoing transit operations needing consistent funding.
- **Tom Gosiorowski:** Questioned why FY27 spending authority is below fund balance, whether locals could advance funds for later reimbursement, and if CDOT should pause new MMOF awards.
- **CDOT Staff Responses (Medora Bornhoft, Bethany Nicholas, Jeff Sudmeier, Darius Pakbaz):** Noted spending projections are set 18 months ahead, continuous spending authority has been requested, reimbursement agreements are legally difficult, and TPRs should pause new awards while maintaining project readiness.
- **Eva Cosyleon:** Expressed concern over cost escalation and advocated sending a STAC support letter to the JBC for continuous spending authority.
- **Emily Haddaway:** Noted partner letters detailing impacts are effective with the JBC.
- **Emily Haddaway & Ann Rajewski:** Haddaway highlighted that partner letters and relationship support with the Joint Budget Committee (JBC) are very effective when advocating for continuous spending authority, offering to notify partners right before CDOT's JBC figure setting in February or March, which Rajewski welcomed.
- **Gary Beedy:** Supported drafting a joint STAC support letter alongside TPR efforts.
- **Jacob Riger:** Inquired about funding changes; staff confirmed cash management rules remain, but active project balances are fully drawn down until FY28.
- **Emily Baer:** Asked if revenue forecasts account for the $1.5B state deficit; Jeff Sudmeier clarified forecasts already assume $0 in general fund transfers for FY27–29, leaving retail delivery fees as the main source.
- **John Liosatos & Emily Haddaway:** Discussed legislative fund balance sweeps; Haddaway noted sweeping retail delivery fees for non-fee purposes raises TABOR issues.

Transportation Alternatives & Safe Routes to School - Neysa Bermingham, DTD

- Neysa Bermingham presented an update on the Transportation Alternatives Program (TAP) and Safe Routes to School (SRTS) grant programs, which fund local active transportation projects and infrastructure.

- Eligible categories include TAP projects (bike/pedestrian facilities, environmental mitigation, historic/scenic activities, interstate-to-boulevard conversions) and SRTS projects (school zone safety and enforcement within two miles of schools). Both also fund bicycle safety education, promotional events, walking training, and vulnerable road user assessments.
- Funding mechanics: Federal TAP funds are split among CDOT regions (58%), MPOs (35%), and Rec Trails via CPW (7.5%).
- The grant call opens October 30, 2026, for a 3-year cycle (FY 27–29). The SRTS budget is ~$7.7M, including standard allocations and the annual $2.5M TC set-aside.
- Eligible applicants include local governments, transit and public land agencies, school districts, schools, tribes, MPOs, and TPRs.
- A mandatory Letter of Interest (LOI) must be pre-vetted by a CDOT region engineer before releasing the application link.
- Review process: A single combined online PDF application covers both programs with reduced attachments, evaluated by scoring panels of CDOT experts and local/TPR representatives.
- Scoring evaluates safety, mobility choice, connected community, community need, and DOLA-managed criteria: Strategic Growth compliance (both programs, 5 pts) and Neighborhood Center designation (TAP only, 5 pts).
- Key takeaways: Verify DOLA status early, target a 1–2 year project delivery horizon, focus on top community priorities with strong support, supply crash/infrastructure data, and subscribe to Active Insights.

Discussion:

- Eva Cosyleon asked about combined application data requirements and match differences. Neysa Bermingham clarified that match reductions follow the MMOF formula, CDOT uses toll credits to satisfy match requirements without extra local funds, and parent surveys demonstrate community demand while student tallies remain optional.
- Tom Gosiorowski noted DOLA's Neighborhood Center webpage was under construction. Neysa confirmed criteria will be ready at launch and assured CDOT will award full points if applications remain pending due to DOLA delays.
- Gary Beedy raised concerns about administrative burdens on small and rural communities. Neysa and Jeff Sudmeier explained these requirements are state mandates, but CDOT streamlined the process via a combined form, fewer attachments, LOI consultations, and broad Strategic Growth compliance eligibility.
- Jeff Sudmeier clarified that when CDOT waives local match requirements, toll credits are utilized to eliminate the local match rather than drawing from additional state cash funds. In addition, Neysa Bermingham noted that Strategic Growth compliance and Neighborhood Center designations each account for 5 points out of the total 100-point scoring scale, intentionally

limiting their weight to reduce administrative burden on smaller communities while remaining compliant with state mandates.

Rest Area Update - Hope Wright, Real Estate Asset Manager

- Hope Wright provided a detailed update on state rest areas, noting that CDOT maintains 27 rest areas across Colorado.
- CDOT provided a summary of its Rest Area program, tracing its history from funding shortages to its current status as CDOT's 12th asset class. CDOT detailed operational coordination, federal electric vehicle (EV) charging restrictions, the newly developed facility prototype, recent capital achievements, long-term modernization plans, a programmatic risk analysis, and a forward-looking strategic conclusion.
- The Statewide Interpretive Signage Replacement Project will be done on a worst-to-first basis, including local input to determine what to highlight around each rest area.
- In response to questions from Kristin Stephens and Gary Beedy, Hope Wright discussed strategies for preventing vandalism, including increased staffing, integrated maintenance facilities, and equipping sites with video surveillance and ITS-ready infrastructure.
- Closed rest areas around Pueblo will undergo demolition. However, CDOT plans to retain property ownership to preserve opportunities for future emergency truck parking and ensure adequate site lighting for driver safety and security under Jason's Law.

Clean Transit Enterprise Overview - Craig Seacrest, Director, Clean Transit Enterprise

- Craig Seacrest delivered an overview of the Clean Transit Enterprise (CTE), established under SB 21-260 to assist public transit agencies in transitioning to zero-emission vehicle (ZEV) fleets, with recently expanded resources under SB 24-230 utilizing oil and gas production fee revenues.
- The CTE manages formula-based allocations, competitive/discretionary grant programs, and passenger rail funding streams that support ZEV bus purchases, facility charging and fueling infrastructure, facility retrofits, and fleet transition planning.
- Program updates highlighted 75% execution of FY26 formula funds, receipt of 39 applications for FY27 funding, technical assistance for rural transit providers navigating electrification, grid capacity coordination with utility companies, and flexible match policies including local match waivers to accommodate revenue variability, ridership impacts, and greenhouse gas reduction goals.

Other Business - Gary Beedy, STAC Chair

- Multiple STAC members want to discuss reactivating an Active Transportation Working Group within STAC.

Next STAC Meeting

- **The next STAC meeting will be held in person on November 5, 2026.**

North Front Range Metropolitan Planning Organization

November 2, 2026

U.S. Census Bureau
4600 Silver Hill Road
Washington, DC 20233

Re: Docket USBC-2026-0628, Decennial Census of the Population of Americans; Proposed Residence Criteria and Proposed Regulations for Demographic Questions

To the Census Bureau:

The North Front Range Metropolitan Planning Organization (NFRMPO) appreciates the opportunity to provide comments on the U.S. Census Bureau's proposed rule regarding the Decennial Census of the Population of Americans; Proposed Residence Criteria and Proposed Regulations for Demographic Questions (Docket USBC-2026-0628).

The NFRMPO is a federally designated Metropolitan Planning Organization serving Northern Colorado through regional transportation and air quality planning and coordination with local, state, and federal partners. Our work depends on accurate and reliable population and demographic data to understand regional conditions, identify transportation needs, evaluate air quality impacts, and guide investments that support the mobility, safety, and quality of life of our communities.

Census data are fundamental to transportation planning, including travel demand modeling, congestion analysis, transportation system performance, environmental impact assessments, and the identification of underserved populations. These data also inform regional growth projections, infrastructure investment priorities, and the allocation of federal and state resources. Changes that reduce the accuracy or availability of census data could compromise the NFRMPO's ability to fulfill its federal planning responsibilities and help our member communities make informed, equitable, and cost-effective decisions.

The NFRMPO recognizes the Census Bureau's responsibility to improve census accuracy and efficiency while fulfilling its constitutional and statutory obligations. However, changes to established census methodologies should be supported by rigorous testing and evidence demonstrating that they will improve, rather than diminish, the accuracy and reliability of the resulting data. Accordingly, the NFRMPO offers the following comments and recommendations.

Usual Residence

The NFRMPO recommends preserving April 1 as the established reference date for determining usual residence in the 2030 Decennial Census until additional testing demonstrates that a proposed alternative would improve accuracy.

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North Front Range Metropolitan Planning Organization

The NFRMPO appreciates the Census Bureau's efforts to count every person once, only once, and in the correct location. However, the proposed enumeration period of January 3 through April 1 introduces a significant change to the established approach for determining usual residence. Before implementing such a change, the Census Bureau should conduct additional testing and evaluation to determine its effects on population counts and the reliability of resulting data.

The existing April 1 standard provides a consistent reference point for counting college students, people experiencing homelessness, individuals in temporary or transitory living arrangements, young children, and other populations whose usual residence may require special consideration. Established procedures have been developed and refined to address these circumstances. Introducing an extended enumeration period could create confusion for census respondents and enumerators, increase the potential for duplicate or missed counts, and make it more difficult to determine where individuals should be counted.

Accurate geographic population data is particularly important to metropolitan planning organizations because transportation planning depends on understanding where people live, work, attend school, and access essential services. Inaccurate population counts can affect travel demand forecasts, regional growth projections, transportation investment decisions, and the identification of communities with unmet mobility needs.

Given the importance of these data to regional planning, the NFRMPO recommends retaining April 1 as the usual residence reference date for the 2030 Census unless comprehensive testing demonstrates that the proposed January 3–April 1 enumeration period produces more accurate and reliable results. Any methodological changes should be evaluated sufficiently in advance of implementation to allow their impacts to be understood and addressed.

Citizenship and Population Counting

The NFRMPO recommends maintaining the existing approach of counting all persons residing in the United States, regardless of citizenship or immigration status, for the decennial census population count. If the Census Bureau proceeds with a different counting methodology, it should ensure that a complete and reliable population dataset remains available for transportation planning and other essential governmental functions.

The proposed rule would limit the population counted for the decennial census to U.S. citizens, legal permanent residents, and certain overseas military and federal government personnel. Such a change could result in significant undercounts in communities where residents include international students, workers on temporary visas, individuals granted asylum, people with Temporary Protected Status, and other noncitizen residents.

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Although administrative records may provide supplemental information about some populations, the NFRMPO is concerned that these records may contain inconsistencies, omissions, and limitations that affect their accuracy. Administrative data should not be assumed to provide an equivalent substitute for direct census enumeration without comprehensive testing and validation. A change intended to improve efficiency should not compromise the completeness of the population data used by public agencies.

For metropolitan planning organizations, an accurate count of the population is essential to understanding current and future transportation demand. Population estimates inform regional travel demand models, forecasts of vehicle and transit trips, congestion assessments, infrastructure needs, and the distribution of transportation investments. Excluding residents from the population count could cause regional transportation needs to be understated, particularly in areas experiencing substantial population growth or serving diverse communities. Population counts also have implications for federal transportation planning requirements and institutional designations. Metropolitan planning organization designations are associated with urbanized area population thresholds, and Transportation Management Area requirements generally apply to urbanized areas with populations of 200,000 or more. Inaccurate counts could affect how urbanized areas are defined, the designation and boundaries of planning areas, and the federal planning requirements applicable to those areas. These changes could have lasting consequences for regional transportation planning, coordination, and investment decisions.

Additionally, census data serve as a foundation for other federal statistical products, including the American Community Survey (ACS). Although the proposed changes may distinguish the population count used for congressional apportionment from other statistical products, the decennial census remains an essential benchmark for population estimates and demographic analysis. Maintaining an accurate count of all residents is therefore important to the reliability of the broader statistical system.

NFRMPO also recognizes that population counts inform the distribution of federal resources across numerous programs. Undercounting communities may affect funding formulas and the ability of local governments and public agencies to provide transportation and other essential services in response to actual community needs.

For these reasons, the NFRMPO recommends retaining the current population-counting methodology. If the Census Bureau pursues a different approach, it should demonstrate through rigorous testing that the resulting data will remain sufficiently complete, geographically accurate, and reliable for transportation planning, federal program administration, and other governmental uses.

Proposed Restrictions on Demographic Questions in the Decennial Census

North Front Range Metropolitan Planning Organization

The NFRMPO recommends preserving the availability of demographic information, including information related to race and ethnicity, and carefully evaluating the consequences of eliminating any demographic questions necessary to support public planning, civil rights compliance, and transportation investments.

Reliable demographic information is essential to understanding how transportation systems serve different populations and whether transportation investments are meeting community needs. The NFRMPO uses demographic data to support regional planning, identify populations that may face barriers to transportation access, evaluate potential impacts of transportation investments, and inform strategies to improve mobility and accessibility.

The removal of demographic questions from the decennial census could limit the availability of comprehensive, geographically detailed information for these purposes. Although the ACS provides important demographic information, it is based on a sample and does not fully replace the decennial census as a foundational population benchmark. For smaller geographic areas and populations, limitations in sample size and data reliability can make it more difficult to identify local needs and evaluate differences in transportation access and outcomes.

As a recipient of federal transportation funding, the NFRMPO must conduct its planning activities in accordance with applicable federal requirements, including requirements related to civil rights and nondiscrimination. Demographic information supports the evaluation of transportation investments, the identification of potentially disproportionate impacts, and the development of planning approaches that consider the needs of historically underserved and disadvantaged populations. Eliminating relevant data could make these responsibilities more difficult to fulfill and require agencies to seek alternative sources that may be less comprehensive, more costly, or less geographically specific.

Demographic data also supports broader regional economic vitality and quality of life. Understanding population characteristics, workforce trends, and access to employment and essential services helps regional and local governments coordinate land use, transportation, and infrastructure planning. Reliable data allows public agencies to evaluate changing community needs and make informed decisions about where investments are most necessary.

The NFRMPO recommends that the Census Bureau preserve the availability of demographic information necessary for transportation planning, civil rights compliance, and the evaluation of reasonable access to public services. Before eliminating any demographic questions, the Bureau should assess the impacts on data quality, geographic detail, and the ability of public agencies to meet their federal obligations. Any alternative data collection or reporting approach should be demonstrated to provide comparable information that remains accessible and reliable for regional planning purposes.

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North Front Range Metropolitan Planning Organization

Conclusion and Recommendations

The NFRMPO appreciates the opportunity to comment on the Census Bureau's proposed rule and recognizes the importance of maintaining an accurate, reliable, and effective decennial census. Census data are foundational to regional transportation planning, air quality coordination, infrastructure investment, civil rights compliance, and the delivery of public services.

For the reasons outlined above, the NFRMPO recommends that the Census Bureau:

1. **Retain April 1 as the usual residence reference date** for the 2030 Decennial Census unless comprehensive testing demonstrates that an alternative methodology produces more accurate and reliable results.
2. **Continue counting all persons residing in the United States, regardless of citizenship or immigration status**, and avoid substituting unvalidated administrative records for direct enumeration. If a different methodology is adopted, ensure that complete and reliable population data remains available for transportation planning and other governmental functions.
3. **Preserve the availability of essential demographic information**, including race and ethnicity data, and evaluate the impacts of eliminating demographic questions on regional transportation planning, civil rights compliance, and the ability of public agencies to identify and address community needs.

The NFRMPO encourages the Census Bureau to prioritize data accuracy, transparency, consistency, and accessibility when considering changes to established census practices. Reliable census data enables metropolitan planning organizations and their member communities to plan for future growth, identify transportation needs, allocate resources responsibly, and make investments that support safe, accessible, and connected communities throughout Northern Colorado.

Thank you for your consideration of these comments. The NFRMPO looks forward to continuing to work with the Census Bureau and its federal, state, and local partners to support a complete and accurate 2030 Decennial Census.

Sincerely,

Elizabeth Relford
Executive Director
erelford@nfrmpo.org

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North Front Range Metropolitan Planning Organization

RIDE NOCO
Connecting You & Northern Colorado

MOBILITY UPDATES

RIDENOCO CONTACT & DIGITAL REACH





CALLS & EMAILS

426

+49% FROM 2025

WEBSITE VISITS

10,826+

+ 93% FROM 2025

PLATFORM EXPANSION PILOT



CURRENT STATUS: TESTING

We are in the testing phase and are excited about the results so far. We will continue to provide updates and hope to be live soon.

GRANT & FUNDING UPDATES

Awards, opportunities, and deadlines



2027 SECTION 5310 FUNDING

NFRMPO received $167,000 in combined 2027 Section 5310 Urban and Rural funding.

2028 SECTION 5310 GRANTS

The 2028 Section 5310 Notice of Funding Availability (NOFA) was released during the second week of October 2026. Applications are due in December 2026.

OUTREACH EQUIPMENT REQUEST

NFRMPO submitted a $7,900 funding request for digital equipment and auxiliary devices to support public outreach and community engagement.

FEATURED COMMUNITY EVENT

MILLIKEN COMMUNITY WALK AUDIT

FRI., NOV. 13 2026 | **12:00 P.M.** | **ABOUT 2 HOURS**

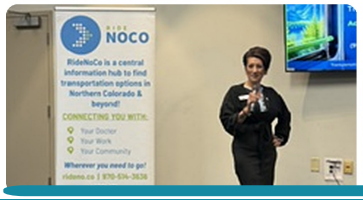
MILLIKEN SENIOR CENTER

Walk local routes and share observations about opportunities for safer, healthier, and more accessible streets and sidewalks. Bring walking shoes, observations, and ideas. Sponsored by NFRMPO.

OUTREACH IN ACTION









FALL OUTREACH DATES & LOCATIONS

OCT. 1	Weld Senior Symposium - Island Grove, Greeley
OCT. 3	Tour de Corgi - Civic Center Park, Fort Collins
OCT. 15	Weld Project Connect - Island Grove Event Center, Greeley
OCT. 18	Open Streets - Laurel St. between Mason & Shields, Fort Collins
OCT. 22	Envision Health & Wellness Fair - 1050 37th St., Evans
NOV. 13	Milliken Walk Audit - Milliken Senior Center
NOV. 14	Wildcraft Farmers Market - Foothills Mall, Fort Collins



GO-TOBER CHALLENGE
OCTOBER 1-31, 2026

Replace drive-alone trips with walking, biking, rolling, transit, carpooling, vanpooling, or teleworking.

HOW TO JOIN: Create an account, join the challenge, and log trips. @ RideNo.Co

RideNoCo | mobility@nfrmpo.org | (970) 514-3636 | Monday-Friday, 8 a.m.-5 p.m.

ACCESSIBILITY ACCOMMODATIONS: staff@nfrmpo.org | (970) 800-9560 | Please allow three business days for a response.

Larimer County Mobility Committee (LCMC) Meeting Minutes

October 20th, 2026, 1:30 pm – 3:00 pm

Hybrid Meeting Location:

Loveland Youth Campus in the United Way Classroom 1 at 2366 E 1st St, Loveland, CO 80537

Welcome and Introductions

Call Meeting to Order, Welcome, and Overview of Agenda

Attendees:

In Person:

- Co-Chair Katlyn Kelly, Transfort
- Jacque Penfold, Citizen
- Nichole Limoges, Larimer County Office on Aging
- Bridie Smith, COLT
- Yvonne Perches, RAFT

Virtual:

- Ari Edgley, Foothills Gateway
- Nathan Vander Broek, GoNoCo34
- Reese Koltz, ARC Larimer County
- Darcy Kitching, Via Mobility Services
- Kristy Wygmans, PFAC
- Erin Alt, Larimer County Office on Aging
- Baily Roubidoux, RAFT

NFRMPO Staff:

- Tanya Trujillo-Martinez, Mobility Director
- Lisa Joyner, Mobility Specialist

Introduction:

Members introduced themselves and the agencies that they represent. In-person attendees went first, then those online.

Public Comment:

No Public Comment

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Transfort & COLT Updates

Kelly reported that the Transfort optimization plan is going well. They are still working to update routes around CSU for students. The Dial-A- Ride program in Ft. Collins now has a web portal for scheduling rides. More information can be found on the website.

SAINT Updates

Robinston announced that SAINT is now offering medical rides between Ft. Collins and Loveland. Rides need to be scheduled for 2 weeks in advance of the appointment. If a ride is not available within 1 week of the appointment, the individual will be contacted.

Approval of July Meeting's Minutes

Penfold made a motion, seconded by Roberts, to approve July 28, 2026, meeting minutes; the motion passed unanimously.

Mobility Program Updates:

RideNoCo Data & Outreach Updates

Joyner presented RideNoCo year-to-date call, email, website, and outreach information. RideNoCo reported 426 calls and emails and 10,826 website visits for 2026 year-to-date. Compared with January 1 through October 16, 2025, when RideNoCo recorded 286 calls and 5,623 website visits, this represents increases of 49 percent in calls and emails and 93 percent in website visits.

October outreach activities included Tour de Corgi in Fort Collins; The Weld Senior Symposium presentation in Greeley; an Aging and Disabilities Resource Center presentation; Weld Project Connect in Greeley; Open Streets in Fort Collins; and the Envision Health and Wellness Fair in Evans. The Wildcraft Farmers Market event at Foothills Mall in Fort Collins is on November 14.

Mobility Leadership Updates

The meeting packet included a written Mobility Program Updates report.

NFRMPO Leadership Updates

The meeting packet included a written NFRMPO Updates report.

Presentations

Larimer County Office on Aging Presentation

Limoges, Office on Aging Program Coordinator, and Alt, Director of Region 2A, presented on behalf of the Office of Aging. LCOA is the Area Agency on Aging for Larimer County and serves adults age 60 and older, adults living with disabilities, and caregivers. The office provides direct services, funds community partners, and supports innovation and advocacy to address community needs.

Services and resources highlighted included:
Options counseling to help adults age 60 and older plan for the future and understand long-term care communities and supports. The Long-Term Care Ombudsman Program, which protects the rights of residents of assisted living residences and nursing facilities and assists residents in speaking up when they are treated unfairly. Application assistance for adults age 60 and older applying for programs such as Long-Term Care Medicaid and the Medicare Savings Program. Information and assistance with navigating housing, medical, support group, and other community resources, including the Answers on Aging Resource Guide in English and Spanish. Individual voucher programs, including in-home service and chore vouchers, to help older adults remain safe in their homes. Family caregiver support, including respite vouchers, grandfamily respite vouchers, caregiver consultations, classes, and resources. Coordination of federally and state-funded services that provide healthy meals, including home-delivered and community meals, transportation, and legal services for older adults. The Aging and Disability Resource Center is a source of information about long-term services and support options, including counseling, application assistance, transition services, voucher programs, caregiver support, and community resource navigation.
LCOA may be reached by phone or text at 970-498-7750 or by email at aging@larimer.gov. Spanish-language assistance is available.

Partnership for Age-Friendly Communities Presentation

Wygmans, Executive Director of the Partnership for Age-Friendly Communities in Larimer County (PAFC), provided an overview of PAFC's vision, mission, organizational approach, priority areas, partnerships, and current initiatives.

PAFC described its role as a convener, incubator, and think tank. Its work centers on bringing partners and community members together, exploring systemic challenges, testing innovative ideas, supporting community-led solutions, launching pilot projects, and scaling resources that help people thrive as they age. PAFC emphasized a systemic, grassroots approach that allows the organization to test, learn, and adapt around changing community needs.

PAFC organizes its work through four priority groups:

Housing: advocacy for housing initiatives that benefit people across the lifespan; updates to the Larimer County Manufactured Home Resident Handbook; support for the Design 2030 initiative; and outreach related to senior-friendly rental practices, accessibility considerations, and home modifications.

Health and Wellness: an evidence-based healthy-aging book list; artificial intelligence training for community members and caregivers to strengthen information and referral skills; and development of a high-school career and technical education curriculum related to long-term care careers.

Mobility and Access: continued partnership with the North Front Range Metropolitan Planning Organization and RideNoCo to help people, particularly older adults and individuals with disabilities, find safe, affordable, and reliable transportation options, while assessing additional initiatives aligned with PAFC's mission and community impact.

Culture of Aging: the Graceful Aging and Empowered Aging blogs; the Tech Buddy Program, which offers one-on-one technology support for older adults; and virtual Lunch and Learn sessions on practical topics.

PAFC also highlighted its partnership with Colorado State University, including Intergenerational Conversations and Game Night, the GenHERous program, communications and branding projects, website improvements, an artificial intelligence pilot for information and referral, and surveys of volunteers and participants. Additional launched projects include Sound Affects; the Toy, Game, and Puzzle Library; and A Little Help Northern Colorado.

Wrap-Up

Next Meeting Agenda Suggestions:

Technical difficulties were encountered, and there was a loss of internet; therefore, the meeting was adjourned prior to the official wrap-up tasks on the agenda.

Meeting Adjournment:

Co-Chair Kelly adjourned the meeting at 2:37 pm.

Upcoming Meetings:

- Northern Colorado Mobility Committee: November 17th, 2026
- Weld County Mobility Committee: December 15th, 2026.
- Larimer County Mobility Committee: January 26th, 2027

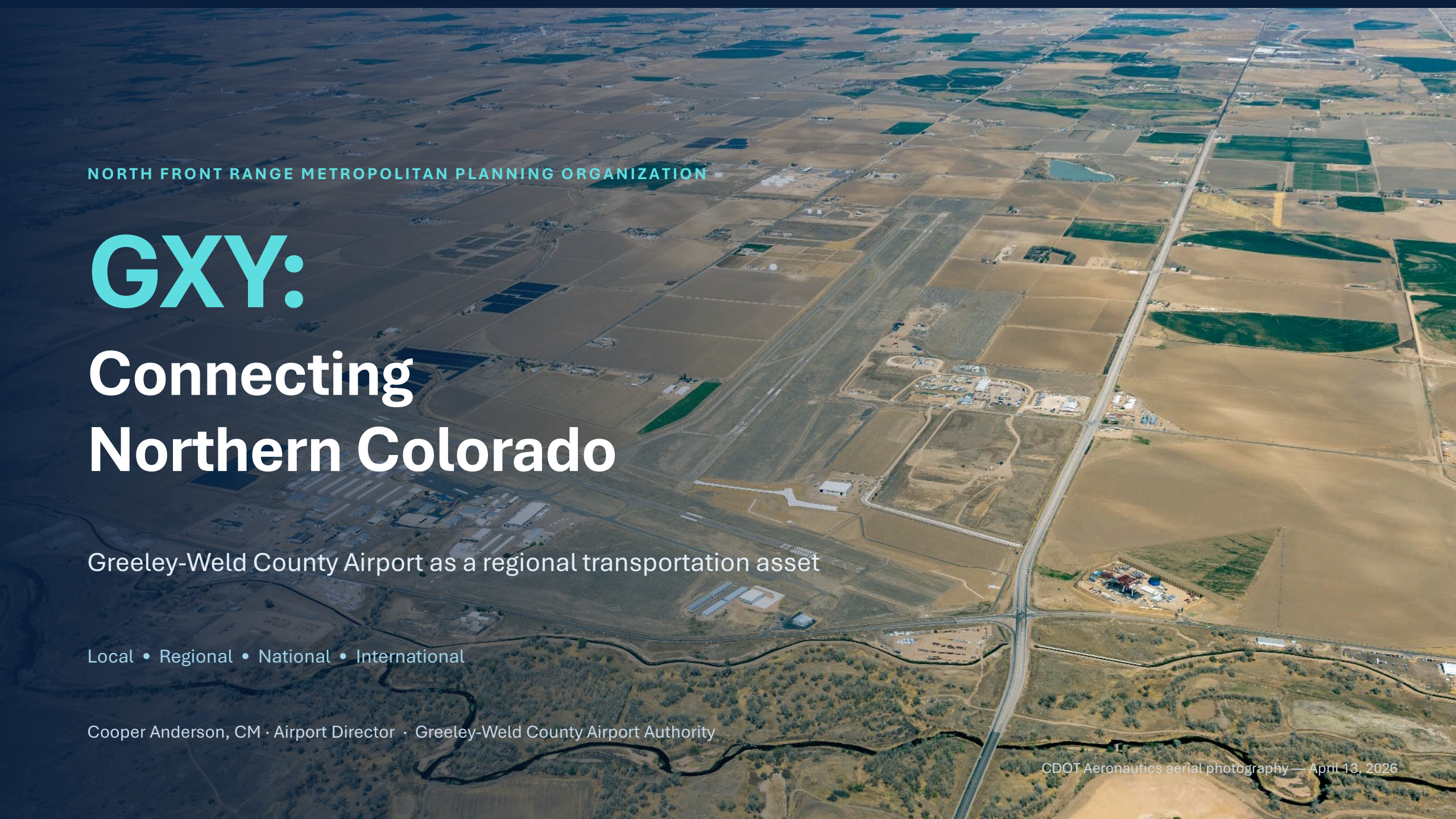
North Front Range Metropolitan Planning Organization

RIDE NOCO

*Please note:

The NCMC, WCMC, and LCMC are hybrid meetings with a virtual option and in-person locations at the following:

- The NCMC in-person meeting location is the Windsor Community Recreation Center, Buckeye/Redwood Room, 250 11th St, Windsor, CO 80550.
- The WCMC in-person meeting location is the United Way of Weld County office at 814 9th Street, Greeley, CO 80631.
- The LCMC in-person meeting location is the Loveland Youth Campus in United Way Classroom 1 at 2366 E 1st St, Loveland, CO 80537.



NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION

GXY:
Connecting Northern Colorado

Greeley-Weld County Airport as a regional transportation asset

Local • Regional • National • International

Cooper Anderson, CM · Airport Director · Greeley-Weld County Airport Authority

CDOT Aeronautics aerial photography — April 13, 2026

AIRPORT OVERVIEW

More Than General Aviation

Working transportation infrastructure for the North Front Range — from business access to public safety.

Business Aviation

Local access. International reach.

Flight Training

Training the next generation of aviation professionals.

Maintenance

On-field operators supporting safe, reliable aircraft operations.

Public Safety

Access for emergency, medical and public-service aviation.

Military

Regional access to our nation’s armed forces.

Specialized Services

Agriculture, utilities, survey and charter operations.

The Airport’s Economic Impact

GXY supports jobs, payroll and business activity across the region.



Jobs
People employed through airport activity

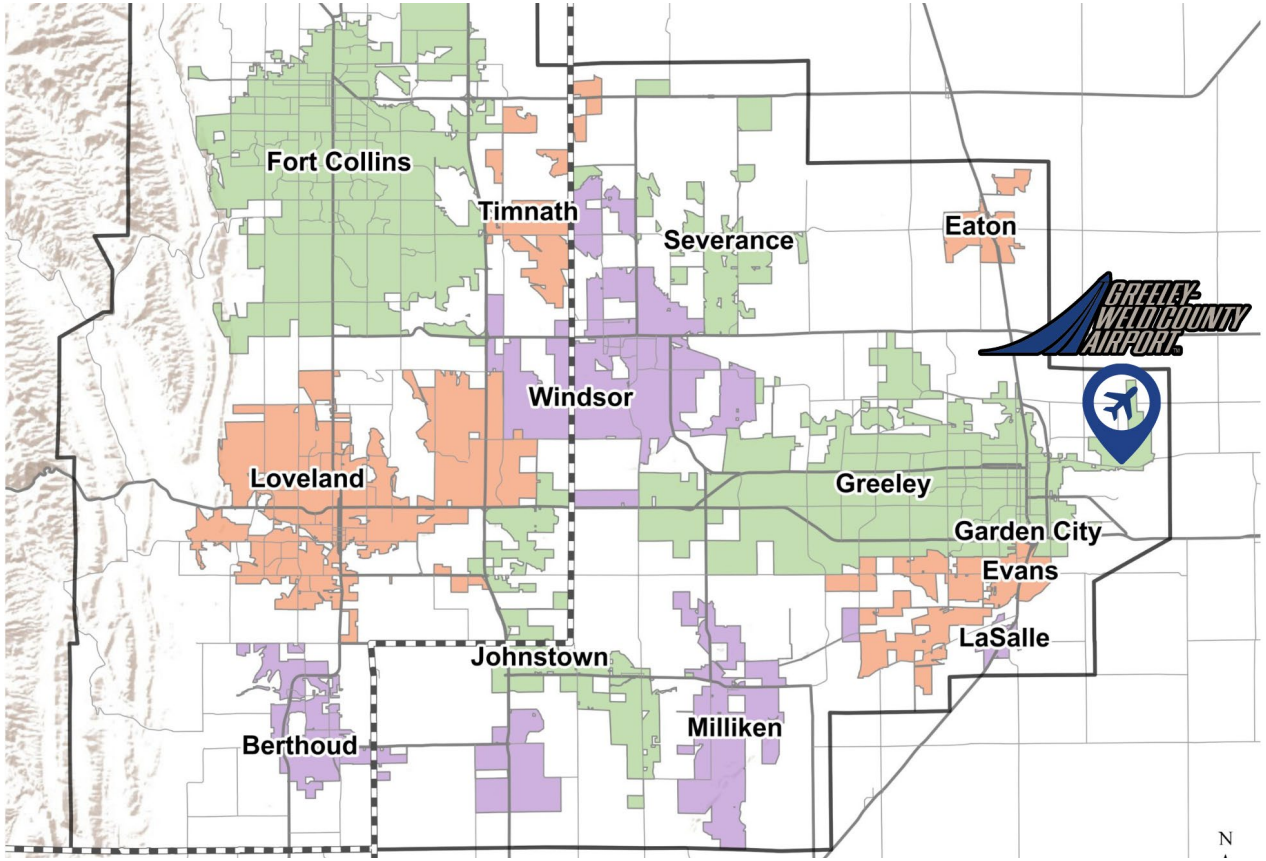
Payroll
Wages paid to those workers

Value added
The airport’s contribution to regional output

Business revenues
Total revenues of airport-related businesses

GXY and the Regional Transportation Network

The 2050 RTP recognizes aviation within the region's multimodal system and lists Greeley-Weld County Airport among the region's general aviation airports.



NFRMPO planning region map; airport marker as shown on source map.

What aviation adds to the network

Access to the national aviation system

Connects Northern Colorado to air travel beyond the region.

Business travel and commerce

Local access, international reach.

Emergency response and military

Public safety, medical and armed-forces access.

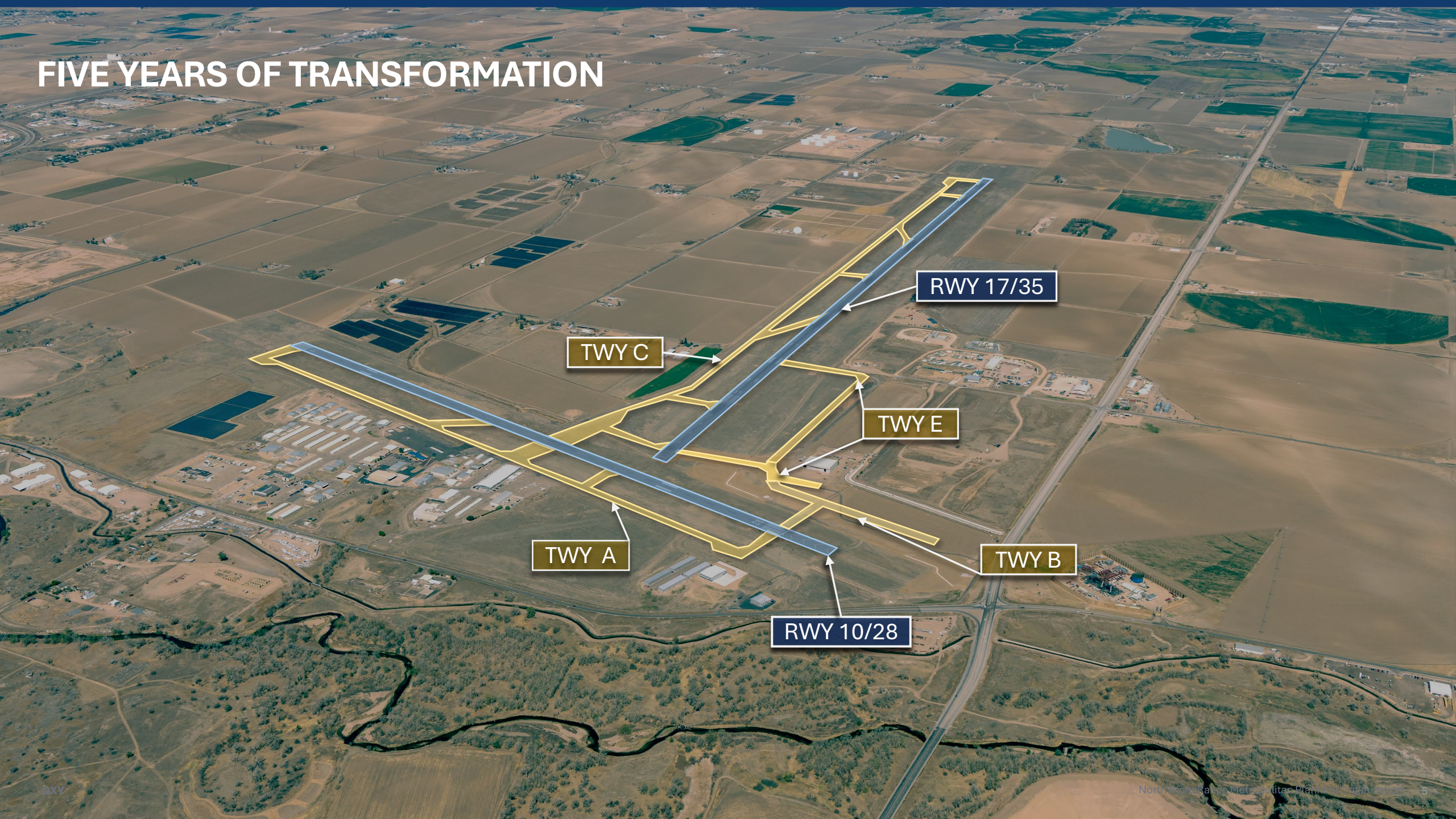
Specialized services

Agriculture, utilities, survey, charter, training.

2050 RTP CORRIDORS & ROUTES

I-25 · US 34 · US 85 · 8th Street (RSC 24)

FIVE YEARS OF TRANSFORMATION

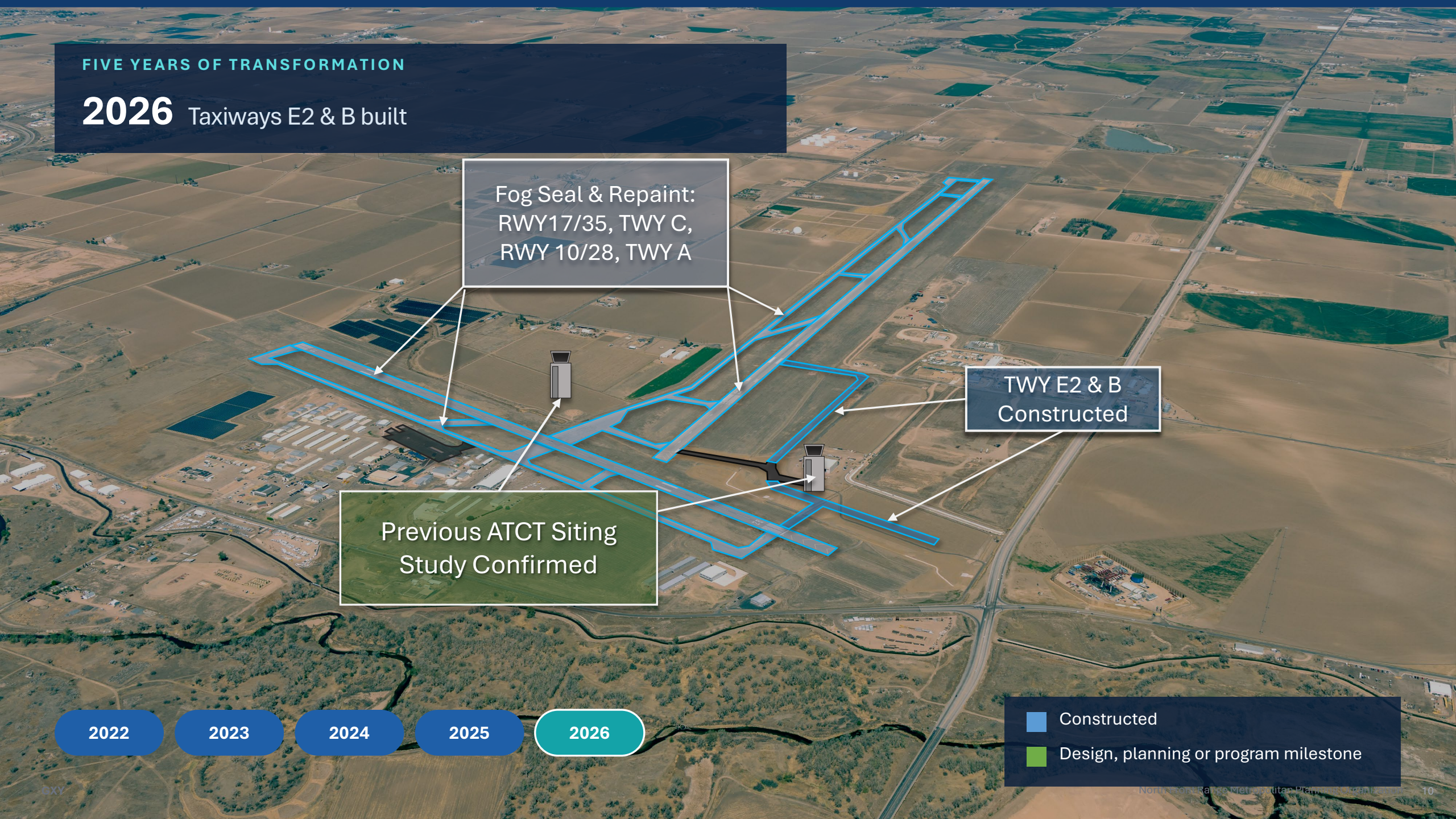



FIVE YEARS OF TRANSFORMATION
2022 Design work begins
TWY E & B Design
RWY 10/28 Rehab Design
2022
2023
2024
2025
2026
Constructed
Design, planning or program milestone


FIVE YEARS OF TRANSFORMATION
2023 Runway 10/28 reconstructed
RWY 10/28
Reconstructed
2022
2023
2024
2025
2026
Constructed
Design, planning or program milestone


FIVE YEARS OF TRANSFORMATION
2024 Main ramp reconstructed
Main Ramp Reconstructed
TWY E & B Design Complete
2022
2023
2024
2025
2026
Constructed
Design, planning or program milestone


FIVE YEARS OF TRANSFORMATION
2025 Taxiway E1 built · Tower program
TWY E1
Constructed
Accepted into Federal
Contract Tower Program
2022
2023
2024
2025
2026
Constructed
Design, planning or program milestone


FIVE YEARS OF TRANSFORMATION
2026 Taxiways E2 & B built
Fog Seal & Repaint: RWY17/35, TWY C, RWY 10/28, TWY A
TWY E2 & B Constructed
Previous ATCT Siting Study Confirmed
2022
2023
2024
2025
2026
Constructed
Design, planning or program milestone



ACCESS · OPERATIONS · CAPACITY

Investing Beyond the Runway

Ground access, development-ready land and a stronger airport organization.

Wing Way

Ground access and enabling infrastructure for airport users and future development.

Partnership with City of Greeley

Northeast Development Area

Private aviation investment and development-ready sites.

Phase I built (2025) · Airside complete (2026)

Airport-Operated FBO

Fueling and ground services under direct airport management; expanded staffing.

Improved and Expanded Services

Capital Partnerships

State and federal funding supporting major improvements.

Large Scale Capital Projects

Runway 17/35 & Taxiway

Engineering analysis refined the scope of the planned strengthening project.

Planning and engineering

Master Plan Update

Airport and stakeholder engagement for long term planning including future uses like Commercial and Spaceport activities.

Modeling and analysis

PREPARING FOR THE NEXT FIVE YEARS

Future development areas



FOCUS Safety · Capacity · Access · Development readiness

AIR TRAFFIC CONTROL TOWER

A Critical Next Step

Proposed infrastructure to support safer, more efficient operations in current conditions as well as future expansion.

Coordination and situational awareness

Active management of aircraft movements on and around the airport.

Safety in a more complex environment

An added layer of aviation safety as the traffic mix grows.

Operational efficiency

Better management of aircraft movements as activity increases.

Capacity for growth

Supports business aviation, training, public safety and other users.



Concept rendering of the proposed air traffic control tower

AIR TRAFFIC CONTROL TOWER

Potential tower locations

Proposed infrastructure — no site, funding or schedule has been selected.



2025

Accepted into the Federal Contract Tower Program

2026

Previous tower siting study confirmed

NEXT

Siting study being finalized; tower design project targeted for 2027 [verify]

Significant Growth Is Expected

Regional planning anticipates significant growth in the years ahead along 8th Street, CR 66 and East Greeley.

- **8th Street**
- **CR 66**
- **East Greeley Subarea**

Airport-led aviation investment

Planned by the Airport Authority:

- **Master Plan Update**
- **Northeast Development Area (Phase II planned)**
- **Southwest Development Area**
- **Runway 17/35 strengthening (planning)**
- **Air traffic control tower (proposed)**
- **Spaceport (Concept Study**

Greeley-Weld County Airport (GXY) → **8th Street · CR 66 · East Greeley** → **Regional road network: US 85 · US 34 · CR 49 · I-25**

PLANNING FOR REGIONAL GROWTH

Coordinating Long-Term Investments

Airport planning and regional transportation planning work best together. These are coordination opportunities, not approved or funded projects.

Airport Authority

Airfield, development and tower planning

City of Greeley

Land use, local roadways and growth

Weld County

Land-use compatibility and county roadway access

CDOT

State highways and aeronautics coordination

NFRMPO

Regional multimodal planning, including the 2050 RTP

SHARED PLANNING FOCUS

- Compatible land use
- Roadway access
- Economic development
- Future demand
- Resilient infrastructure



BUILDING NORTHERN COLORADO'S AVIATION FUTURE

Greeley-Weld County Airport is an evolving regional transportation asset.

Its infrastructure, safety improvements and development opportunities are increasingly important to Northern Colorado's future.

INVEST | MODERNIZE | PREPARE | GROW

Thank you · Questions

NORTHERN COLORADO REGIONAL AIRPORT
FNL

What's Ahead for FNL

John S. Kinney, CAE CM
Director of Aviation

NORTH FRONT RANGE METROPOLITAN PLANNING ORGANIZATION (NFRMPO)



1

1

FNL Today = Commercial Service Airport: 139 / 1542

- ✓ General Aviation
- ✓ Business / Corporate Aviation
- ✓ Charters: Allegiant, Sun Country, AS…
- ✓ Airline Diversions: UAL, AA, DL...
- ✓ US Customs Clearing for Bus Jets
- ✓ Fully Staffed Presence of the TSA
- ✓ Certificated for Airline flights today!

260
Based Aircraft

Approximately
26
Aviation Companies

Approximately
125,000
Annual takeoffs and landings

2

2

Legislative Leaders Have a Unique Opportunity

In Shaping an Airport's Character & Vision

Which Option Do You Favor ?

A) Limit an Airport's Potential ?

or

B) Remove Constraints?

How ? - - Is there a Right Answer? - - What did they Choose?

3

3



4



5



6



7

This Planning Body Host Several Airports within It's Jurisdiction……

The Opportunity and Commonailty is Where these Airports are in their Respective Maturity Curve… Unique Potential

Adolescence is Not a Negative Stage of an Airport – Opportunities are Abound

NORTHERN COLORADO REGIONAL AIRPORT
FNL

8

8

The How:

What Efforts Are Being Implemented to Protect the Airport

Encroachment of Incompatible Land Uses…..

Residential Developments ?

NORTHERN COLORADO REGIONAL AIRPORT FNL

9

9



10


Site 1

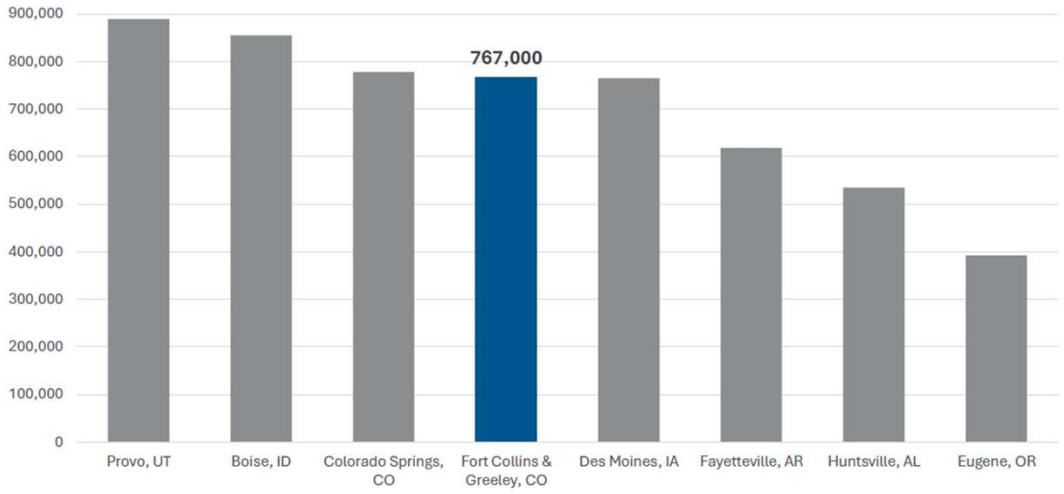
11


NORTHERN COLORADO
REGIONAL AIRPORT
FNL
Air Service Development
UNITED EXPRESS
925
12

12

Populations of Similar Market Areas

The combined MSAs are projected to overtake Colorado Springs' population by 2028



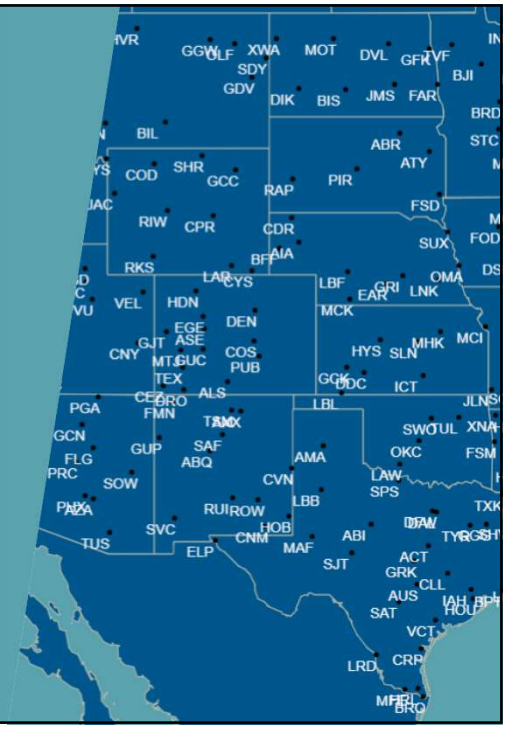
13

Source: Woods & Poole Economics, Inc., U.S. Census Bureau

13

A Global Battle for Limited Assets

- **FNL's competition is <u>NOT</u> just Denver or Cheyenne.**
- **Competition is *fierce*, nationwide between 400 airports. Airlines possess limited inventory of aircraft, pilots, and flight crews**
- **Airport must demonstrate routes can compete against airline's other aircraft deployment options…Expand at the expense of another airport.**



14



Airlines have Choices!
What's Required of a Community?

15

John S. Kinney CAE CM
Director of Aviation

John.Kinney@cityofloveland.org

Thank You!

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www.FlyFNL.com

16

16