



NORTH FRONT RANGE TRANSPORTATION & AIR QUALITY PLANNING COUNCIL
REVISED HYBRID MEETING AGENDA
June 1, 2023

<u>In-Person Attendance Option</u> Greeley City Council Chambers 1001 11th Avenue Greeley, CO 80631	<u>Virtual Attendance Option</u> Call-in Number: (408) 650-3123 Access Code: 814-514-261-857-813 Online Meeting: https://bit.ly/3VGQ52U
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For assistance during the meeting, please contact Alex Gordon – agordon@nfrmpo.org or 970.289.8279

Pledge of Allegiance

Public Comment- 2 Minutes Each (accepted on items not on the Agenda) Anyone in the audience will be given time to speak to items on the Consent Agenda. Please ask for that item to be removed from the Consent Agenda. Items pulled will be heard at the beginning of the regular agenda. Members of the public will be given an opportunity to speak to all other items prior to Council action being taken.

- 1) Acceptance of Meeting Agenda
- 2) Approval of Minutes - Lead Planning Agency for Air Quality/MPO – May 4, 2023 (Page 8)

Lead Planning Agency for Air Quality Agenda

REPORTS:

- | | | |
|--|----------------------|------|
| 3) Air Pollution Control Division (APCD) (Handout) | Jessica Ferko – APCD | 6:05 |
| 4) Regional Air Quality Council (RAQC) (Handout) | (Written) | |
| 5) NFRMPO Air Quality Program Updates (Handout) | (Written) | |

Metropolitan Planning Organization Agenda

REPORTS:

- | | | |
|---|---|------|
| 6) Report of the Chair | Scott James – Council Chair, Weld County Commissioner | 6:15 |
| 7) Executive Director Report <ul style="list-style-type: none">• SS4A• Shift Your Ride• RAQC Programs Request (Handout) | Suzette Mallette - Executive Director | 6:20 |
| 8) TAC (Page 13) | (Written) | |
| 9) Mobility (Handout) | (Written) | |
| 10) Community Advisory Committee (CAC) (Page 14) | (Written) | |

PRESENTATIONS:

- | | | |
|--|---|------|
| 11) State Demographer Presentation (Handout) | Elizabeth Garner - State Demographer | 6:30 |
| 12) NFRMPO Models Presentation (Handout) | Medora Bornhoft- Transportation & Air Quality Planner III
Sean McAtee – CS | 6:50 |

ACTION ITEMS:

- | | | |
|--|---|------|
| 13) 2023 Congestion Management Process (CMP)
Resolution 2023-10 (Page 15) | Alex Gordon - Transportation Planner III | 7:10 |
| 14) May 2023 TIP Amendment Resolution 2023-11 (Page 17) | AnnaRose Cunningham - Transportation Planner II | 7:15 |
| 15) 2050 RTP Goals, Objectives, Performance Measures,
and Targets (GOPMT) (Page 25) | Jerome Rouser - Transportation Planner I | 7:20 |

NEXT MPO COUNCIL MEETING: July 6, 2023- Hosted by Town of Severance



DISCUSSION ITEMS:

16) 2023 Call for Projects <i>(Page 27)</i>	AnnaRose Cunningham	7:25
17) NFRMPO Priorities List <i>(Page 36)</i>	Becky Karasko - Transportation Planning Director	7:40
18) 2050 RTP Fiscally Constrained Plan <i>(Handout)</i>	AnnaRose Cunningham	7:45
19) 2050 RTP Projects <i>(Handout)</i>	Medora Bornhoft	8:00
20) NFRMPO 2050 RTP Greenhouse Gas (GHG) Transportation Report <i>(Handout)</i>	Medora Bornhoft	8:10

COUNCIL REPORTS:

8:20

Transportation Commission	Kathleen Bracke - Transportation Commissioner	
CDOT R4 Update	Heather Paddock - CDOT R4 Transportation Director	
STAC Report <i>(Page 38)</i>	(Written)	
Colorado Transportation Investment Office (CTIO) <i>(Page 41)</i>	(Written)	
Nonattainment Area Air Pollution Mitigation Enterprise (NAAPME)	Kristin Stephens – Larimer County Commissioner	
Front Range Passenger Rail District	Will Karspeck – Past Chair, Mayor Town of Berthoud Johnny Olson – City of Greeley Councilmember	
TPR Boundary Study	CDOT	
Host Council Member Report	Johnny Olson	8:30

MEETING WRAP UP:

Next Month's Agenda Topic Suggestions	8:35
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MPO Planning Council

Weld County

Scott James, Commissioner – Chair

Alternate- Perry Buck, Commissioner

City of Loveland

Jon Mallo, Councilmember - Vice Chair

Alternate- Steve Olson, Councilmember

Town of Berthoud

William Karspeck, Mayor – Past Chair

Alternate- Mike Grace, Mayor Pro Tem

Town of Eaton

Liz Heid, Mayor Pro Tem

Alternate- Glenn Ledall, Trustee

City of Evans

Mark Clark, Mayor

City of Fort Collins

Tricia Canonico, Councilmember

Alternate- Jeni Arndt, Mayor

Town of Garden City

Fil Archuleta, Mayor

City of Greeley and Greeley Evans Transit (GET)

Johnny Olson, Councilmember

Alternate- Brett Payton, Mayor Pro Tem

Town of Johnstown

Troy Mellon, Mayor Pro Tem

Larimer County

Kristin Stephens, Commissioner

Alternate- Jody Shaddock-McNally, Commissioner

Town of LaSalle

Paula Cochran, Trustee

Town of Milliken

Dan Dean, Trustee

Alternate- Elizabeth Austin, Mayor

Town of Severance

Frank Baszler, Councilmember

Alternate- Matt Fries, Mayor

Town of Timnath

Lisa Laake, Mayor Pro Tem

Town of Windsor

Paul Rennemeyer, Mayor

Alternate- Barry Wilson, Mayor Pro Tem

CDPHE- Air Pollution Control Division

Jessica Ferko, Manager, Planning & Policy Program

Colorado Transportation Commission

Kathleen Bracke, Commissioner

Alternate- Heather Paddock, Region 4 Director

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

**May 2023 Report from the Air Pollution Control Division to the
North Front Range Transportation and Air Quality Planning Council
Thursday, June 1, 2023**

Air Pollution Control Division (Division) Updates:

- The Division has revamped its daily ozone pollution forecast emails. The division sends these daily emails so people have the necessary information to plan their day. The updates make it even easier for Coloradans to quickly get the information they want. If you haven't already, [subscribe for emails](#) in your area. We've also updated our [website on ozone pollution and health](#) to help answer frequently asked questions.
- The Division is working on ways to [reduce ozone pollution](#) in Colorado. We held a public meeting on May 31 and an additional remote public meeting is scheduled for August 19, 10 a.m. - 12 p.m. [Register to attend through Zoom](#).
- The Division is seeking comments on its [2023 Ambient Air Monitoring Network Plan](#). Comments will be accepted through June 26, 2023 and may be submitted to cdphe.commentsapcd@state.co.us.

Air Quality Control Commission (Commission) Updates:

- During its May meeting the Commission adopted enhanced protections for communities disproportionately impacted by air pollution. The new rule includes enhanced modeling and monitoring requirements for new or modified air pollution sources, as required by the Environmental Justice Act. The rule includes additional protections beyond legislative requirements, including environmental justice report summaries, Reasonably Available Control Technology, community air monitoring programs, monitoring at existing major air pollution sources, and air pollution education in impacted communities.

The Division and permit applicants will use the [Colorado EnviroScreen tool](#) to determine if a facility is in a disproportionately impacted community. The department is committed to continuously updating and improving the tool to reflect communities' lived experience. Members of the public can [share their feedback on Colorado EnviroScreen](#) or [join a June 15 public meeting](#) on updates to the tool.

Upcoming Commission Activities

June 19-21, 2023 Commission Meeting

- The Division will request that the Commission set a hearing to consider revisions to the Common Provisions regulation to address HB20-1143 with respect to inflation adjustments for maximum fines and penalties for air quality control violations.

- The Division will request that the Commission set a hearing to consider revisions to Regulation Number 20 to establish new requirements applicable to light and medium duty vehicles. The proposed revisions will include new zero emission light-duty vehicle sales requirements for model years 2027-2032, and new criteria pollutant emission standards for new light and medium-duty vehicles for model years 2027-2030.
- The Commission will consider revisions to Regulation Number 7 to address greenhouse gas intensity verification in the oil and gas sector. The proposal also includes changes to requirements for monitoring of enclosed combustion devices at oil and gas operations.

June 21-23, 2023 Annual Commission Planning Retreat - Durango

- Programmatic Issues
 - The Division will provide an overview of the Division's structure and program-by-program activities.
 - The Commission will discuss the progress made in achieving goals, milestones, and other relevant air quality policy matters.
 - The Division and Commission will identify and discuss items for inclusion on the Long Term Calendar including regulatory/policy issues and potential facility tours.
 - The Division and the RAQC will provide an overview of where things are related to Ozone.
- Commission staff will provide an overview of the 2023 legislative session and implications for the Commission.
- The Commission will elect Officers (Chair, Vice-Chair, and Secretary) to the Executive Committee of the Commission for the upcoming year. The Commission Administrator will facilitate the nomination and election process.





Date: May 31, 2023

From: Mike Silverstein
Executive Director

To: North Front Range Metropolitan Planning Organization

Subject: Monthly Meeting Briefing Memo

Simple Steps. Better Air. Stepping Into Ozone Season!

The 2023 *Simple Steps. Better Air.* campaign is in full swing. This year's media buy includes more than 20 media partners spanning nearly 50 publications – over double last year's reach. We are again working with traditional partners including all major TV stations, but have also added several ethnic media outlets, regional print publications in communities across the front range, the CityCast podcast, Westword, and others. RAQC staff is also at time-honored events such as Bike to Work Day and new opportunities like ¡Viva! Streets.

Go to <https://raqc.org/program/simple-steps-better-air/> to take your simple steps for better air!

Emission Control Strategy Recommendations

RAQC has been working these past months to evaluate emission control measures designed to improve summertime ozone conditions. We have developed approaches to achieve substantial emission reductions from gasoline-powered lawn and garden equipment and specific activities from the oil and gas industry.

Achieving emission reductions as rapidly as possible, but no later than the 2026 summer ozone season, is necessary for the region to attain the ozone standards by 2027. RAQC staff are advancing these specific measures for Board consideration.

Lawn & Garden Emission Control Proposals

Lawn and garden equipment emit more than 10% of the region's volatile organic compounds (VOCs), which in the presence of sunlight, react with nitrogen oxides (NOx) to form ozone. In

fact, L&G VOC emissions are greater than all VOC emissions from the numerous cars and trucks on the region's roadways. Due to this high level of emissions and because there are clean alternatives readily available, especially for the smaller gas-powered push and hand-held equipment, restricting future sales and the use of certain L&G equipment is a reasonable approach.

Staff recommends that the Board begin to consider:

- **Prohibitions on the sale of gas-powered push and hand-held equipment in the nonattainment area, beginning in 2025; and**
- **Limitations on governments' and commercial operators' use of gas-powered push and hand-held equipment in the nonattainment area, during June-August, beginning in 2025 for governments and 2026 for commercial operators.**

RAQC estimates that 10 to 20 tons of VOCs per day can be reduced by these measures. The region's total VOC emissions are approximately 300 tons/day.

Oil & Gas Emission Control Proposals

Emissions from the oil and gas industry constitute the largest emissions category for both VOCs and NOx in the nonattainment area. While many of the emissions points within O&G are regulated and achieving substantial emissions reductions, the sheer quantity of remaining emissions from lesser or uncontrolled activities have drawn RAQC's and the State's attention for further consideration.

RAQC recommends that a control program for "**equipment blowdowns**" be advanced for Board consideration.

"Blowdown" means the depressurization of equipment or piping to reduce system pressure. These emissions occur most often by opening a valve during equipment maintenance to ensure it is no longer pressurized with natural gas. A control strategy to limit well production facility equipment blowdowns would reduce VOCs and methane (a powerful greenhouse gas). Though there are currently control requirements for certain blowdown activities in State regulation, there are additional opportunities to achieve 2 to 3 tons of VOC emissions reductions per day during the summertime ozone season and throughout the year. Again, the region's total VOC emissions are approximately 300 tons/day.

Staff recommends that the Board begin to consider:

- **Operators within the nonattainment area must defer maintenance or other activities that necessitate equipment blowdowns to months outside of the summertime ozone season.**
- **If equipment blowdowns are necessary, sources are required to control emissions by 95%.**

- **Typical emissions control options include capturing and recovering the emissions using closed vent systems, vapor recovery unit, or routing to air pollution control equipment such as flares/enclosed combustion devices.**

In addition to the measures evaluated through RAQC's work group process, RAQC has provided recommendations to the State related to "pre-production" emissions control. RAQC has developed a draft control strategy paper for **drill rig and fracturing pump engines** NOx emissions reductions, projecting NOx reduction benefits of 11 to 25 tons NOx per day, depending on the selected strategy. The region's total NOx emissions are approximately 160 tons/day.

Several control strategy options offered by staff for summertime, or year-round, applicability include:

- **Do not allow diesel/natural combustion equipment for drilling and fracturing pump operations from June through August in ozone nonattainment area.**
- **Allow diesel/natural gas fueled engines for drilling and fracturing pump operations in the ozone nonattainment area but require Tier IV diesel engines and Tier II natural gas engines (highest performance Tiers from EPA nonroad engine standards).**
- **Establish a NOx emissions budget allowance per well drilled and fractured while providing flexibility on the equipment used to meet the emissions limit.**

RAQC Staff will further develop these L&G and O&G regulatory emission control approaches for the Board's consideration and formal action over the next few months.

RAQC/NFRMPO

Roles in State Implementation Plan (SIP) development



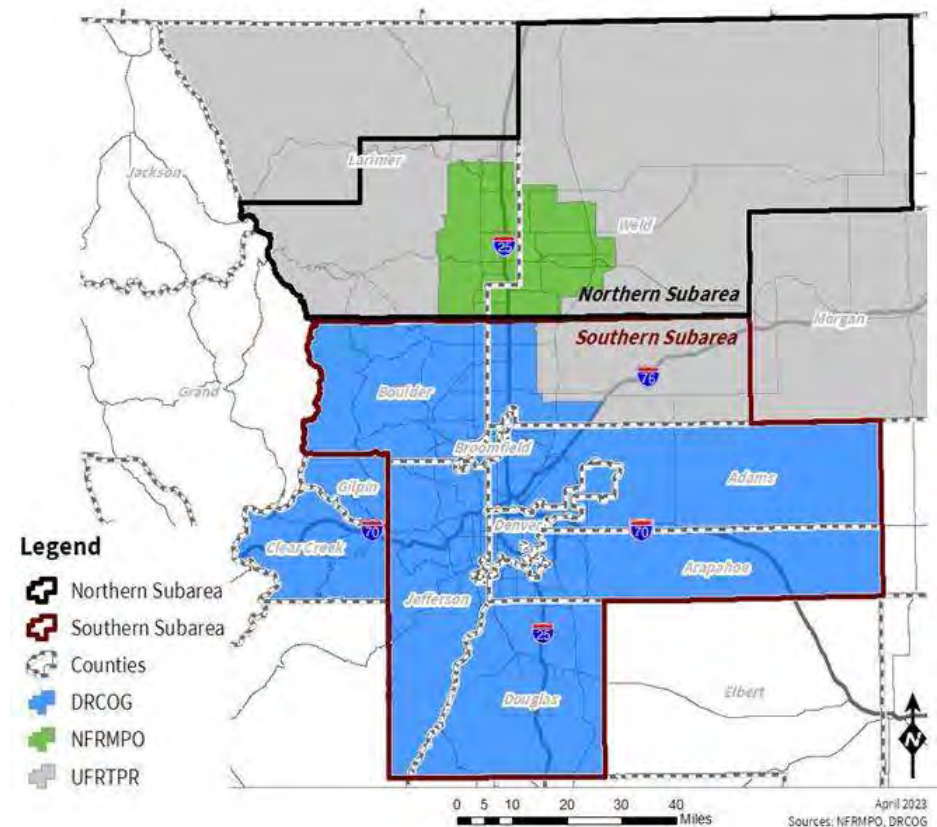
North Front Range
Metropolitan
Planning
Organization

June 1, 2023

NFRMPO responsibility



- NFRMPO is in the 8-hour ozone nonattainment area designated by EPA
- We need to have a State Implementation Plan (SIP) to perform Conformity testing on our Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP)
- RAQC has been designated by the Governor(s) to create SIPs for the nonattainment area.
- If not RAQC, then who?



- **Denver/Northern Colorado region became a nonattainment area for 8-hour ozone in 2008**
- 1. RAQC was Recreated and Reauthorized in **March 2009** by Governor's executive order as the Lead Planning Agency for the Denver Metropolitan Area. Two-year expiration date.
 - Included 'local government representative from the North Front Range Metropolitan Area'
 - Tasked with reducing transportation related ozone emissions
- 2. Executive Order **2011-002** – Extended and amended 2009 Executive Order. Expired in two years.
 - "Prepare air quality plans for the region to demonstrate and ensure long-term compliance with federal air quality standards." – SIP development on behalf of the nonattainment area.
- 3. Executive Order **2012 001** – expired in April 2015
- 4. Executive Order **2013 007** – in full force until amended
 - Added expanded participation on RAQC Board by NFR
 - One representative from NFRMPO
 - One representative from Larimer County
 - One representative from Weld County

([https://raqc.org/postfiles/who we are/Executive%20Order.pdf](https://raqc.org/postfiles/who_we_are/Executive%20Order.pdf))



Mike Foote
Environmental/Energy Attorney, rep Broad Public Interest
Chair

Steve Arnold
University of Denver, rep Broad Public Interest

Frank Bruno
Via Mobility Services, Individual with Transit
Experience

Jeffrey Collett
Colorado State University, Individual with
Environmental Science Experience

Rick Garcia
Colorado Department of Local Affairs
Alternate: Anne Miller

Lynn Guissinger
Catalyst Communications, rep. Transit Management
Agencies

Eva Henry
Adams County

Bill Holen
Arapahoe County

Curt Huber
Citizen, rep. Conservation Community

Jill Hunsaker Ryan
Colorado Department of Public Health & Environment
Alternate: Shaun McGrath, Trisha Oeth

Ryan Hurst
Hurst LLC, rep. Automotive-Related Business

Enessa James
City of Arvada

Alicia Johnson
City of Evans, rep. Weld County

Wendy Koenig
Town of Estes Park, rep. Larimer County

Michael Leccese
Urban Land Use Institute Colorado, rep. Land Use
Planning Experience

Shoshana Lew
Colorado Department of Transportation
Alternate: Rebecca White

Oscar Madera
City of Commerce City

Vanessa Mazal
Department of Natural Resources, rep. Broad Public
Interest

Ning Mosberger-Tang
Innovo Foundation, rep. Broad Public Interest

Steve Naples
Naples Franchising, rep. Business Community

Michael Ogletree
Air Pollution Control Division
Alternate:

Brian Payer
Sphera Solutions, rep General Business Community

Margo Ramsden
Town of Bow Mar

Doug Rex
Denver Regional Council of Governments

Grace Rink
City and County of Denver

Kristen Stephens
Larimer County, rep. North Front Range Metropolitan
Planning Organization

Will Toor
Colorado Energy Office
Alternate: Christine Berg

Jeff West
Xcel Energy, rep. Stationary Sources

Susan Wood
Regional Transportation District

Definitions



- State Implementation Plan (SIP) – Plan sent to EPA that gets us back into Attainment
- Clean Air Act (CAA) – Defines requirements for air quality areas
- CDPHE – Colorado Department of Health and Environment
- RAQC – Regional Air Quality Council
 - Non-profit Colorado corporation
 - Shall perform only those duties and functions specifically designated in an Executive Order
- Lead Planning Agency – Responsible for developing SIPs.

What goes into a SIP?



1. Background and Overview
2. Ozone Monitoring Data
3. Updated milestones for year emissions inventory
4. Attainment demonstration – oil & gas, point sources, area sources, non-road sources, on-road sources, biogenic sources
 - Models used to develop a SIP
 - Meteorological model – covers all of Colorado
 - Emissions model – Source categories
 - Emissions and gas aerosol model – Biogenic emissions
 - Comprehensive Air Quality Model – windblown dust, lightening, sea salt, Dimethyl Sulfide emissions
 - Motor Vehicle Emissions Simulator (MOVES) – on road mobile source emissions
 - Community Multiscale air quality – support weight of evidence
5. Reasonably Available Control Technology (RACT)
6. Reasonably Available Control Measures (RACM)
7. Motor Vehicle Inspection & Maintenance Program (I&M)
8. Contingency Measures
9. Motor Vehicle Emission Budgets (MVEB)
10. Clean Fuel Fleet Requirement

RAQC Budget Expenses



- Salaries & Benefits
- Administrative Expenses – Rent, phones, insurance etc.
- Ozone Modeling – modeling and technical analysis
- Programs
 - Ozone Education and Outreach Programs – Simple Steps Better Air, Mow Down Pollution, Municipal Lawn & garden
 - Vehicle Emission Reduction Programs – Alt fuels Colorado
- Miscellaneous – Legislative liaison, public outreach

Questions?

Suzette Mallette
smallette@nfrmpo.org

Northern Colorado Regional Mobility Meeting —MINUTES

May 23, 2023

1:00 p.m. – 3:30 p.m.

1. Call Meeting to Order, Welcome and Introductions

In Person:

- Cory Schmitt, NFRMPO
- Hanna Johnson, City of Greeley
- Leiton Powell, City of Greeley
- Celeste Ewert, Envision
- Nichole Seward, Weld County AAA
- Steve Teets, WAND
- Shana Cundall, Weld RE-4 School District
- Jim Pinkerton, CO Division of Vocational Rehab
- Garrett Mumma, CO Division of Vocational Rehab
- Katlyn Kelly, Transfort
- Annabelle Phillips, Transfort
- Desiree Sandoval, Weld RE-4 School District
- Steve Conaway, RAFT
- Olga Gonzalez, Weld County Department of Public Health & Environment
- Ari Edgley, Foothills Gateway
- Megan Kaliczak, zTrip

Virtual:

- Amy Threewitt, 60+ Ride
- Gretchen Vidergar, RTD
- Kimberly Baker, Larimer County Department of Health & Environment
- Kyle Holman, Weld Trust
- Melanie Royalty, Transfort
- Darlene Kilpatrick, N40MA
- Candice Folkers, COLT
- Brian Dubois, Town of Berthoud
- Nicole Limoges, Larimer County Office on Aging

2. Group Introductions, Review of Agenda, Minutes Approval and 2023 Mobility Action Plan

Approval

Both virtual and in person attendees introduced themselves and their organizations. The in-person group did a speed networking exercise to get to know one another and learn more about each other's respective organizations and services.

Mobility Committee bylaws were briefly reviewed with clarifying questions asked regarding agencies with multiple representatives only getting one vote per agency. Conaway motioned to approve February 2023 meeting minutes; Teets seconded.



Mumma motioned to approve 2023 Mobility Action Plan, Kaliczak seconded.

Presentations & Activity

1) Transit Mobility and Orientation for Visually Impaired Training – Mumma

Mumma gave a presentation and training on working with individuals with visual impairments in a transportation context. Slides can be found [here](#) and members finished the activity with a human guide demonstration.

Questions were asked regarding safely crossing roundabouts, dangers posed by the quieter engines of electric vehicles, and etiquette with guide dogs vs service animals.

2) RTD Access-on-Demand Program – Vidergar

Vidergar shared details about RTD's Access-on-Demand pilot and newly launched expanded program that allows Access-a-Ride paratransit members to register with rideshare and taxi companies to increase flexibility with scheduling trips beyond what the Access-a-Ride program can provide. Slides will be shared at a later date.

3) RideNoCo Update + Roundtable – Schmitt

Schmitt shared a brief update on RideNoCo (slides [here](#)) that included progress on the Phase 3: TDS Project, the availability of the Rider's Guide in audio format, and Call Center hours over the Memorial Day holiday.


Members discussed emerging needs in urbanizing communities that are located in both Larimer and Weld counties such as Johnstown. Johnson suggested sharing Call Center data and gaps with elected officials and town planners through avenues such as the Technical Advisory Committee and Planning Council. Members agreed that this was a great idea. Members also expressed hope that more communities can become active participants in the Mobility Committees to have a seat at the table to discuss these needs as they arise.

Wrap Up + Next Steps

No organization updates were given due to time.


Upcoming Meetings:

- a. Weld County Mobility Committee (WCMC) Meeting: June 27th
- b. Larimer County Mobility Committee (LCMC) Meeting: July 25th
- c. Northern Colorado Mobility Committee: August 22nd



Population Matters
Trends, Transitions, and What it Means

NFRMPO
 June 2023
 State Demography Office, Department of Local Affairs
Demography.dola.colorado.gov




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1

Colorado Trends

- Population growing at a slowing rate - births down, deaths up
- Migration and mobility slowing
 - Harder to attract and retaining the best and brightest.
- Concentrated growth in Front Range - both jobs and people
- Aging - impacts everything
 - Largest share of future growth is the 65+
 - Prime working age 25-54 becoming smaller share of total pop
 - Youth becoming a smaller share of total pop
- Growing racial and ethnic diversity.



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2

Big Picture

Growth is Slowing

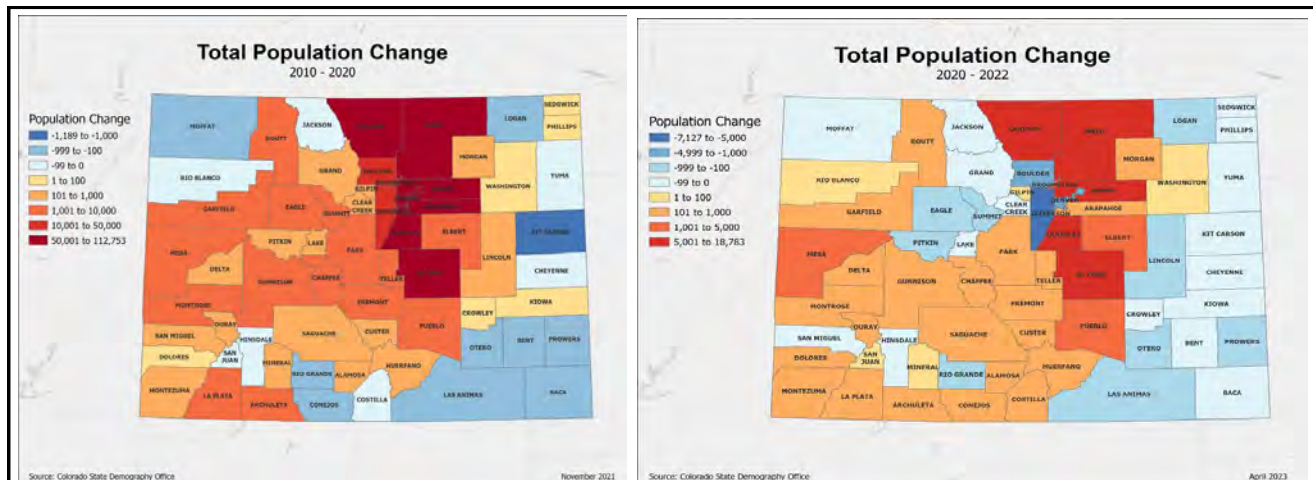
	2010-2020		2020-2021		2021-2022	
United States	22.3MM	7.4%	520k	0.1%	1.256MM	0.4%
Colorado	744.5k	14.8%	26.5k	0.5%	27.7k	0.5%
Colorado Rank	9th	6th	11th	20th	12th	19th

- 2010 - 2020
 - Second slowest decade for US in terms of growth
- 2020 - 2021
 - Slowest year for US growth rate;
 - 17 states lost population
- 2021 - 2022
 - 19 states lost population



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3



2010 to 2020 - 95% of population and job growth along Front Range

2020 to 2022 - Decreased to 75%, with a number of Denver Metro Counties losing population

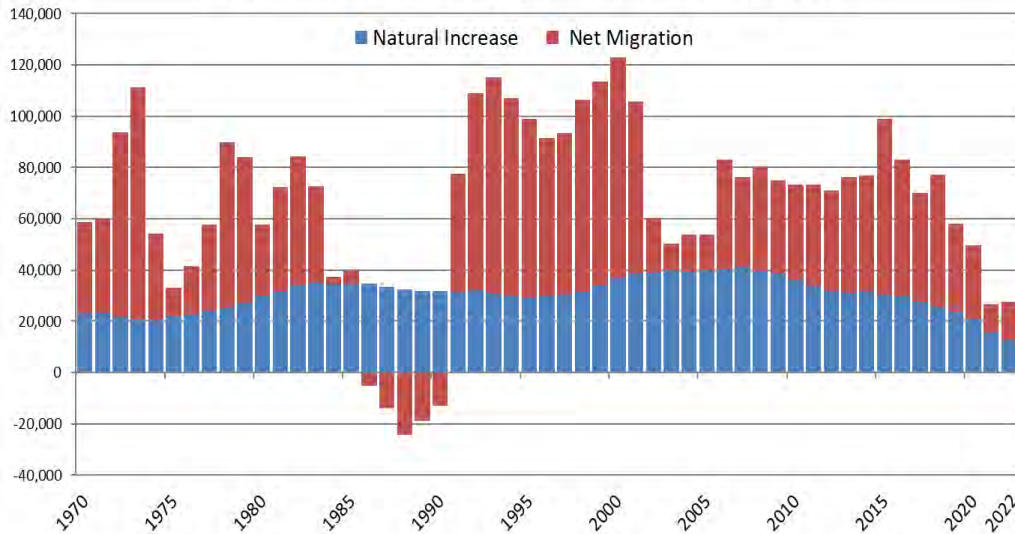


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Source: 2010 and 2020 Colorado State Demography Office
Population Estimates, Accessed March, 2023

4

Components of Colorado Population Change 1970-2022



Colorado growth slows from an annual average of 74K last decade to 26,000

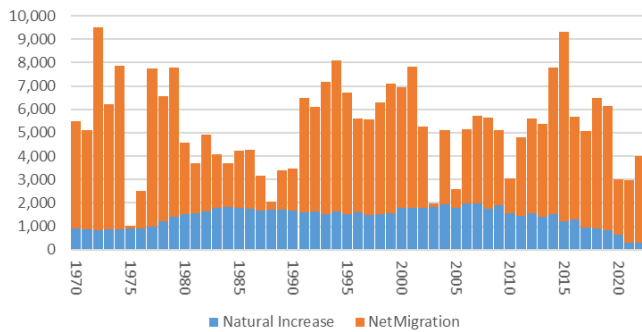


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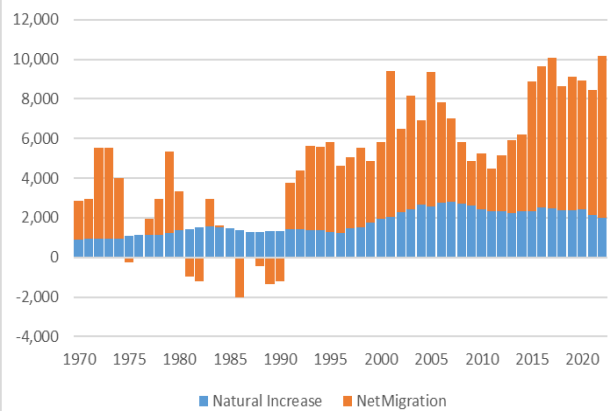
Source: State Demography Office

5

Larimer, Components of Change



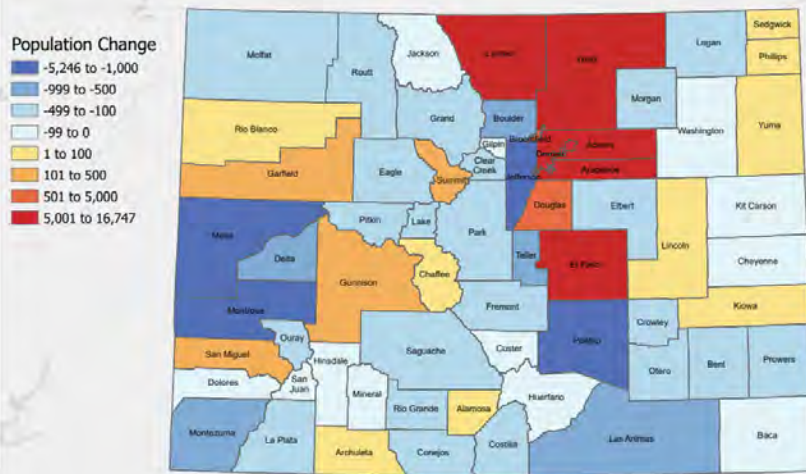
Weld Components of Change



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6

Under 18 Population Change by County 2010 to 2020



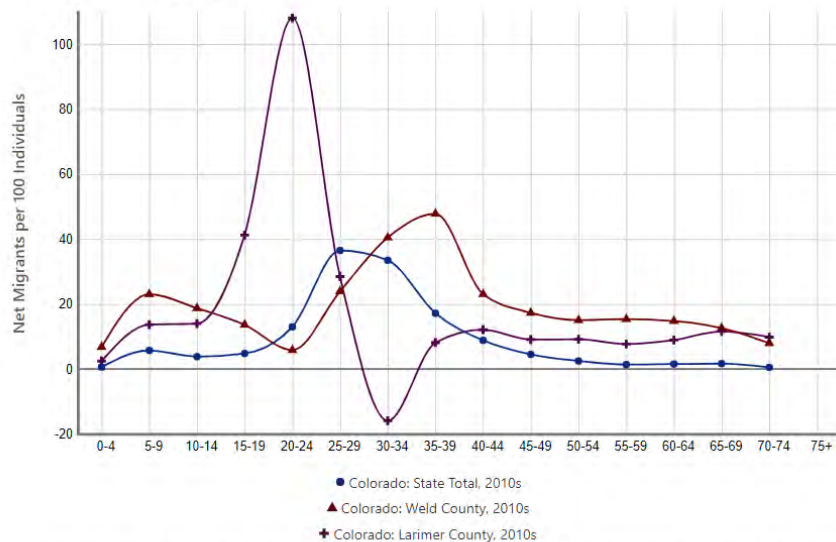
- US decline in under 18
- 27 States decline under 18
- Population Under 18 increased by 38K over the decade.
- Only 5% of the total 744,518 growth was from the under 18
- Weld was 43% of the total growth in the under 18



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7

Net Migration by Age

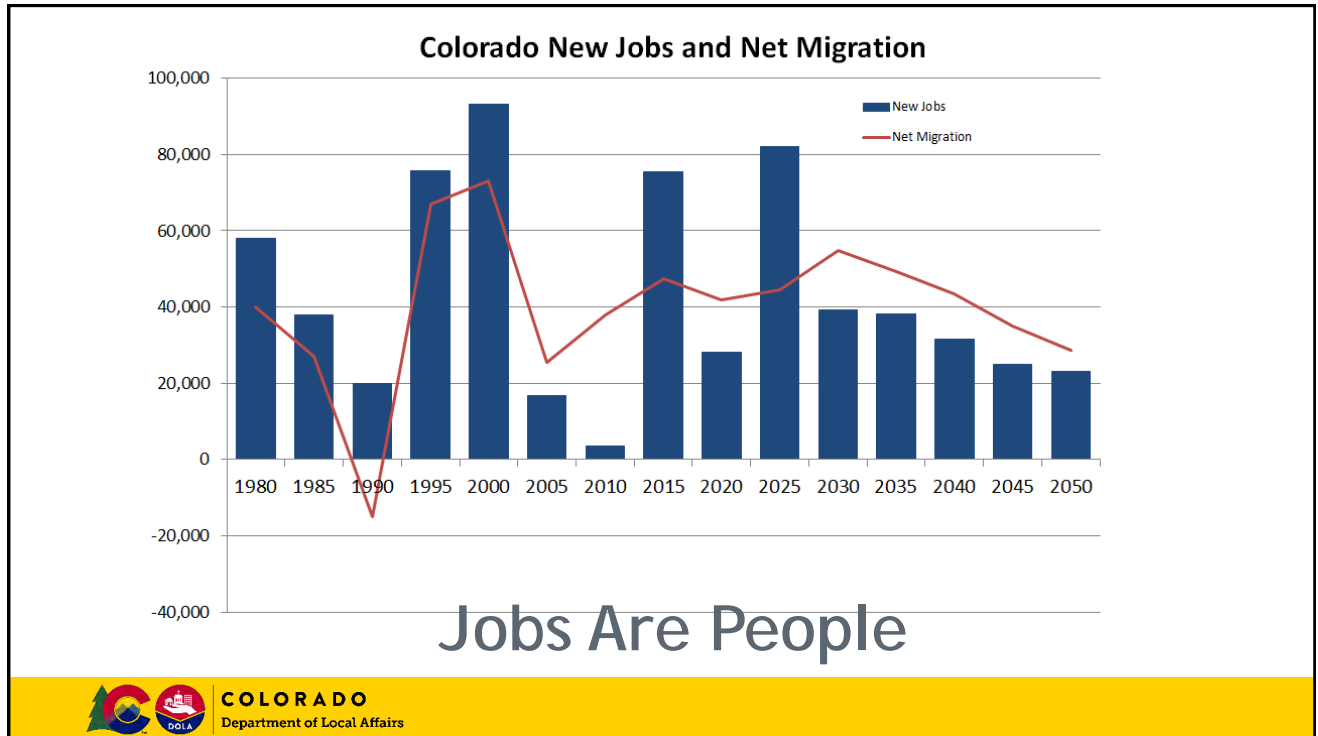


Egan-Robertson, David, Katherine J. Curtis, Richelle L. Winkler, Kenneth M. Johnson, and Caitlin Bourbeau. Age-Specific Net Migration Estimates for US Counties, 1950-2020. Applied Population Laboratory, University of Wisconsin - Madison, 2023 (Beta Release). Web.



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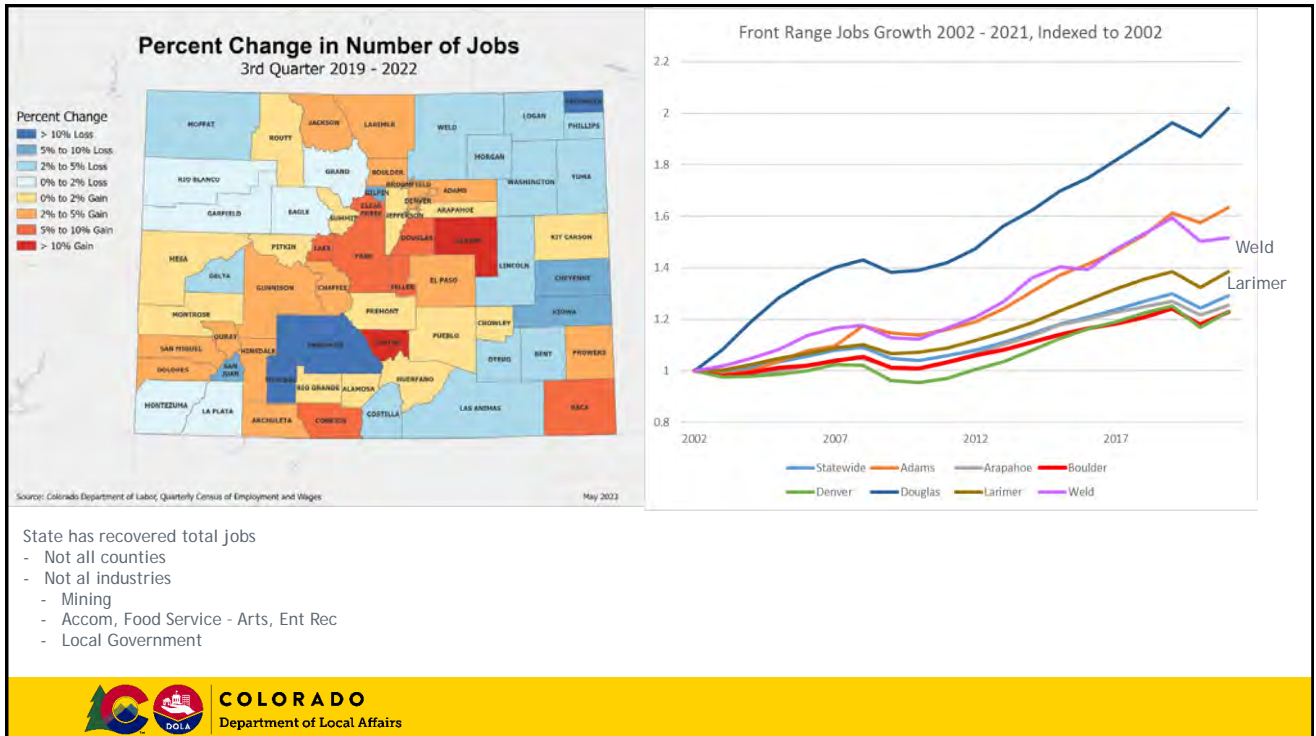
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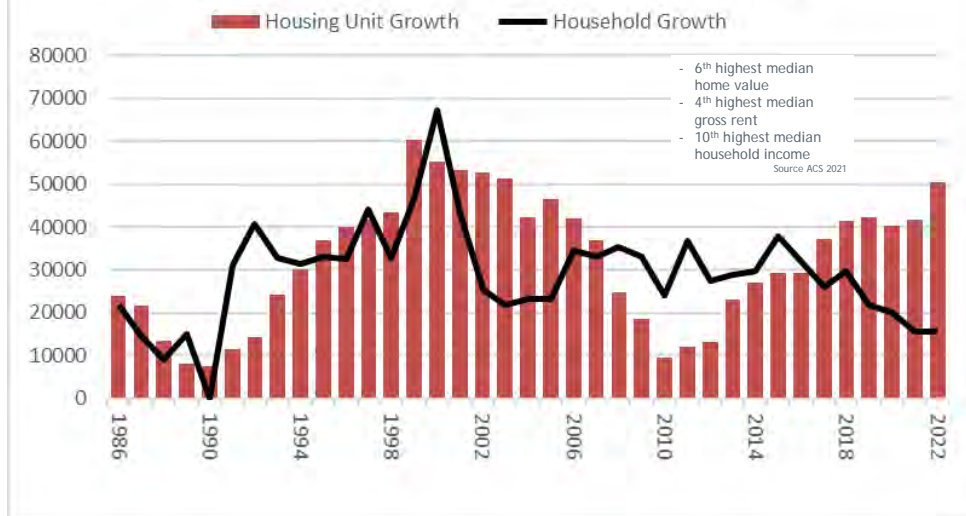
11

Housing and Households

Job Growth Drives Demand For Housing (as do retirements)

12

Households and Housing Unit Annual Growth



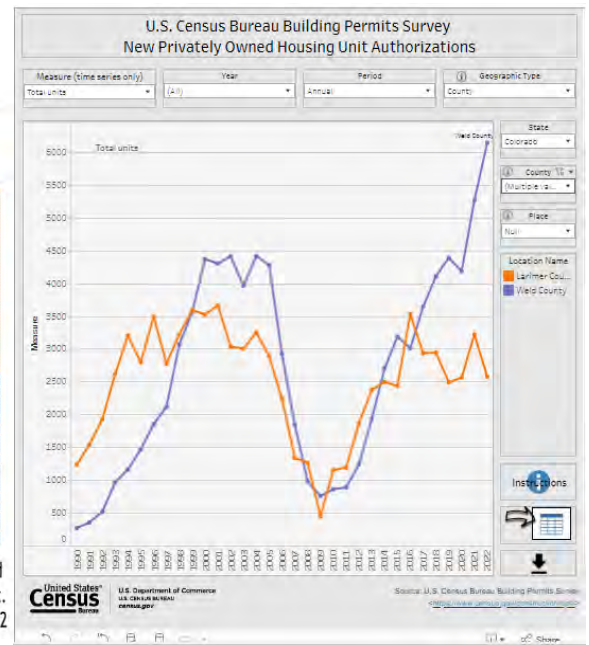
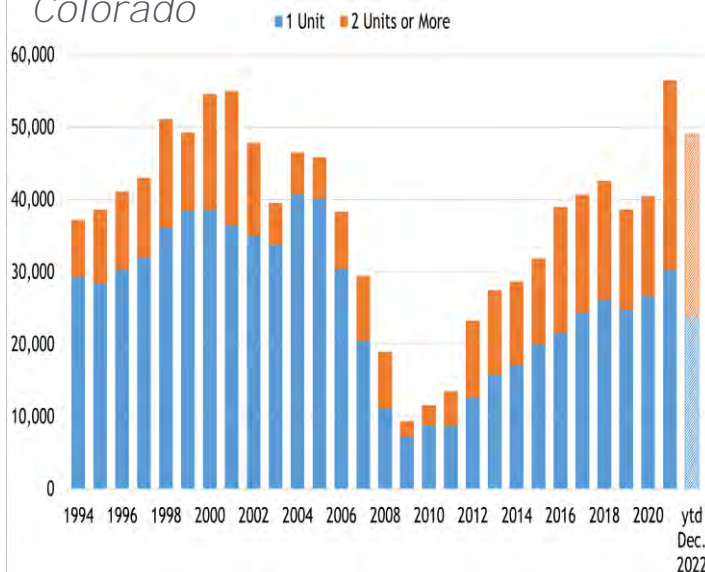
- Housing Boom and Bust Cycle
- Job Growth and Retirements = Demand for Housing
- Interest Rates impact demand



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13

New Residential Building Permits Colorado



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14

Age Matters

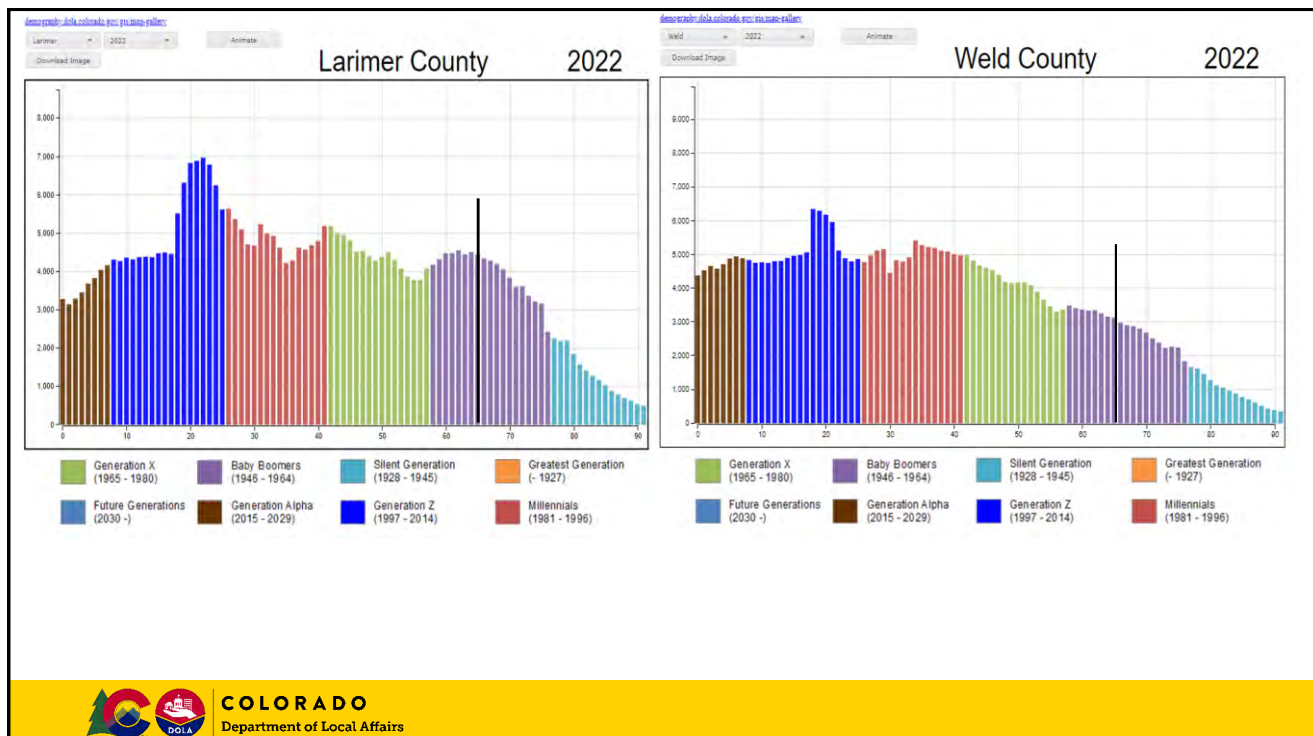
Colorado is young but aging

- Preferences - where people shop and what they buy.
- Housing - type, size, mobility
- Labor Force
- Income
- Service Demands



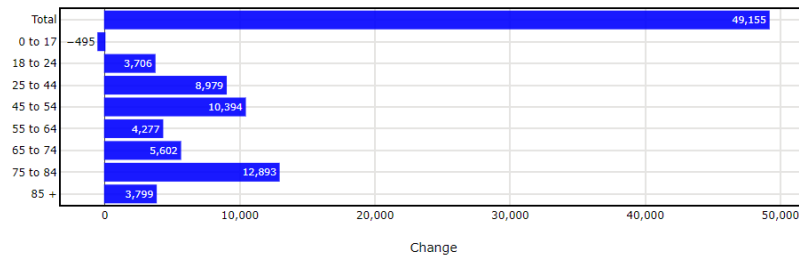
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16

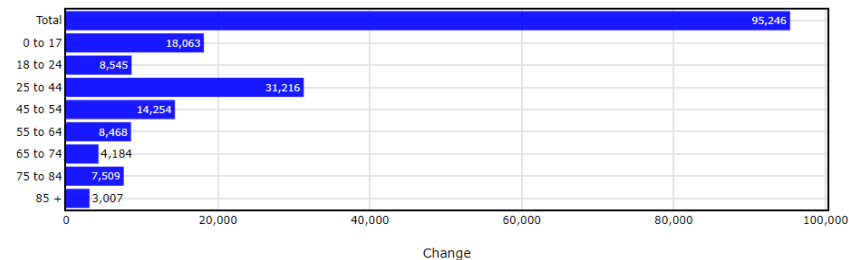
Projected Population Change by Age Group, 2021 to 2031, Larimer County



Growth Forecast Based On:

- Current age
- Job forecasts
- Retirements
- Migration by age

Projected Population Change by Age Group, 2021 to 2031, Weld County



Data and Visualization by the Colorado State Demography Office. Print Date: May 24, 2023



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17

Implications From Age and Aging

- Fastest Growth 65+, slower growth in younger ages
- Labor force - commuting
- Housing - household size, mobility, owners, remodeling - accessibility
 - Retires aging in place and demand from new workers.
 - Millennials aging into prime and second home ownership
 - Gen Z - aging into housing and first time home buying
- Commuting - remember Weld especially houses many workers from other counties
- Services for Older Adults - Health, transportation, etc



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18

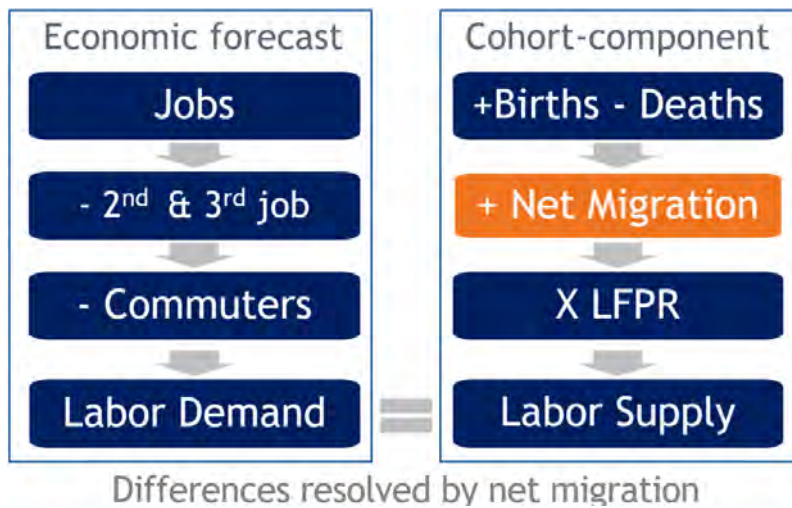
Forecast



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19

Colorado population forecast methodology



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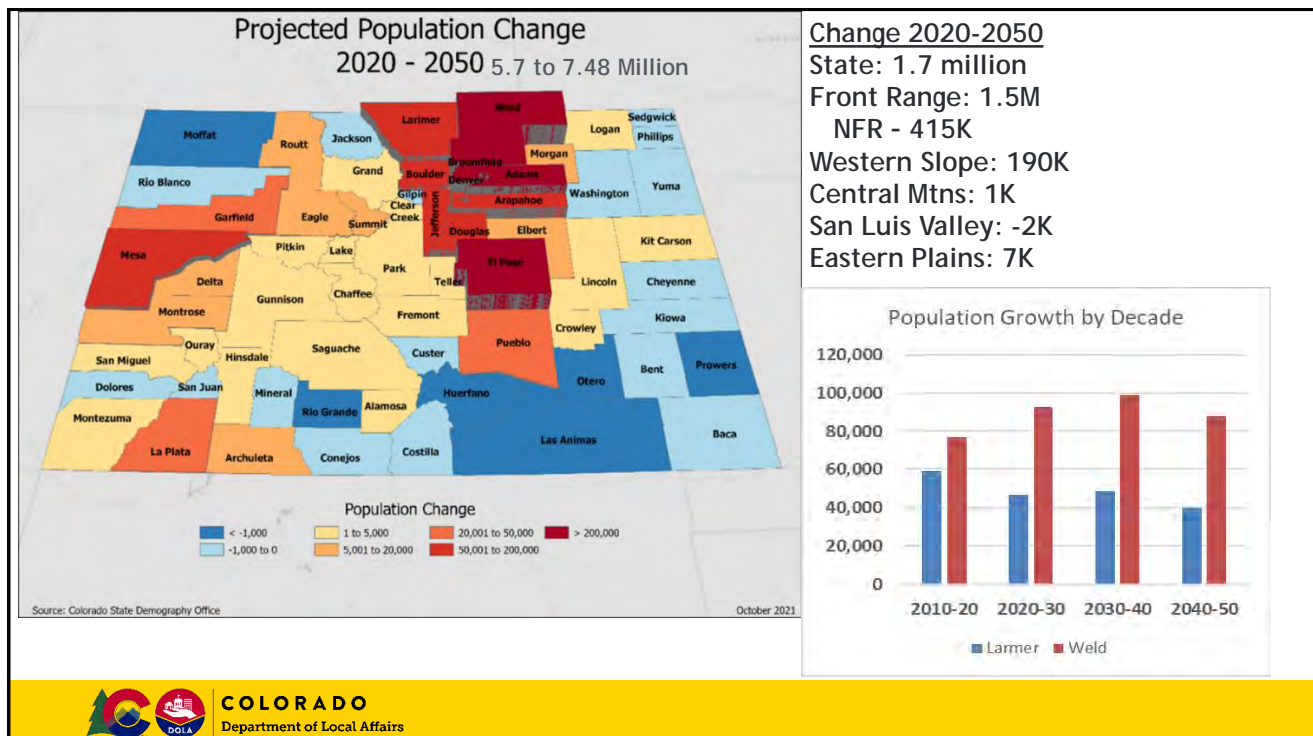
Forecast Factors

- Job growth = Population growth
- Population growth is slowing - but still growing
 - Births slowed, deaths up, migration slowing
 - NFR - Forecast fastest growth rate in state
- Fastest growth in the 65+ for state but varies by county
 - Move less, smaller household size, age in place
 - Retirements driving migration
 - Tight labor force - can Colorado attract/retain workers?
- Housing and other community services key for attracting and retaining population



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21



22



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Uncertainties to the Forecast +/-

- Intl' immigration
- Water
- Housing - supply, price, type, location
- Economy - Industries, boom/bust, competitiveness
- Aging - labor force, prepared labor force
- Pandemic uncertainty
- Infrastructure/Transportation
- Natural disasters - nationally
- State Budget



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23



Thank you

State Demography Office
Department of Local Affairs
Elizabeth Garner

Elizabeth.garner@state.co.us

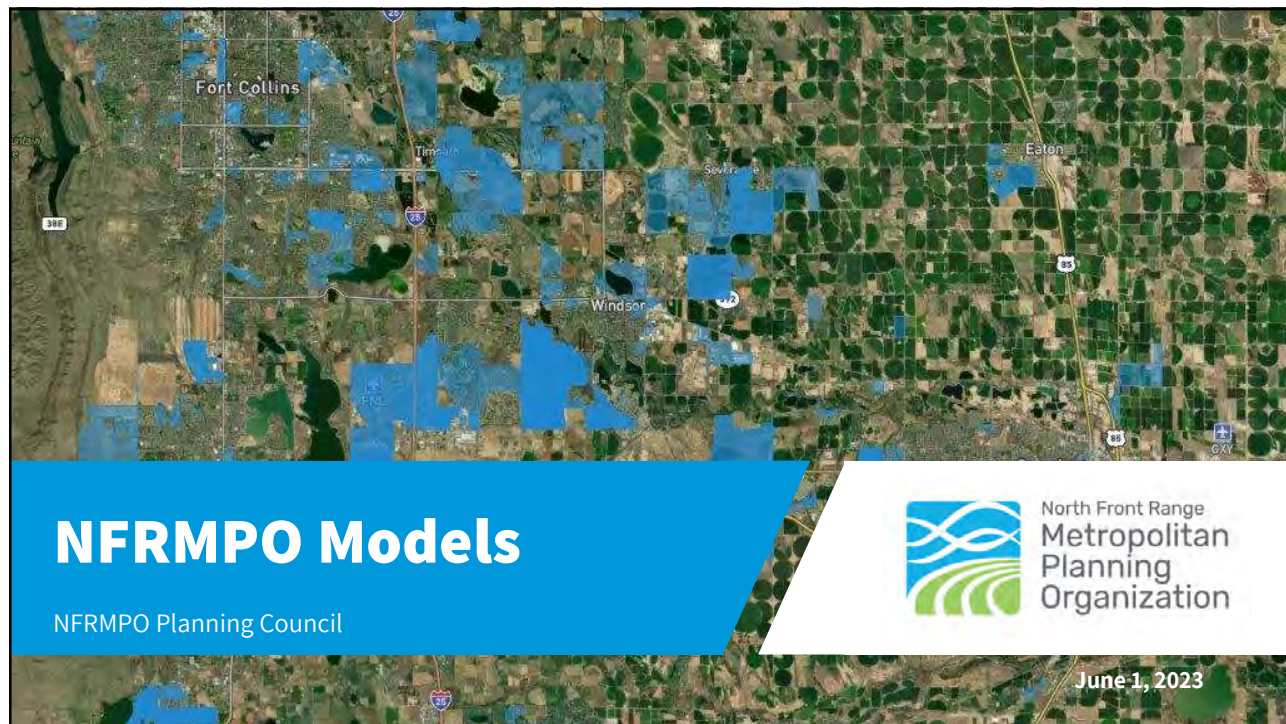
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Demography.dola.colorado.gov



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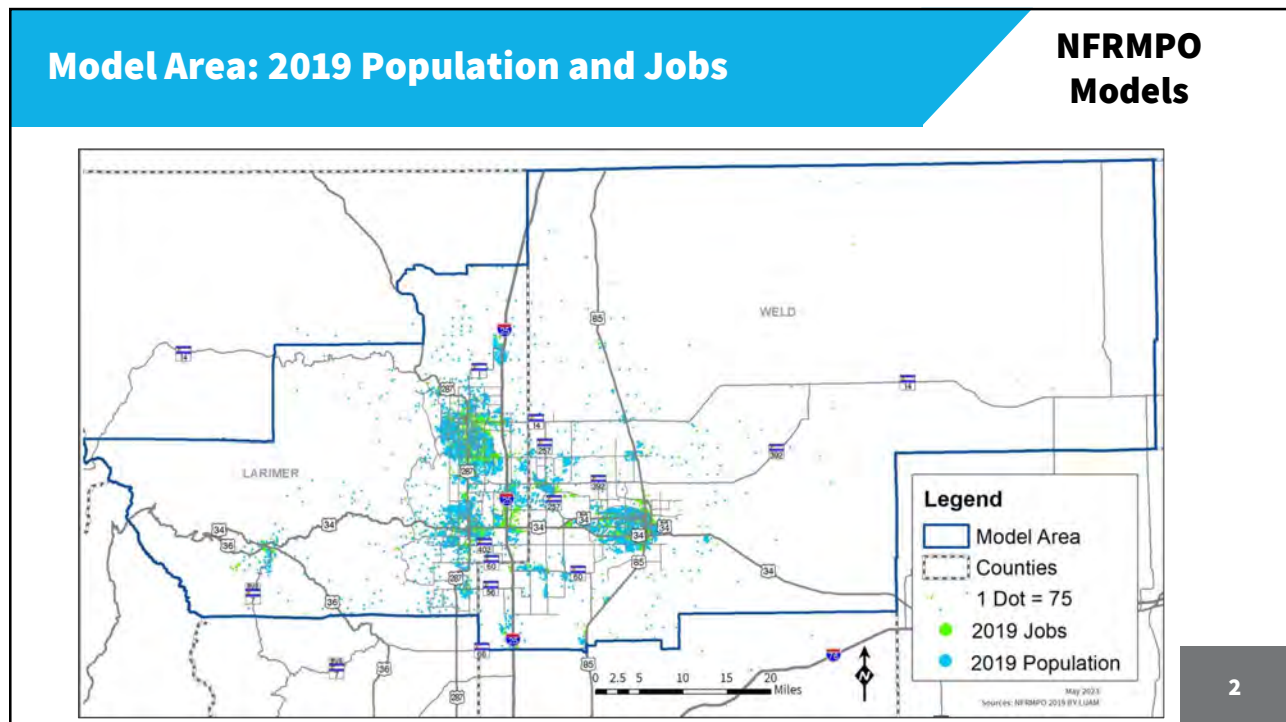


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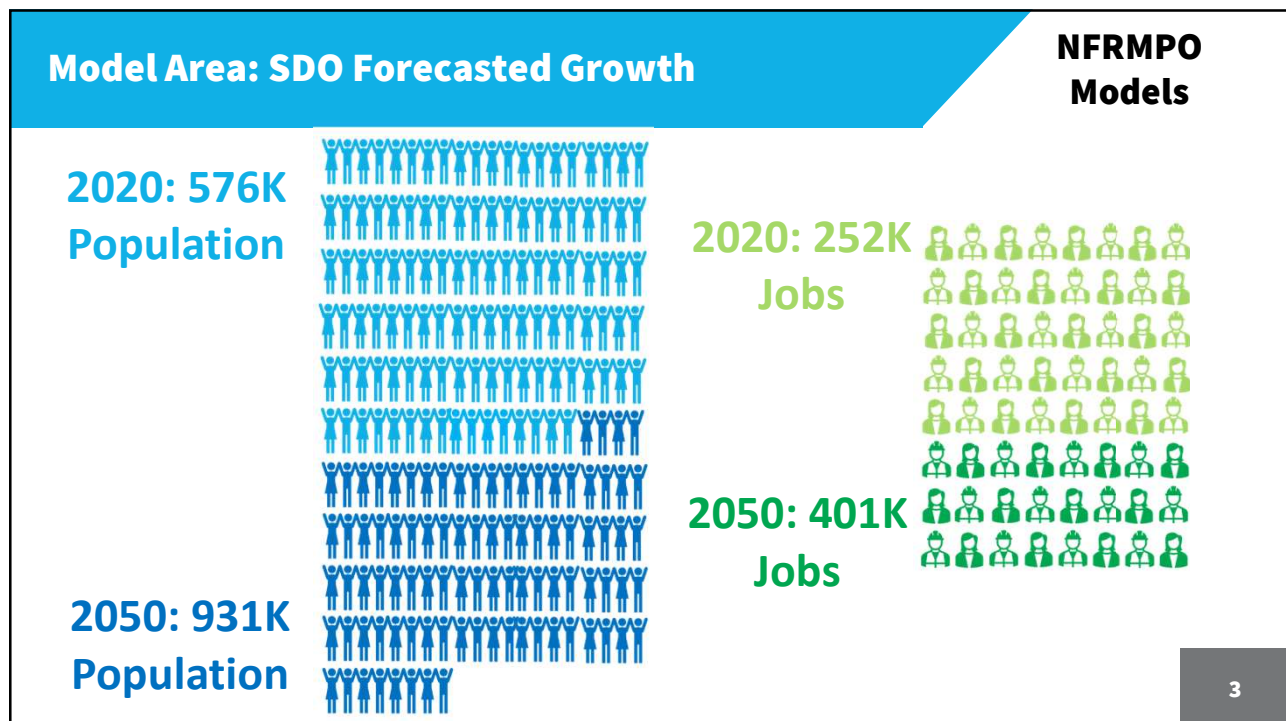
Modeling Overview	NFRMPO Models
<ul style="list-style-type: none"> • Purpose <ul style="list-style-type: none"> • Land Use: Forecast location of population and jobs • Travel Model: Forecast travel patterns • Uses: RTP, project studies, local transportation plans, etc. • Frequency <ul style="list-style-type: none"> • Major update every four years • Model Steering Team (MST) <ul style="list-style-type: none"> • Land use and transportation planners review model inputs and outputs 	

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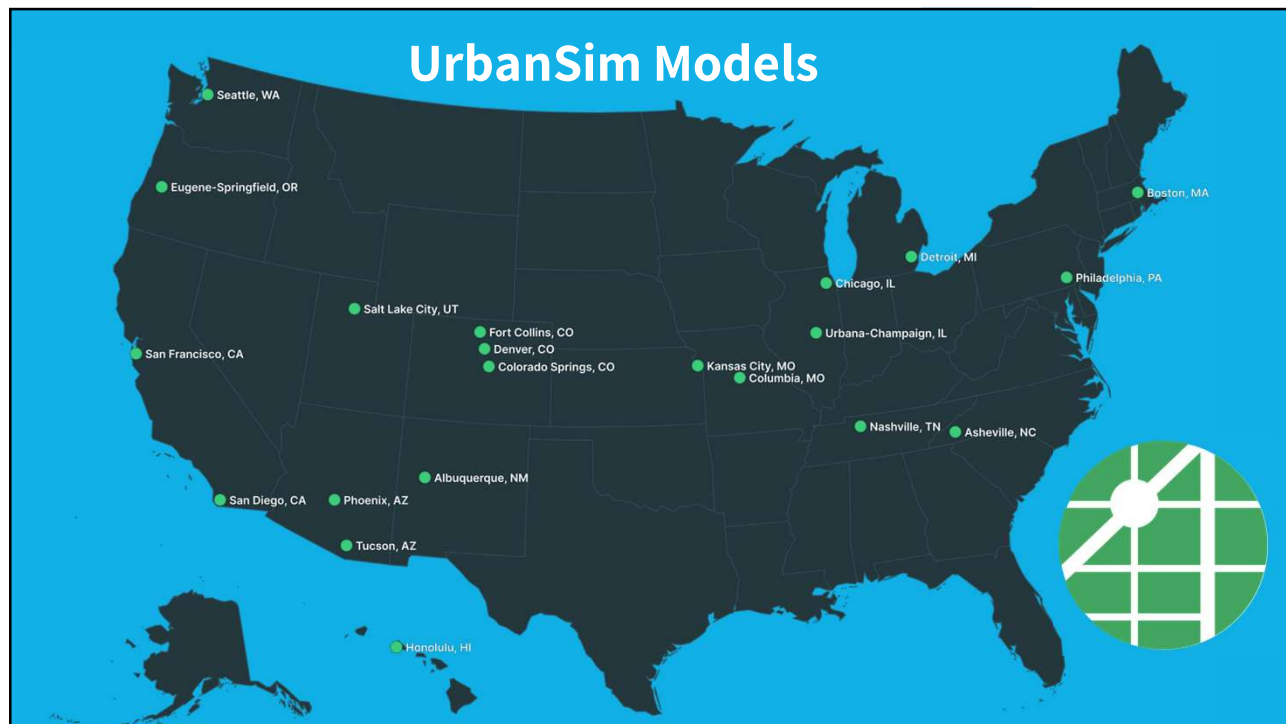
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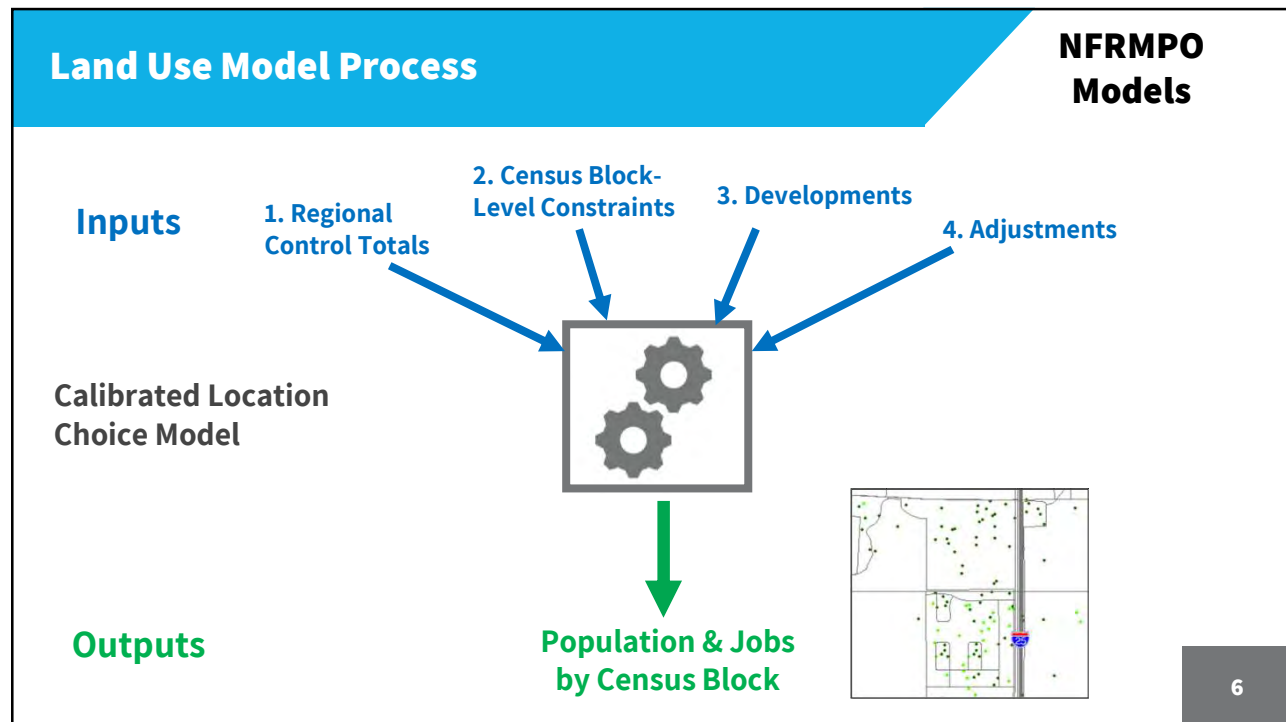


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Land Use Model Inputs	NFRMPO Models
1. How many people and jobs in the region in 2050?	Regional Pop, HH, and Job Control Totals <i>Source: State Demography Office (SDO)</i> 
2. How many dwelling units and jobs can fit in each census block?	Census Block-Level Constraints: Max DUA and Max FAR <i>Source: Future Land Use Plans /Zoning</i> 
3. What developments are anticipated?	Housing and Employment Developments <i>Source: Local agencies</i> 
4. How will other factors influence development?	Adjustments <i>Source: Local agencies</i> 

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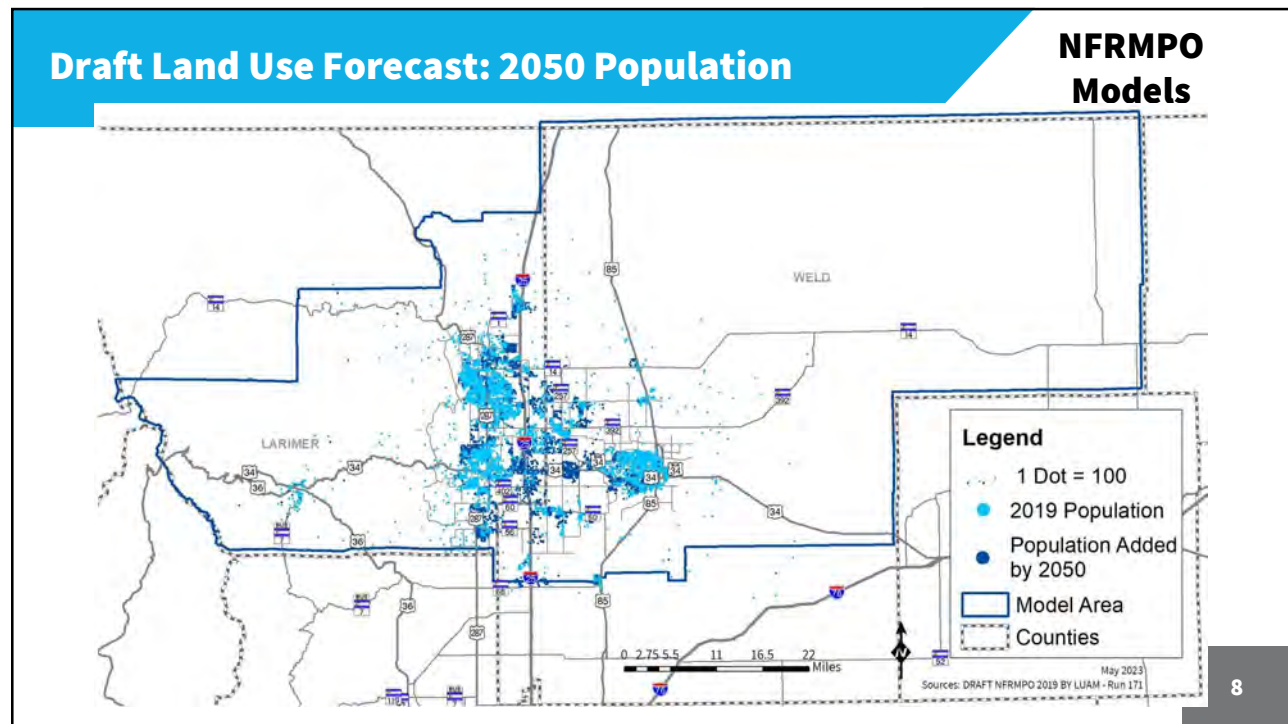
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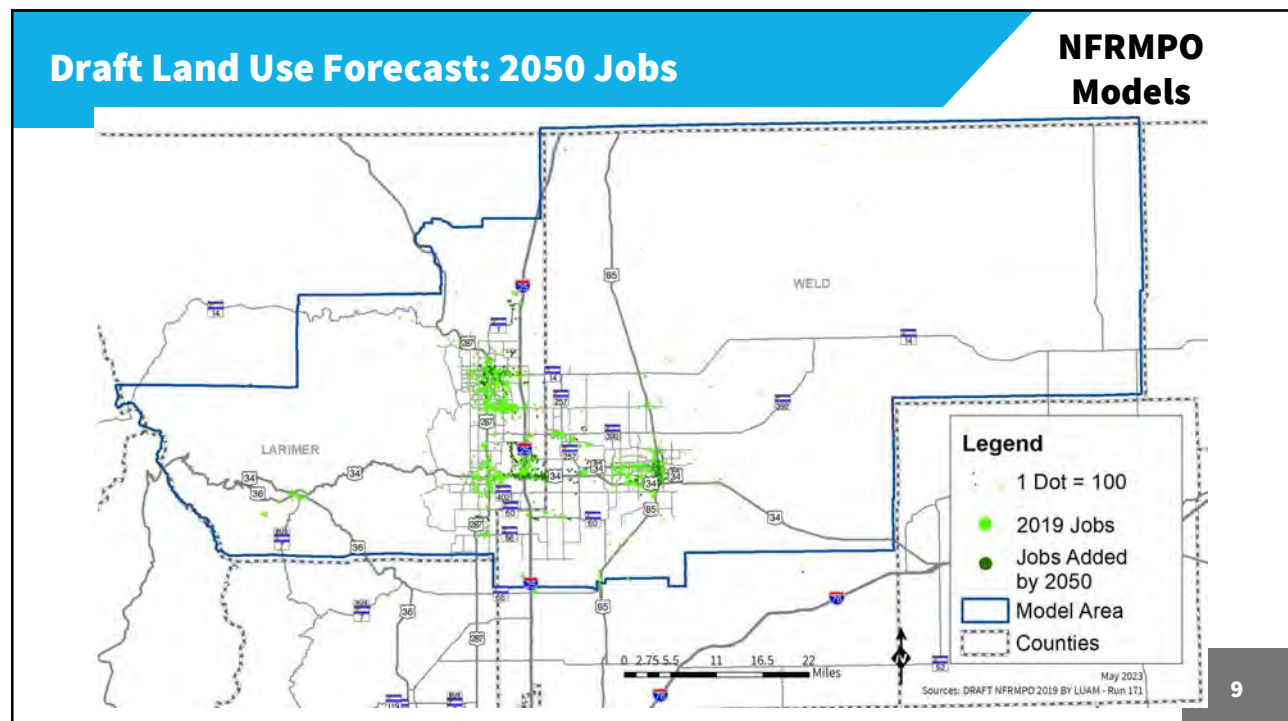
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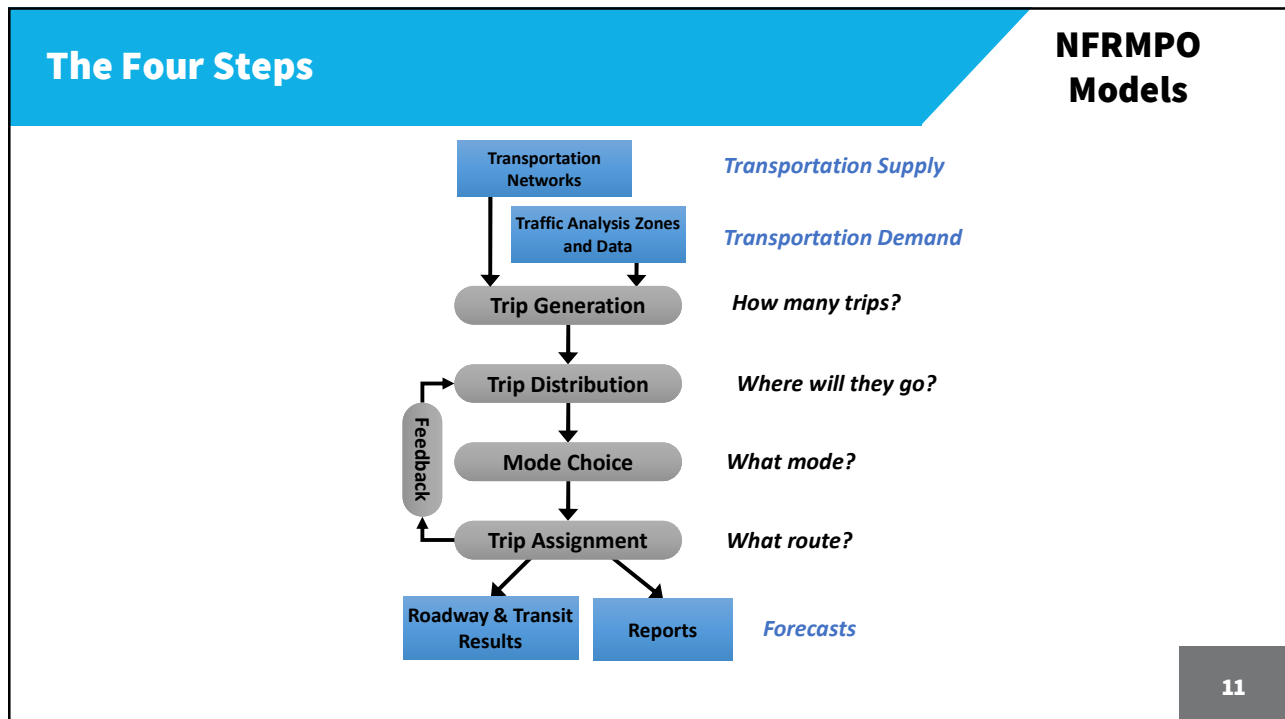
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Model Enhancements

NFRMPO Models

- **Person-level demand**
 - Age, person type (worker, commuter, student), auto ownership, income
- **Mobile device data**
 - Up-to-date travel patterns
- **Work from home**
 - Telework considered in trip generation
- **Induced Demand**
 - Consideration of accessibility

12

12

Induced Demand

NFRMPO Models

- the **increase** in the overall amount of travel such as **person-miles traveled (PMT)** or **vehicle-miles traveled (VMT)** in response to improvements in transportation **capacity**/level of service

Status in NFR Travel Model



➤ Included



➤ Somewhat included



➤ Not included

1. Route shifts
2. Mode shifts
3. Destination shifts
4. Additional trips
5. New development

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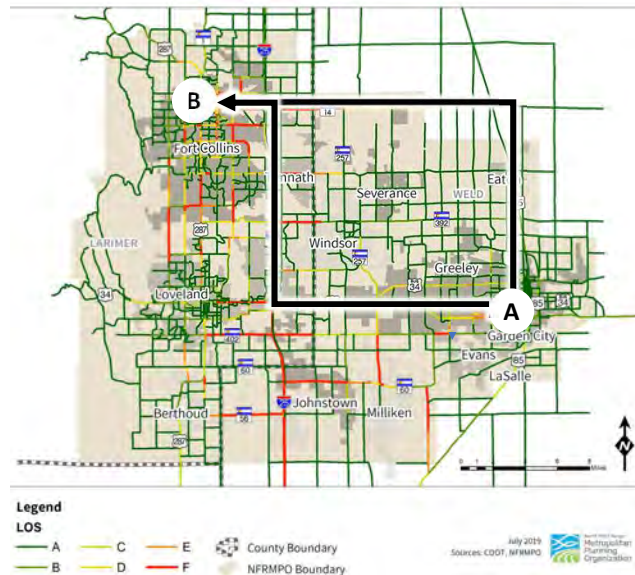
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Induced Demand

NFRMPO Models



Route shifts: Travelers choose a different route, which changes volumes on particular facilities and has the potential to slightly increase or decrease overall VMT.



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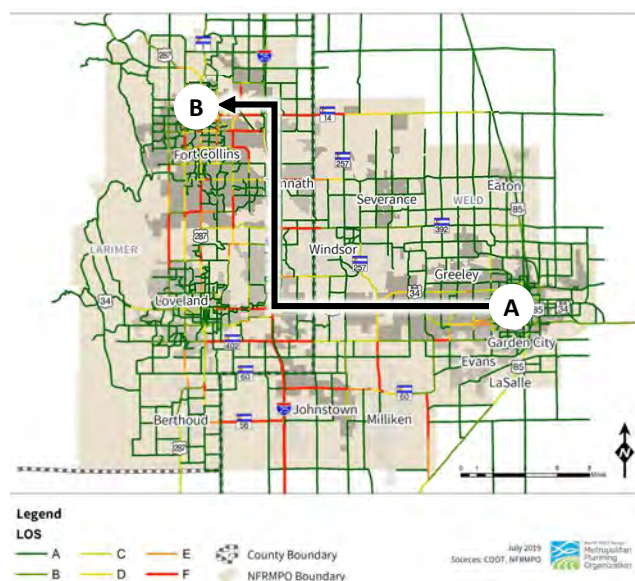
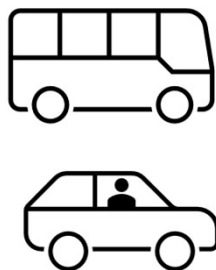
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Induced Demand

NFRMPO Models



Mode shifts: Travelers choose a different mode, which changes overall VMT but does not significantly change PMT.



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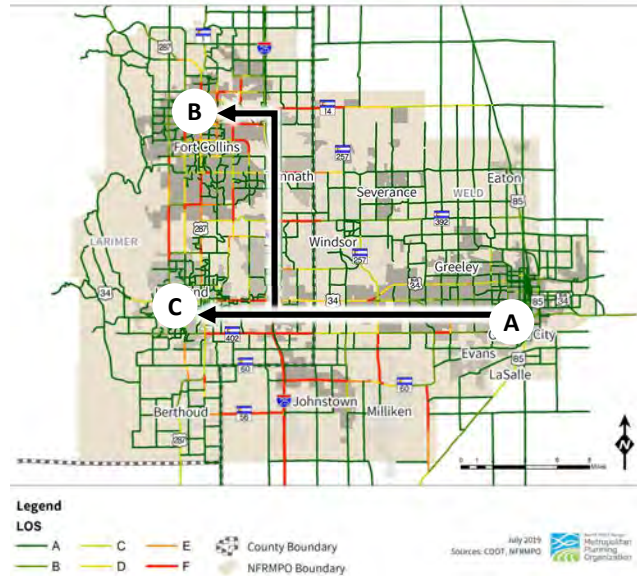
Induced Demand

NFRMPO Models



Destination shifts:

Travelers choose to visit different destinations or choose to live further or closer to their frequent destinations.



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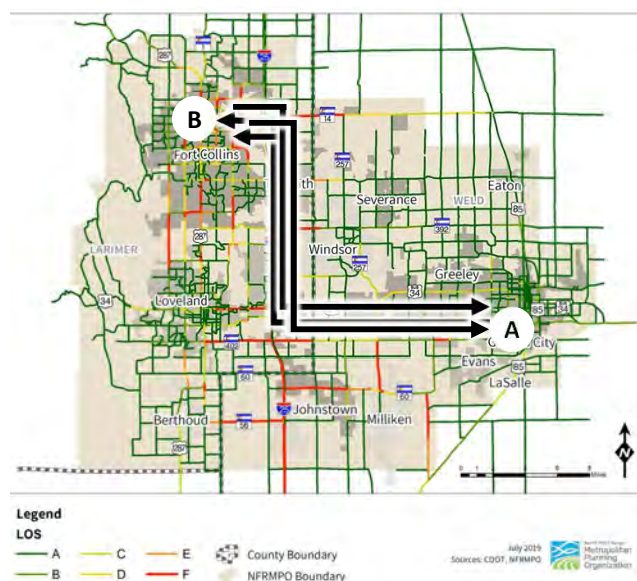
Induced Demand

NFRMPO Models



Additional trips:

Travelers choose to make a trip they would otherwise forgo.



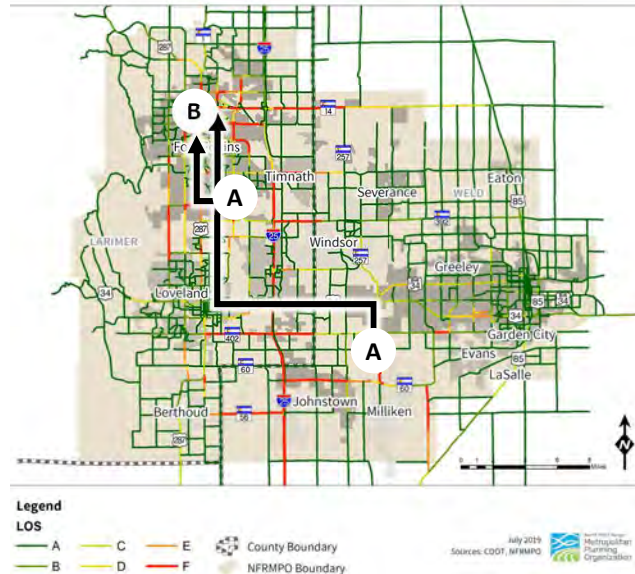
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Induced Demand

NFRMPO Models

- X New development:** In the long term, transportation capacity can influence the location of new development, which may affect overall VMT.



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Induced Demand Summary

NFRMPO Models

- ✓ 1. Route shifts
- ✓ 2. Mode shifts
- ✓ 3. Destination shifts
- ✓ 4. Additional trips
- X 5. New development

Additional Trips in NFRMPO Region

- Research of trip patterns shows accessibility to destinations minimally changes number of trips

19

19

Induced Demand Elasticity

NFRMPO Models

$$\text{Elasticity} = \frac{\% \text{ Change in VMT}}{\% \text{ Change in Lane Miles}}$$

Regional impact for all types of induced demand

- Range of elasticities in literature: 0.1 to 0.9
- Range of elasticities in NFRMPO model: 0.1 to 0.2
 - **Varies based on project type and location**

20

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Induced Demand Elasticity

NFRMPO Models

$$\text{Elasticity} = \frac{\% \text{ Change in VMT}}{\% \text{ Change in Lane Miles}}$$

Example project with 0.1 elasticity:

Assumptions

- Add a general purpose lane to I-25 in each direction for 31 miles
- Total increase of **62 lane miles**
 - 1% increase to 6,300 regional lane miles

Result

- Increase regional VMT by 30,000
 - 0.1% increase from 25.65M to 25.68M

21

21

Questions**NFRMPO
Models****Medora Bornhoft, PTP**

Transportation & Air Quality Planner III

mbornhoft@nfrmpo.org / (970) 289-8283**Alex Gordon, PTP**

Transportation Planner III

agordon@nfrmpo.org / (970) 289-8279**Sean McAtee**

Principal Travel Modeler

smcatee@camsys.com

22

MEMORANDUM

To: NFRMPO Planning Council

From: Alex Gordon

Date: June 1, 2023

Re: 2023 Congestion Management Process (CMP) **CONSENT**

Background

According to the Federal Highway Administration (FHWA), the CMP is a systematic and regionally accepted approach for managing congestion. Every four years, the NFRMPO reviews its Congestion Management Process (CMP) to manage congestion in the region and identify the appropriate strategies to address it. CMPs build on the performance-based planning approach of the Regional Transportation Plan (RTP), identify and evaluate mitigation strategies, and describe potential implementation of described strategies.

In the process of developing the CMP, staff undertook the following steps:

- Identified congested segments of Regionally Significant Corridors (RSCs) using data from local communities, INRIX, the National Performance Management Research Dataset (NPMRDS), and other sources;
- Inventoried congestion strategies and their implementation since the 2019 CMP; and
- Developed a recommended Call for Projects capacity screening process.

TAC discussed the strategies and their relationship to the NFRMPO Call for Projects at their April 19, 2023 meeting. To address this feedback, NFRMPO staff have categorized strategies into Demand Management, Supply Management, and Capacity. NFRMPO staff presented to Planning Council at their May 4, 2023 meeting. Planning Council raised questions about which corridors meet the congested corridor definitions. NFRMPO staff added additional detail into the 2023 CMP to address these concerns, explaining data sources and the limits of the data.

The public comment period on the 2023 CMP opened May 1, 2023 and closed May 15, 2023. One comment was received during the Public Comment period asked about the location of congestion at US34 Business and US85 Business. The language on the map was updated to acknowledge the corridors, not the intersection.

The updated draft 2023 CMP is available online: <https://nfrmpo.org/wp-content/uploads/2023-congestion-management-process.pdf>.

Action

Staff requests Planning Council adopt ***Resolution 2023-10*** approving the 2023 Congestion Management Process (CMP).



MEMORANDUM

To: NFRMPO Planning Council

From: AnnaRose Cunningham

Date: June 1, 2023

Re: 2050 RTP Fiscally Constrained Plan

Background

The 2050 Regional Transportation Plan is federally required to be fiscally constrained, which means the total estimated cost of maintaining and improving the transportation system cannot exceed the reasonably anticipated forecasted revenue over the time horizon of the Plan.

Revenues

The 2050 Fiscally Constrained Plan incorporates reasonably anticipated revenue from federal, state, and local sources. Revenue forecasts for state and Federal Highway Administration (FHWA) funding sources were based on the CDOT 2045 Program Distribution extrapolated out to 2050. CDOT additionally provided updated program tables to incorporate increased program amounts following the implementation of the Bipartisan Infrastructure Law (BIL) and Colorado Senate Bill (SB) 21-260. Transit revenue, including Federal Transit Administration (FTA) and local funds, were forecasted based on data reported to the National Transit Database (NTD) and local sources.

Local revenue available for roadways was estimated based on a three- to five-year average of local budgets from FY2019-2023 to account for fluctuations which may have impacted local budgets during the COVID-19 pandemic. County transportation revenues were apportioned to the North Front Range based on two factors weighted equally:

- the percentage of lane miles within the North Front Range and
- the percentage of Vehicle Miles Traveled (VMT) in the North Front Range.

Based on these two factors, 61 percent of Larimer County's transportation revenue and 24 percent of Weld County's transportation revenue was considered to be reasonably anticipated to be available for the North Front Range.

Operations and Maintenance Costs

As federally required, the anticipated costs for operating and maintaining the transportation system were developed for the transportation network as it is anticipated to exist between 2024 and 2050. Based on the 2045 RTP assumptions for operations and maintenance, operation costs include the cost of lighting, traffic control, and snow and ice removal and maintenance costs are defined as resurfacing costs. The cost per



lane mile for operations and maintenance was averaged based on data received from TAC members and assumed to be \$24,727 in 2023 dollars.

The costs for operating, maintaining, and expanding the Regional Active Transportation Corridor (RATC) network were based on input from the NoCo Bike and Ped Collaborative. The cost to operate and maintain one mile of trail was assumed to be \$8K and the cost to construct a new mile of trail was assumed to be \$1.2M in 2023 dollars.

Staff are continuing to work with TAC members to ensure the estimates for roadway operations and maintenance costs and the Local-Roadway funds available are reasonable for the planning horizon of the RTP.

Operations and maintenance costs for the transit system include vehicle operations and maintenance, general administration, facility maintenance, and state of good repair. Operations and maintenance costs for the existing transit system are estimated at \$25.7M per year in 2023 dollars.

RTP Projects

The RTP is required to identify roadway capacity and major transit projects planned over the 25-year planning horizon for which funding is reasonably anticipated to be available. The cost of roadway capacity projects on Regionally Significant Corridors (RSCs) submitted by NFRMPO member jurisdictions and collected from local plans totals \$3.2B. The capital and operating costs of the Regional Transit Corridors (RTCs), including operation of the current system and expansion of the local and regional system, is estimated at \$4.6B over the time horizon of the plan.

All revenues and expenditures are presented in year of expenditure (YOE) dollars in accordance with federal requirements. Funding estimated provided by CDOT with the 2045 Program Distribution assumed a 1.1 percent growth rate, all other revenues and expenditures were inflated to YOE using a 2.5 percent inflation factor.

The total reasonably anticipated revenue over the time horizon of the 2050 RTP is \$13.3B as shown in **Attachment 1**, and the total anticipated need is \$17B as shown in **Attachment 2**. NFRMPO staff has allocated the dedicated and flexible funding to expenditures to fiscally constrain the operations, maintenance, and expansion of the transportation system as illustrated in **Attachment 2** based on fiscal constraint status of locally submitted projects and planned priorities of the 2050 RTP. Of the unmet need of



\$3.9B, there remains \$254M of flexible funding between 2024-2050 which may be allocated to expenditure categories based on regional priorities.

Action

Staff requests Planning Council review the 2050 RTP Fiscally Constrained Plan tables and presentations and be prepared to discuss options for allocating additional flexible funding.

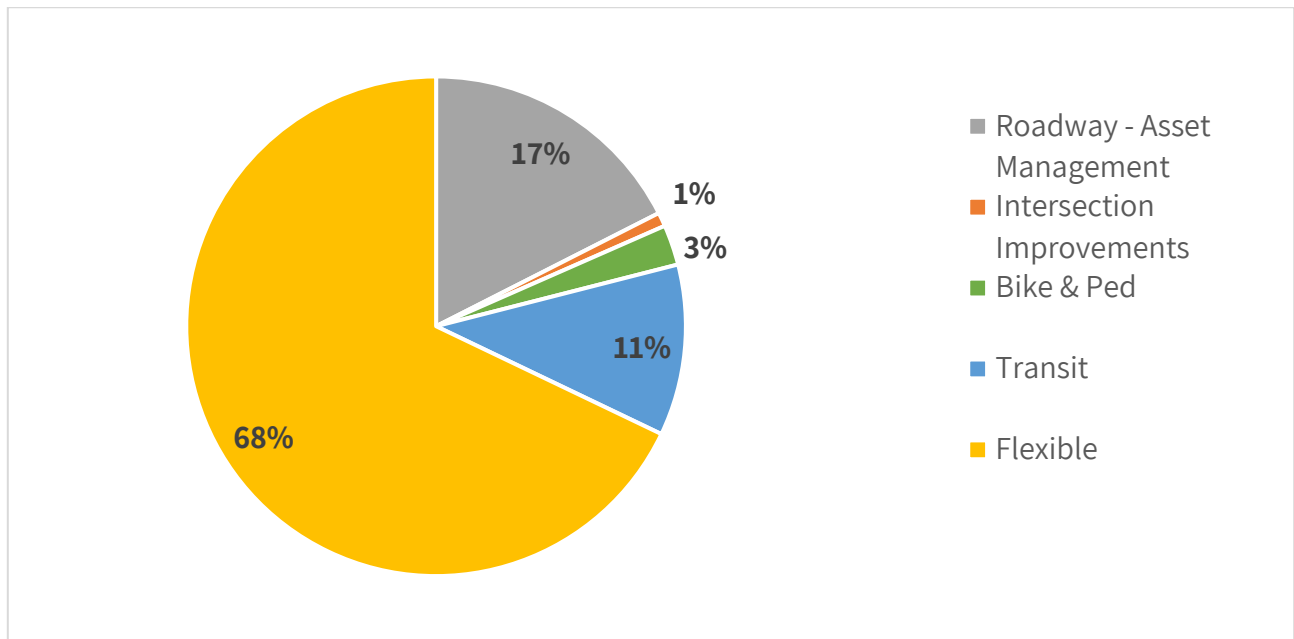
Attachments

- **Attachment 1:** Revenue Estimates by Expenditure Category
- **Attachment 2:** Resource Allocation by Expenditure Category
- **Attachment 3:** 2050 RTP: Fiscally Constrained Plan Presentation



Attachment 1: Revenue Estimates by Expenditure Category, in Millions of YOE, 2024-2050

Years	Roadway - Asset Management	Intersection Improvements	Bike & Ped	Transit	Flexible	Total
2024-2030	\$573.26	\$26.44	\$78.39	\$309.49	\$2,155.18	\$3,142.76
2031-2040	\$859.82	\$43.31	\$126.95	\$524.13	\$3,118.52	\$4,672.74
2041-2050	\$894.22	\$49.37	\$141.40	\$639.06	\$3,747.62	\$5,471.67
Total	\$2,327.31	\$119.12	\$346.74	\$1,472.69	\$9,021.32	\$13,287.17





Attachment 2: Resource Allocation by Expenditure Category, in Millions of YOE, 2024-2050

Expenditure Category	Cost	Dedicated Funding	Flexible Funding	Total Funded	Unfunded
Roadway Operations & Maintenance	\$6,382.94	\$2,327.31	\$4,055.63	\$6,382.94	\$0.00
Intersection Improvement Projects	\$787.93	\$119.12	\$668.81	\$787.93	\$0.00
RATC: Operations, Maintenance, and Expansion	\$435.38	\$347.32	\$88.06	\$435.38	\$0.00
RTC Local: Operations, Maintenance, and Local System Expansion	\$2,606.36	\$1,463.65	\$1,142.71	\$2,606.36	\$0.00
RTC Regional: LinkNoCo, Bustang, FRPR	\$1,993.50	\$9.04	\$612.83	\$621.87	\$1,371.63
RSC: Capacity Projects	\$3,282.92	\$0.00	\$1,432.58	\$1,432.58	\$1,850.35
Non-RSC Capacity Projects	\$1,439.48	\$0.00	\$674.84	\$674.84	\$764.64
GHG Reduction Strategies	\$91.00	\$0.00	\$91.00	\$91.00	\$0.00
Total	\$17,019.51	\$4,266.44	\$8,766.46	\$13,032.90	\$3,986.61



1

<i>Federal Requirements</i>	2050 RTP
<ul style="list-style-type: none"> • System-level estimates <ul style="list-style-type: none"> • Cost to operate and maintain federal-aid highways and public transportation • <u>ALL</u> reasonably anticipated revenue (public and private) by funding source • Identification of funding for projects and programs in the RTP • Year of Expenditure (YOE) Dollars 	<div data-bbox="1339 1780 1445 1856">2</div>

2

Data Sources**2050 RTP**

- **CDOT Program Distribution** – State and federal funding
- **Local Jurisdiction Budgets** – Local revenue for roadway operations, maintenance, & improvements
- **National Transit Database** – Transit operations costs and state and local funding sources for transit
- **TAC** – Roadway operations and maintenance costs, intersection improvement costs
- **Transit Agencies** – Transit maintenance costs
- **NoCo Bike & Ped** – Trail operations, maintenance, and construction costs
- **Local Plans** – Anticipated projects and costs

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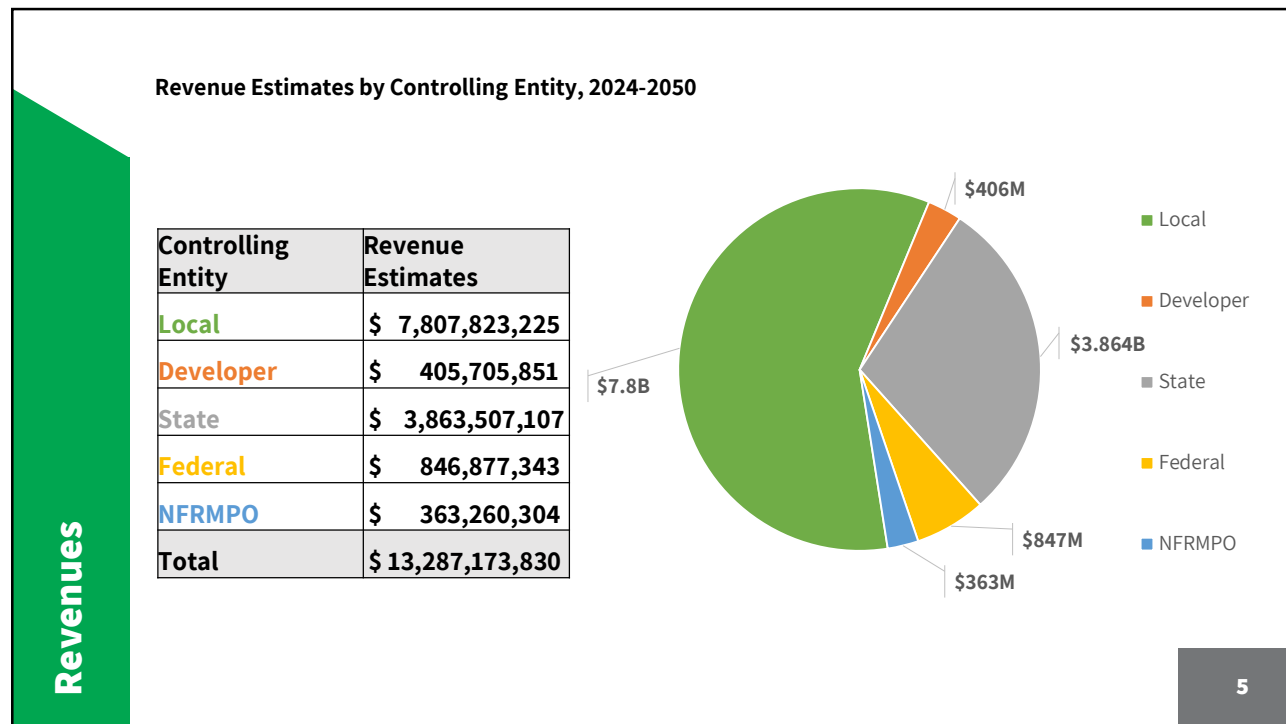
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Operations & Maintenance Costs**2050 RTP**

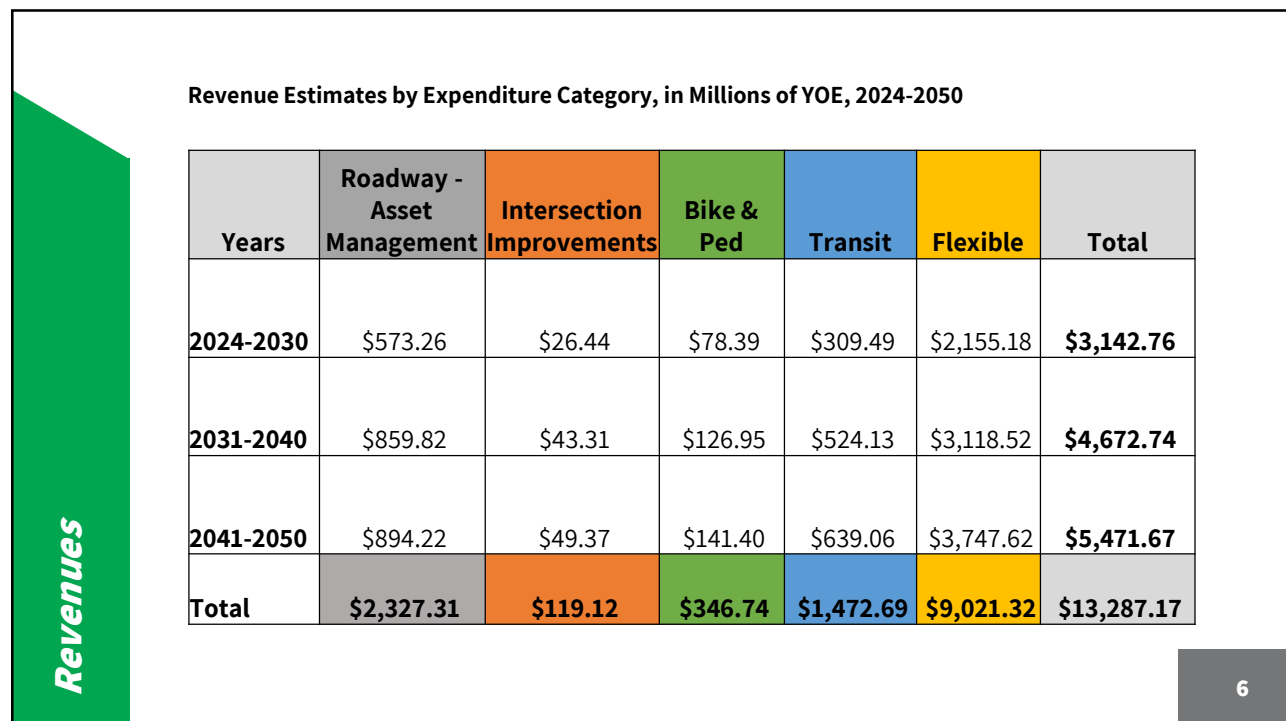
- **Roadway Operations** - \$27,126 per lane mile
 - Includes lighting, traffic control, snow and ice removal, design, planning, and engineering costs
- **Roadway Maintenance** - \$13,175 per lane mile
 - Includes resurfacing costs
- **Transit Operations, Maintenance, and Capital** - \$23.7M per year
 - Includes vehicle operations and maintenance, general administration, facility maintenance, and state of good repair

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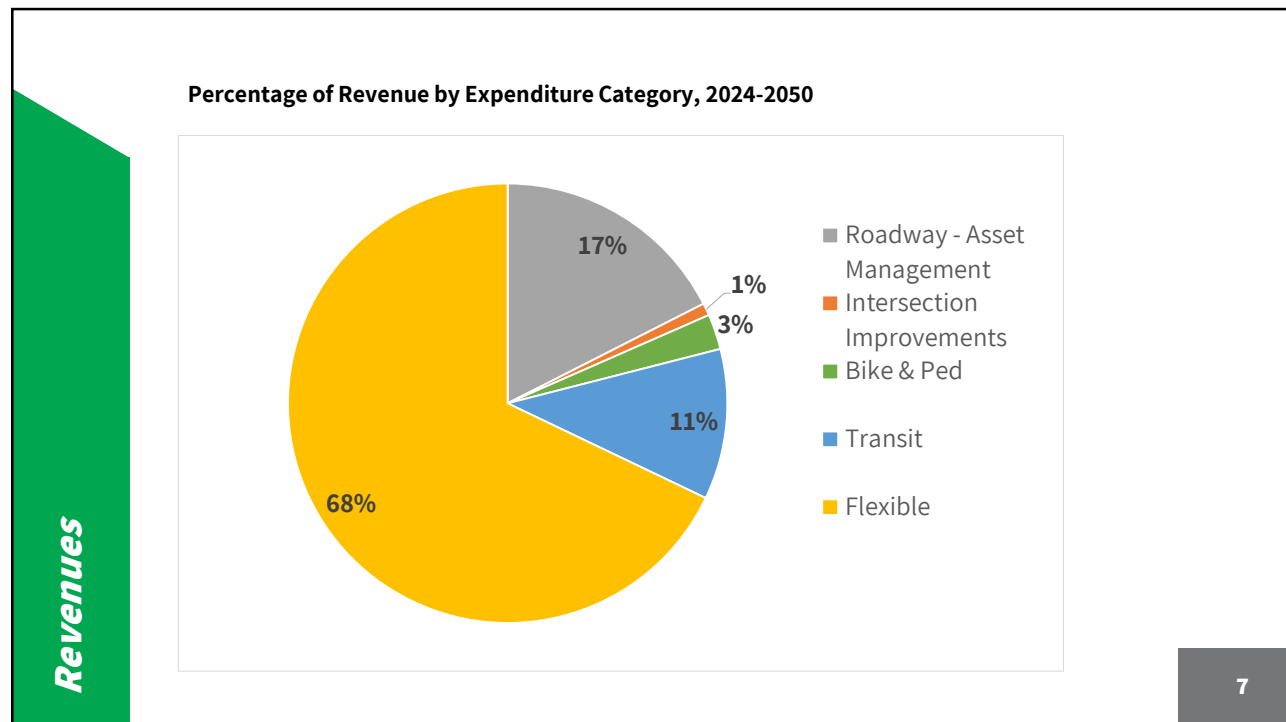
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Expenditures

Revenue Estimates by Expenditure Category, in Millions of YOE, 2024-2050

Expenditure Category	Cost	Dedicated Funding	Flexible Funding	Total Funded	Unfunded
Roadway Operations & Maintenance	\$6,382.94	\$2,327.31	\$4,055.63	\$6,382.94	\$0.00
Intersection Improvement Projects	\$787.93	\$119.12	\$668.81	\$787.93	\$0.00
RATC: Operations, Maintenance, and Expansion	\$435.38	\$347.32	\$88.06	\$435.38	\$0.00
RTC Local: Operations, Maintenance, and Local System Expansion	\$2,606.36	\$1,463.65	\$1,142.71	\$2,606.36	\$0.00
RTC Regional: LinkNoCo, Bustang, FRPR	\$1,993.50	\$9.04	\$612.83	\$621.87	\$1,371.63
RSC: Capacity Projects	\$3,282.92	\$0.00	\$1,432.58	\$1,432.58	\$1,850.35
Non-RSC Capacity Projects	\$1,439.48	\$0.00	\$674.84	\$674.84	\$764.64
GHG Reduction Strategies	\$91.00	\$0.00	\$91.00	\$91.00	\$0.00
Total	\$17,019.51	\$4,266.44	\$8,766.46	\$13,032.90	\$3,986.61

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Assumptions**2050 RTP**

- Regional Active Transportation Corridor (RATC) buildout by 2045
- LinkNoCo Priority Corridors in operation by 2050
- GHG Strategies
 - TDM Related Projects
 - Additional local bike and ped system expansion
 - Additional operational improvements

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GHG Strategy Funding Allocations
*In Millions YOY***2050 RTP**

Expenditure Category	Proportion of Expenditure Category Achieving GHG Strategies	Total Funded Expenditure Category (2024-2050)	\$ Contributing to GHG Strategies
Roadway Operations & Maintenance	6%	\$6,382.94	\$382.98
Intersection Improvement Projects	9%	\$787.93	\$67.35
RATC Operations, Maintenance, and Expansion	89%	\$435.38	\$387.49
RTC Local: Operations, Maintenance, and Local System Expansion	62%	\$2,606.36	\$1,615.94
RTC Regional: LinkNoCo, Bustang, FRPR	94%	\$621.87	\$584.56
Regionally Significant Corridor (RSC) Capacity Projects	5%	\$1,432.58	\$71.63
Non-RSC Capacity Projects	5%	\$813.27	\$40.66
GHG Reduction Strategies	100%	\$91.00	\$91.00
TOTAL	24%	\$13,171.33	\$3,241.61

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Unmet Need and Flexible Funding**2050 RTP**

Expenditure Category	Total Funded	Unfunded
Roadway Operations & Maintenance	\$6,382.94	\$0.00
Intersection Improvement Projects	\$787.93	\$0.00
RATC: Operations, Maintenance, and Expansion	\$435.38	\$0.00
RTC Local: Operations, Maintenance, and Local System Expansion	\$2,606.36	\$0.00
RTC Regional: LinkNoCo, Bustang, FRPR	\$621.87	\$1,371.63
RSC: Capacity Projects	\$1,432.58	\$1,850.35
Non-RSC Capacity Projects	\$674.84	\$764.64
GHG Reduction Strategies	\$91.00	\$0.00
Total	\$13,032.90	\$3,986.61

- Unmet need
 - RTC Regional: FRPR
 - RSC Capacity Projects
 - Non-RSC Capacity Projects
 - Optional: GHG Reduction Strategies
- Remaining Flexible Funding
 - \$254M

11

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QUESTIONS / CONTACT**2050 RTP**

AnnaRose Cunningham
 Transportation Planner II
arcunningham@nfrmpo.org
 (970) 818-9497

12

12

MEMORANDUM

To: NFRMPO Planning Council

From: Medora Bornhoft

Date: June 1, 2023

Re: Draft 2050 RTP Roadway and Transit Projects

Background

In early 2023, NFRMPO member agencies submitted roadway projects expected to be necessary by 2050 for inclusion in the travel model and the 2050 Regional Transportation Plan (RTP).

The attached maps (see **Figure 1** and **Figure 2**) and table show the regionally significant roadway projects submitted by agencies along Regionally Significant Corridors (RSCs). Regionally significant projects include adding at least two (2) lane miles of through lanes, new interchanges, and certain other improvements as identified in the Air Quality Significant Definition available at <https://nfrmpo.org/wp-content/uploads/air-quality-significant-projects-2021.pdf>.

Details for each roadway project are provided in **Table 1**. Projects are identified as fiscally constrained or unconstrained. Projects identified as fiscally constrained are reasonably expected to have funding available and, once included in the adopted RTP, are able to proceed per federal regulations. Fiscally unconstrained projects are not reasonably expected to have funding available and cannot proceed unless and until the RTP is amended to include the project as fiscally constrained. Fiscally unconstrained projects are identified to provide detail on the total unmet need for the region's transportation system.

The cost in year-of-expenditure (YOE) dollars in 2024 and beyond is provided for each project based on an assumed inflation rate of 2.5 percent. Several projects are fully funded in 2023 or earlier funding years and are therefore shown as having a cost of \$0. Projects are grouped into the following four staging periods based on the anticipated opening year:

- 2024-2026
- 2027-2030
- 2031-2040
- 2041-2050

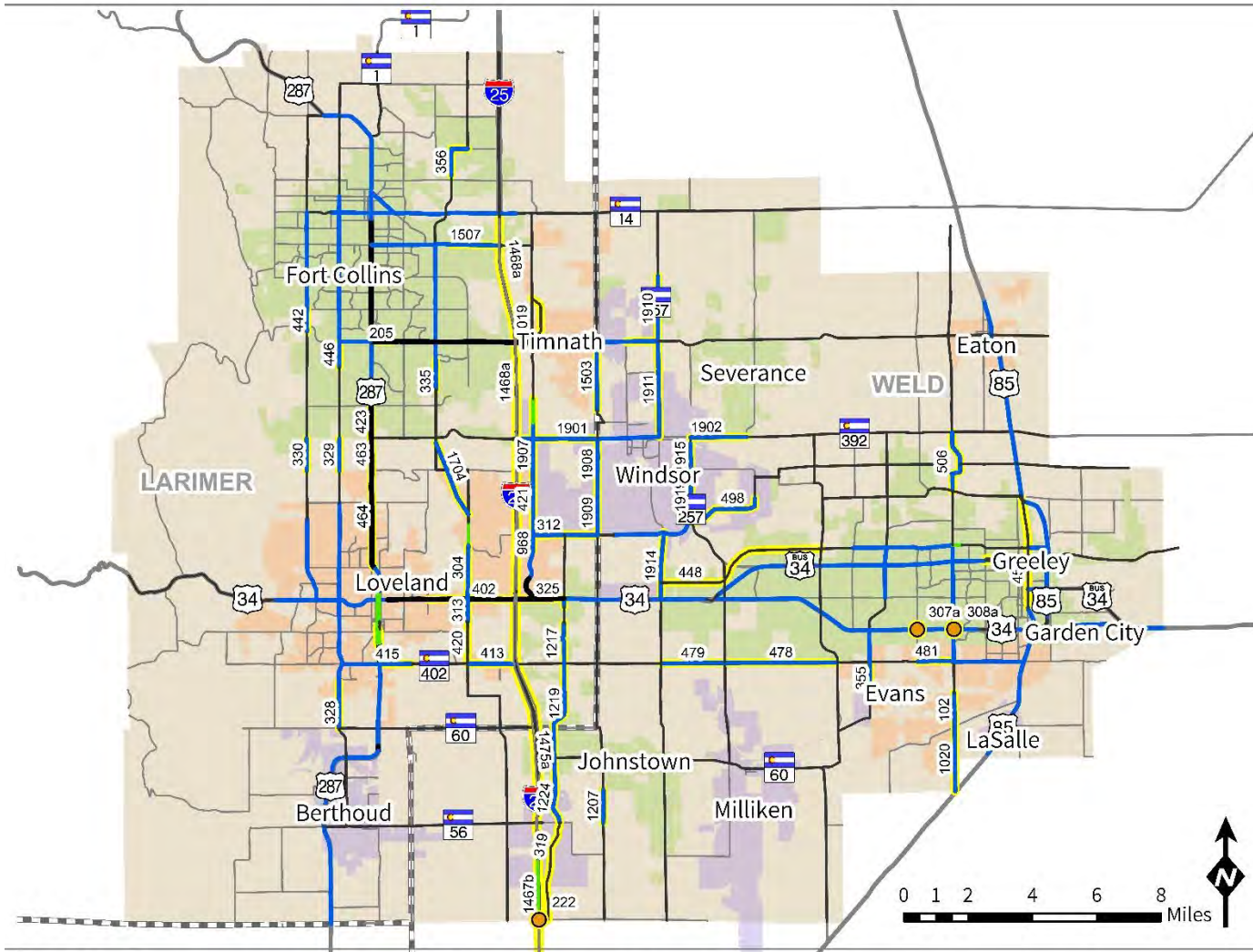
At their May meeting, TAC received the draft 2050 RTP roadway projects and were asked to submit updates by Tuesday, May 30. Comments received by the deadline were incorporated into the table and maps.

Fiscally constrained regionally significant transit projects are displayed in **Figure 3**. The fiscally constrained transit projects include all of the Regional Transit Corridors (RTCs) except for Front Range Passenger Rail, which will be identified as an unconstrained project in the 2050 RTP.

Action

Staff requests Planning Council review the draft 2050 RTP Projects and provide feedback to ensure projects are listed appropriately and to ensure the list is not missing any regionally significant roadway projects on RSCs or transit projects anticipated to be necessary by 2050.

Figure 1. DRAFT 2050 RTP Fiscally Constrained Roadway Projects on RSCs



Legend

Lanes 2050

— 1
— 2

— 3
— 4
— 6

— Fiscally Constrained Project

● Interchanges
County Boundary
NFRMPO Planning Area

May 2023
Sources: CDOT, NFRMPO



Figure 2. DRAFT 2050 RTP Fiscally Unconstrained Roadway Projects on RSCs

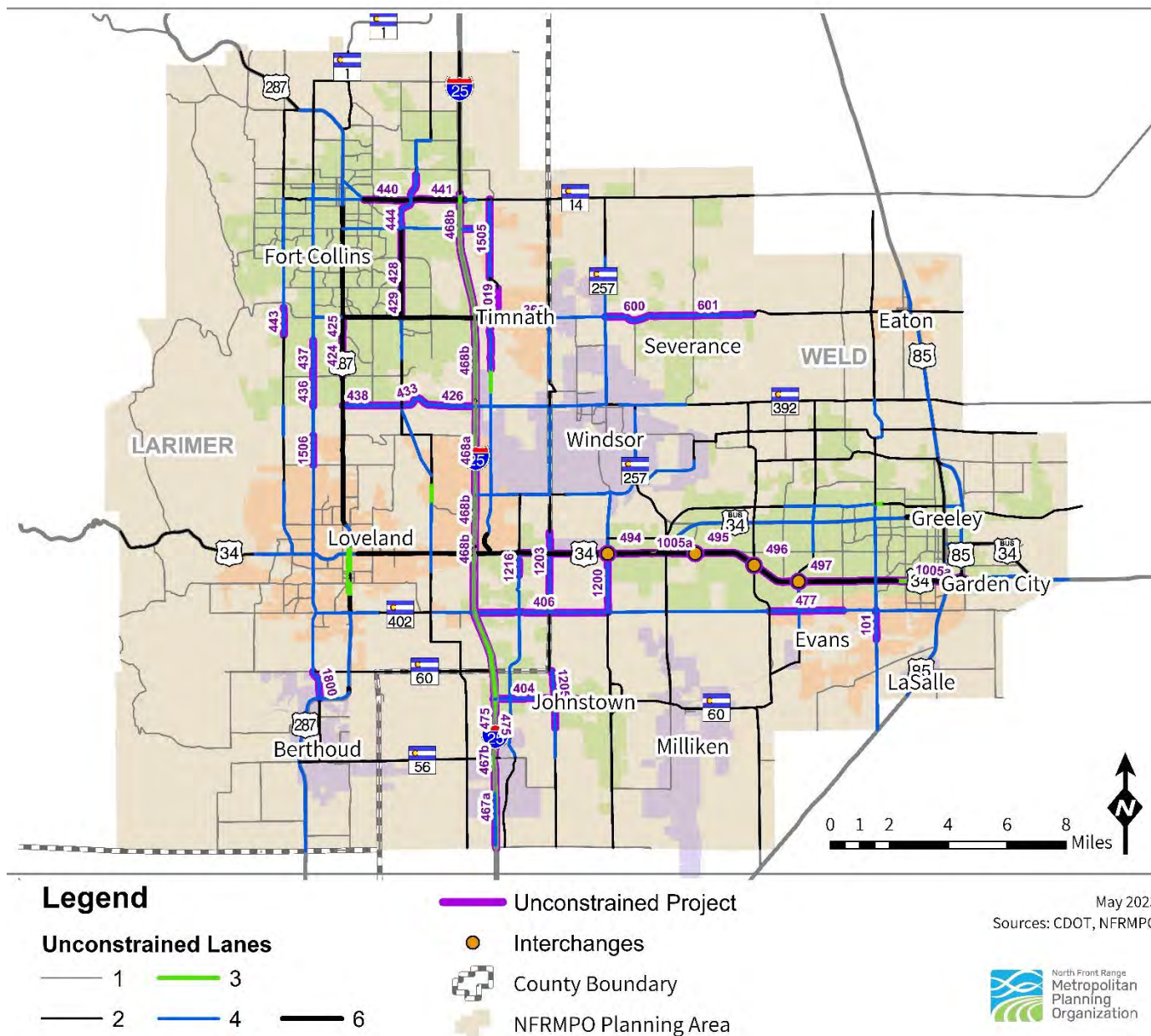
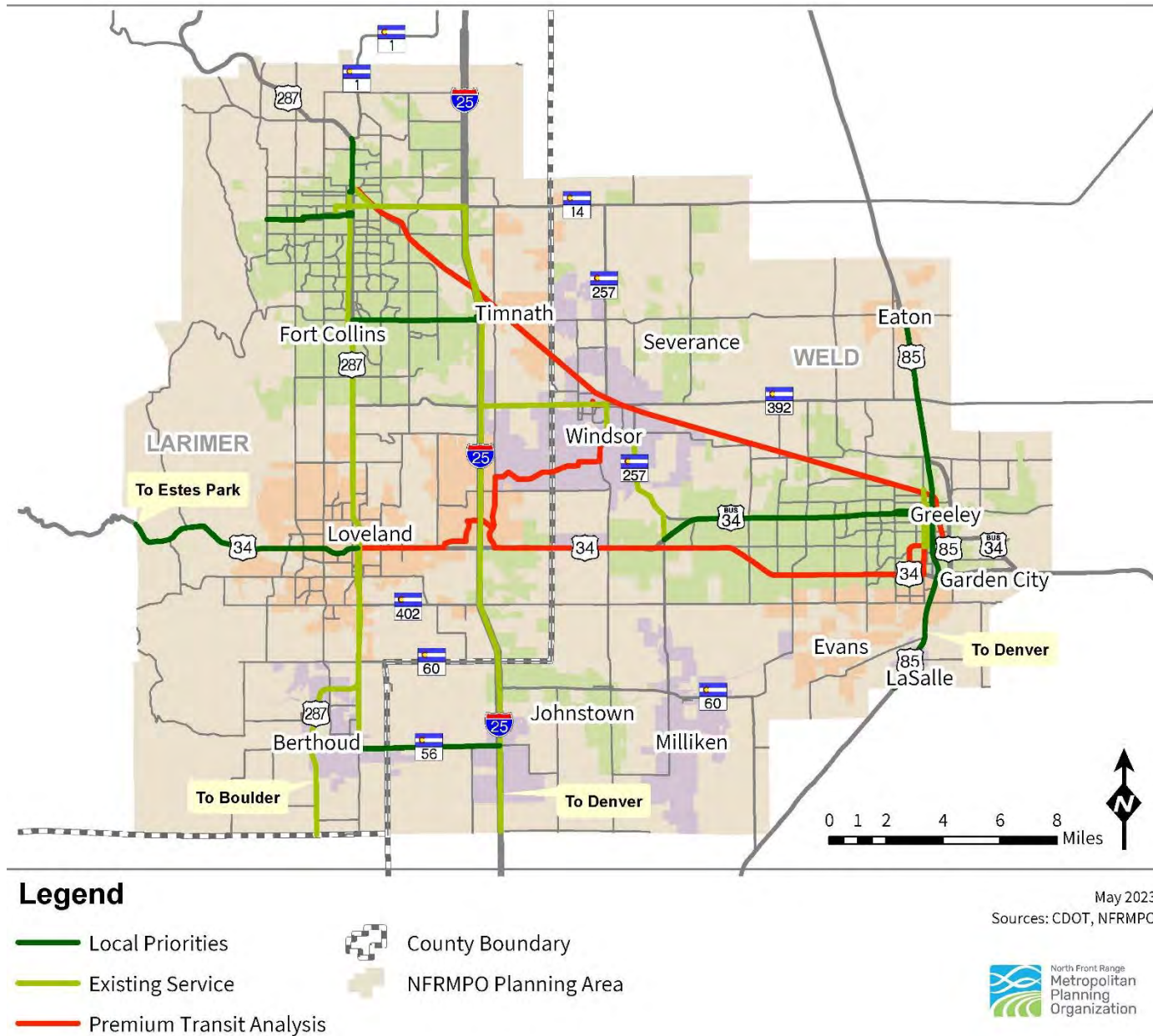


Figure 3. DRAFT 2050 RTP Fiscally Constrained Transit Projects



DRAFT 2050 RTP Roadway Project List as of 5/24/2023

Fiscally Constrained Capacity Projects on RSCs									
Fiscal Constraint	Staging Period	RSC	Project ID	Agency	Project Name	Extent N/W	Extent S/E	Improvement Type	YOE Cost in 2024+
Constrained	2024-2026	1	1475a	CDOT	I-25 Express Lane Segment 6	SH402	SH56	Add tolled express lane in each direction and interchange reconstructions	\$0
Constrained	2024-2026	1	1468a	CDOT	I-25 Express Lane Segment 7&8	SH14	SH402	Add tolled express lane in each direction and interchange reconstructions	\$0
Constrained	2027-2030	1	1467a	CDOT	I-25 Express Lane Segment 5	SH56	WCR 38	Add tolled express lane in each direction and interchange reconstructions	\$168,924,363
Constrained	2024-2026	1	222	Mead	I-25 and WCR-38 Interchange	WCR-38	WCR-38	New Interchange	\$30,000,000
Constrained	2024-2026	2	308a	Greeley/CDOT	US 34 and 35th Interchange	35th Ave	35th Ave	New interchange	\$54,121,608
Constrained	2024-2026	2	307a	Greeley/CDOT	US 34 and 47th Interchange	47th Ave	47th Ave	New interchange	\$48,709,447
Constrained	2024-2026	2	325	Loveland	US 34 Widening	Centerra Pkwy.	LCR 3	Widen from 4 lanes to 6 lanes	\$12,807,337
Constrained	2024-2026	2	402	Loveland	US 34 Widening	Boyd Lake Ave.	Rocky Mountain Ave.	Widen from 4 lanes to 6 lanes	\$5,615,797
Constrained	2027-2030	3	483	Greeley	10th St One-way to Two-Way Conversion	E of 23rd Ave	10th Ave	Convert to Two-Way	\$4,654,458
Constrained	2027-2030	3	482	Greeley	9th St One-way to Two-Way Conversion	E of 23rd Ave	8th Ave	Convert to Two-Way	\$4,654,458
Constrained	2027-2030	5	452	Greeley	8th Avenue / US 85 Business Road Diet	O Street	24th Street	Reduce from 4 lanes to 2 lanes	\$64,945,930
Constrained	2031-2040	6	423	Fort Collins	US 287 / College Widening	Trilby	Carpenter / LCR 32	Widen from 4 lanes to 6 lanes	\$16,232,787
Constrained	2031-2040	6	464	Loveland	US 287 Widening	29th St.	71st St.	Widen from 4 lanes to 6 lanes	\$12,756,199
Constrained	2031-2040	6	463	Larimer/CDOT	US 287 Widening	LCR 32 / SH392	LCR 30	Widen from 4 lanes to 6 lanes	\$7,001,207
Constrained	2031-2040	6	961a	Loveland	US 287 Widening	1st St / 2nd St	SH 402	Widen from 4 lanes to 6 lanes	\$23,804,104
Constrained	2027-2030	11	1915	Windsor	SH-257 Widening	Walnut St	Eastman Park Dr.	Widen from 2 lanes to 4 lanes	\$4,279,269
Constrained	2031-2040	11	1919	Windsor	SH-257 Widening	Eastman Park Dr.	Crossroads	Widen from 2 lanes to 4 lanes	\$8,203,822
Constrained	2031-2040	11	1910	Windsor	SH-257 Widening	WCR-78	WCR-74	Widen from 2 lanes to 4 lanes	\$9,661,666
Constrained	2031-2040	11	1911	Windsor	SH-257 Widening	WCR-74	SH-392	Widen from 2 lanes to 4 lanes	\$13,316,539
Constrained	2024-2026	12	1902	Windsor	SH 392 Widening	WCR-19	WCR-21	Widen from 2 lanes to 4 lanes	\$3,589,380
Constrained	2027-2030	12	1901	Windsor	SH-392 Widening	Highland Meadows Pkwy	Colorado Blvd	Widen from 2 lanes to 4 lanes	\$31,014,513

Fiscal Constraint	Staging Period	RSC	Project ID	Agency	Project Name	Extent N/W	Extent S/E	Improvement Type	YOE Cost in 2024+
Constrained	2027-2030	12	505	Weld County	SH-392 Widening	WCR-21	WCR-23	Widen from 2 lanes to 4 lanes	\$4,973,497
Constrained	2024-2026	13	201	Loveland	SH 402 Widening	St. Louis	Boise	Widen from 2 lanes to 4 lanes	\$6,855,238
Constrained	2024-2026	13	481	Evans / Greeley	WCR-54 / 37th St Widening	47th Ave	Stampede Dr	Widen from 2 lanes to 4 lanes	\$0
Constrained	2027-2030	13	413	Loveland	SH 402 Widening	Boyd Lake Ave	I-25	Widen from 2 lanes to 4 lanes	\$13,500,363
Constrained	2031-2040	13	415	Loveland	SH 402 Widening	US 287	St. Louis	Widen from 2 lanes to 4 lanes	\$6,668,778
Constrained	2031-2040	13	479	Greeley	WCR-54 / 37th St Widening	WCR 17	SH257	Widen from 2 lanes to 4 lanes	\$25,364,836
Constrained	2041-2050	13	478	Greeley	WCR-54 / 37th St Widening	SH 257	77th Ave / 83rd Ave/ Two Rivers Parkway	Widen from 2 lanes to 4 lanes	\$54,109,288
Constrained	2027-2030	14	1215	Johnstown	High Plains Parkway Widening	US 34	Ronald Reagan	Widen from 2 lanes to 4 lanes	\$3,855,304
Constrained	2027-2030	14	1217	Johnstown	High Plains Parkway New Road	LCR20C	LCR18	Widen from 2 lanes to 4 lanes	\$19,276,521
Constrained	2031-2040	14	1218	Johnstown	High Plains Parkway New Road	LCR18	LCR16	New 4 lane road	\$19,740,461
Constrained	2027-2030	14	1219	Johnstown	High Plains Parkway New Road	LCR16	2500 ft N of LCR14	New 4 lane road	\$7,710,608
Constrained	2024-2026	14	1220	Johnstown	High Plains Parkway New Road	2500 ft N of LCR14	LCR14	New 4 lane road	\$5,836,747
Constrained	2024-2026	14	1221	Johnstown	High Plains Parkway Widening	Juniper	SH60	Widen from 2 lanes to 4 lanes	\$6,985,431
Constrained	2024-2026	14	1222	Johnstown	High Plains Parkway New Road	SH60	2500 ft S of SH 60	New 4 lane road	\$7,708,000
Constrained	2031-2040	14	1223	Johnstown	High Plains Parkway New Road	2500 ft S of SH 60	WCR46	New 4 lane road	\$9,870,230
Constrained	2041-2050	14	1224	Johnstown	High Plains Parkway New Road	WCR46	WCR44	New 4 lane road	\$25,269,459
Constrained	2027-2030	14	320	Berthoud/Weld County	WCR-9.5 New Road	WCR 44 / SH 56	WCR32	New 2 lane road	\$35,809,180
Constrained	2027-2030	15	968	Loveland	Centerra Parkway Widening	Crossroads Blvd	0.5 miles south	Widen from 2 lanes to 4 lanes	\$4,621,208
Constrained	2027-2030	15	1907	Windsor	LCR 5 Widening	LCR 30	SH 392	Widen from 2 lanes to 4 lanes	\$5,169,086
Constrained	2031-2040	15	421	Loveland	N Fairgrounds Ave Widening	Rodeo Rd.	71st St. (CR 30)	Widen from 2 lanes to 4 lanes	\$20,960,279
Constrained	2031-2040	15	1019	Timnath	Timnath Bypass/Parkway New Road	N of LCR 40	LCR 38	New 2 lane road	\$3,714,868
Constrained	2024-2026	16	352	Fort Collins	Timberline New Road 1	Giddings	Mountain Vista	New 2 lane road	\$8,136,788
Constrained	2027-2030	16	420	Loveland	Boyd Lake Extension	SH 402	LCR 20C	New 2 lane road	\$7,989,923
Constrained	2027-2030	16	1013a	Loveland	Boyd Lake Extension	Hwy 402	E County Rd 16	New 2 lane road	\$5,707,088
Constrained	2027-2030	16	1014b	Loveland	Boyd Lake Extension	E County Rd 16	Hwy 60	New 2 lane road	\$3,247,401
Constrained	2031-2040	16	313	Loveland	Boyd Lake Widening 3	LCR 20C	US 34	Widen from 2 lanes to 4 lanes	\$3,528,608
Constrained	2031-2040	16	356	Fort Collins	Timberline Widening 3	Mountain Vista	N of Vine	Widen from 2 lanes to 4 lanes	\$15,602,448
Constrained	2041-2050	16	1704	Fort Collins / Larimer County / Loveland	New Road UP: LCR 11 to LCR 9	LCR 11 south of SH 392	LCR 9 north of Valley Oak Dr	New 4 lane road	\$51,594,058
Constrained	2031-2040	17	329	Larimer	LCR 17 Widening	LCR 32	LCR 30	Widen from 2 lanes to 4 lanes	\$7,429,737

Fiscal Constraint	Staging Period	RSC	Project ID	Agency	Project Name	Extent N/W	Extent S/E	Improvement Type	YOE Cost in 2024+
Constrained	2031-2040	17	328	Larimer/ Loveland	LCR 17 Widening	CR 16/28th St SW	CR 14/SH 60	Widen from 2 lanes to 4 lanes	\$10,851,871
Constrained	2031-2040	17	446	Fort Collins	Shields Widening	Harmony	Hilldale	Widen from 2 lanes to 4 lanes	\$10,663,939
Constrained	2031-2040	17	418	Loveland	Taft Ave Widening 2	23rd St. SW	28th St SW / LCR 16	Widen from 2 lanes to 4 lanes	\$16,032,764
Constrained	2024-2026	18	442	Fort Collins	Taft Hill Widening	Harmony	Brixton	Widen from 2 lanes to 4 lanes	\$9,993,565
Constrained	2031-2040	18	330	Larimer	LCR 19 Widening	LCR 32	LCR 30	Widen from 2 lanes to 4 lanes	\$7,429,737
Constrained	2024-2026	19	1909	Windsor	WCR-13 Widening	Kaplan Dr	Crossroads	Widen from 2 lanes to 4 lanes	\$4,756,709
Constrained	2027-2030	19	1503	Timnath	LCR 1 Widening	Harmony Rd	South GMA	Widen from 2 lanes to 4 lanes	\$13,189,510
Constrained	2031-2040	19	1908	Windsor	WCR-13 Widening	SH-392	Kaplan Dr	Widen from 2 lanes to 4 lanes	\$5,250,521
Constrained	2041-2050	19	1207	Johnstown	WCR-13 Widening	WCR 46	WCR 44	Widen from 2 lanes to 4 lanes	\$13,140,827
Constrained	2031-2040	20	1914	Windsor	WCR-17 Widening	WCR-62 / Crossroads	US-34	Widen from 2 lanes to 4 lanes	\$7,113,226
Constrained	2031-2040	21	1601	Severance	WCR 27 New Road	SH 14	WCR 74	New 2 lane road	\$8,443,153
Constrained	2031-2040	22	102	Evans	35th Ave New Road	49th Street	WCR 35 / WCR 394	New 4 lane road	\$38,808,199
Constrained	2031-2040	22	1020	Evans / Weld County	35th Ave Widening	WCR-394	US-85	Widen from 2 lanes to 4 lanes	\$22,403,863
Constrained	2024-2026	23	1900	Windsor	Harmony Road Widening	WCR-15	SH-257	Widen from 2 lanes to 4 lanes	\$5,285,232
Constrained	2027-2030	23	205	Fort Collins	Harmony Road Widening	College	Boardwalk	Widen from 4 lanes to 6 lanes	\$12,582,013
Constrained	2027-2030	23	1504	Timnath	Harmony Widening	I-25	LCR-1	Widen from 4 lanes to 6 lanes	\$7,536,863
Constrained	2027-2030	25	355	Evans	65th Avenue Widening	WCR-54/37th St	49th St	Widen from 2 lanes to 4 lanes	\$9,373,275
Constrained	2024-2026	26	312	Loveland	Crossroads Blvd Widening	Centerra	LCR 3	Widen from 2 lanes to 4 lanes	\$12,111,404
Constrained	2027-2030	26	498	Windsor	Crossroads Blvd New Road	SH 257	WCR 23	New 4 lane road	\$20,676,342
Constrained	2027-2030	26	1904	Windsor	Crossroads Widening	LCR 3	WCR 13	Widen from 2 lanes to 4 lanes	\$3,962,966
Constrained	2024-2026	28	348	Fort Collins	Prospect Widening	Summit View	I-25	Widen from 2 lanes to 4 lanes	\$9,142,458
Constrained	2024-2026	28	1507	Fort Collins	Prospect Widening	Sharp Point	Summit View	Widen from 2 lanes to 4 lanes	\$3,063,162
Constrained	2031-2040	29	448	Greeley	4th St New Road	WCR 17	83rd Ave.	New 2 lane road	\$82,435,717
Constrained	2031-2040	22, 26	506	Weld County	WCR-35 (35th Ave) Widening	SH 392	O Street	Widen from 2 lanes to 4 lanes	\$19,763,100
Total Constrained									\$1,269,538,733

Unconstrained Capacity Projects on RSCs									
Fiscal Constraint	Staging Period	RSC	Project ID	Agency	Project Name	Extent N/W	Extent S/E	Improvement Type	YOE Cost in 2024+
Unconstrained	2027-2030	1	9006	CDOT	Prospect and I-25 Park and Ride	N/A	N/A	Park and Ride	\$5,743,428
Unconstrained	2031-2040	1	467a	CDOT	I-25 GP Widening Segment 5	SH56	WCR 38	Widen from 2 to 3 general purpose lanes (each direction)	\$71,412,312
Unconstrained	2031-2040	1	475	CDOT	I-25 GP Widening Segment 6	SH402	SH56	Widen from 2 to 3 general purpose lanes (each direction)	\$142,824,625
Unconstrained	2031-2040	1	468b	CDOT	I-25 GP Widening Segment 7&8	SH14	SH402	Widen from 2 to 3 general purpose lanes (each direction)	\$139,709,516
Unconstrained	2027-2030	2	496	Greeley	US34 and 83rd Ave Interchange	N/A	N/A	New interchange	\$34,460,570
Unconstrained	2031-2040	2	1005a	CDOT / Loveland / Johnstown / Greeley / Evans / Weld	US 34 Widening	LCR 3 (MP 97.8)	MP 113.65	Widen from 4 lanes to 6 lanes	\$436,000,000
Unconstrained	2031-2040	2	497	Greeley	US34 and 65th Ave SPUI or interchange	N/A	N/A	New interchange	\$105,018,106
Unconstrained	2031-2040	2	495	Greeley	US34 and Promontory Parkway SPUI or interchange	N/A	N/A	New interchange	\$41,978,803
Unconstrained	2041-2050	2	494	Greeley	US34 and WCR17 interchange	N/A	N/A	New interchange	\$51,206,594
Unconstrained	2041-2050	6	424	Fort Collins	US 287 / College Widening	Fossil Creek	Trilby	Widen from 4 lanes to 6 lanes	\$18,775,751
Unconstrained	2041-2050	6	425	Fort Collins	US 287 / College Widening	Harmony	Fossil Creek	Widen from 4 lanes to 6 lanes	\$14,508,535
Unconstrained	2041-2050	8	439	Fort Collins	Mulberry Widening	Timberline	Summit View	Widen from 4 lanes to 6 lanes	\$3,622,723
Unconstrained	2041-2050	8	440	Fort Collins	Mulberry Widening	Riverside	Timberline	Widen from 4 lanes to 6 lanes	\$28,981,785
Unconstrained	2041-2050	8	441	Fort Collins	Mulberry Widening	Summit View	I-25	Widen from 4 lanes to 6 lanes	\$18,113,616
Unconstrained	2024-2026	10	404	Johnstown/CDOT	SH-60 Widening	I-25	WCR-15	Widen from 2 lanes to 4 lanes	\$21,588,459
Unconstrained	2031-2040	12	432	Fort Collins	Carpenter Widening	Lemay	County Road 9	Widen from 2 lanes to 4 lanes	\$13,124,848
Unconstrained	2041-2050	12	426	Fort Collins	Carpenter Widening	County Road 9	I-25	Widen from 2 lanes to 4 lanes	\$7,245,446
Unconstrained	2041-2050	12	438	Fort Collins	Carpenter Widening	College	Lemay	Widen from 2 lanes to 4 lanes	\$10,868,170
Unconstrained	2027-2030	13	477	Evans / Greeley	WCR-54 / 37th St Widening	77th Ave / 83rd Ave/ Two Rivers Parkway	47th Ave	Widen from 2 lanes to 4 lanes	\$34,131,844
Unconstrained	2031-2040	13	406	Johnstown	LCR-18 / WCR-54 Widening	I-25	WCR-17	Widen from 2 lanes to 4 lanes	\$20,640,166
Unconstrained	2027-2030	14	1216	Johnstown	High Plains Parkway Widening	Ronald Reagan	LCR 20C	Widen from 2 lanes to 4 lanes	\$7,710,608

Fiscal Constraint	Staging Period	RSC	Project ID	Agency	Project Name	Extent N/W	Extent S/E	Improvement Type	YOE Cost in 2024+
Unconstrained	2027-2030	15	1500	Timnath	Main St Widening	Harmony Rd	South GMA	Widen from 2 lanes to 4 lanes	\$13,189,510
Unconstrained	2041-2050	15	1505	Timnath/ Larimer	LCR-5 Widening	SH-14	Realigned Main Street	Widen from 2 lanes to 4 lanes	\$59,741,027
Unconstrained	2041-2050	15	10190	Timnath	Timnath Bypass/Parkway New Road	N of LCR 40	LCR 38	Widen from 2 lanes to 4 lanes	\$16,483,390
Unconstrained	2031-2040	16	427a	Fort Collins	Timberline Widening and overpass	N of Vine	S of Vine	Widen from 2 lanes to 4 lanes	\$15,602,448
Unconstrained	2031-2040	16	444a	Fort Collins	Timberline Widening	Mulberry	Prospect	Widen from 2 lanes to 4 lanes	\$26,249,696
Unconstrained	2031-2040	16	428	Fort Collins	Timberline Widening	Drake	Horsetooth	Widen from 4 lanes to 6 lanes	\$10,663,939
Unconstrained	2031-2040	16	429	Fort Collins	Timberline Widening	Horsetooth	Harmony	Widen from 4 lanes to 6 lanes	\$10,663,939
Unconstrained	2041-2050	16	431	Fort Collins	Timberline Widening	S of Vine	Mulberry	Widen from 2 lanes to 4 lanes	\$27,170,424
Unconstrained	2041-2050	16	430	Fort Collins	Timberline Widening	Prospect	Drake	Widen from 4 lanes to 6 lanes	\$20,830,658
Unconstrained	2031-2040	17	436	Fort Collins	Shields Widening	Trilby	Carpenter / LCR 32	Widen from 2 lanes to 4 lanes	\$6,562,424
Unconstrained	2031-2040	17	437	Fort Collins	Shields Widening	Hilldale	Trilby	Widen from 2 lanes to 4 lanes	\$6,562,424
Unconstrained	2041-2050	17	1800	Berthoud	LCR 17 Widening	LCR 14	US 287	Widen from 2 lanes to 4 lanes	\$8,534,432
Unconstrained	2041-2050	17	1506	Loveland/ Larimer	LCR-17 Widening	LCR-30	LCR-28/57th Street	Widen from 2 lanes to 4 lanes	\$44,805,770
Unconstrained	2031-2040	18	443	Fort Collins	Taft Hill Widening	Brixton	GMA	Widen from 2 lanes to 4 lanes	\$11,887,579
Unconstrained	2031-2040	19	1205	Johnstown	WCR-13 Widening	WCR 50	SH 60	Widen from 2 lanes to 4 lanes	\$28,218,380
Unconstrained	2031-2040	19	1206	Johnstown	WCR-13 Widening	SH 60	WCR 46	Widen from 2 lanes to 4 lanes	\$10,145,934
Unconstrained	2031-2040	19	1203	Johnstown	WCR-13 Widening	WCR-60	WCR-54	Widen from 2 lanes to 4 lanes	\$22,521,890
Unconstrained	2031-2040	20	405	Johnstown	Downtown Loop Road North	WCR-17	SH-60	New 2 lane road	\$7,345,216
Unconstrained	2031-2040	20	1200	Johnstown	WCR-17 Widening	WCR-56	WCR-54	Widen from 2 lanes to 4 lanes	\$12,637,282
Unconstrained	2024-2026	22	101	Evans	35th Ave Widening	37th St / WCR 54	49th St	Widen from 2 lanes to 4 lanes	\$8,040,800
Unconstrained	2027-2030	23	600	Severance	WCR-74 Widening	SH-257	WCR-21	Widen from 2 lanes to 4 lanes	\$12,976,128
Unconstrained	2041-2050	23	601	Severance	WCR-74 Widening	WCR-21	WCR-27	Widen from 2 lanes to 4 lanes	\$27,491,635
Unconstrained	2041-2050	28	473	Fort Collins	Prospect Widening	Overland	Taft Hill	Widen from 2 lanes to 4 lanes	\$11,773,850
Total Unconstrained									\$1,647,764,682



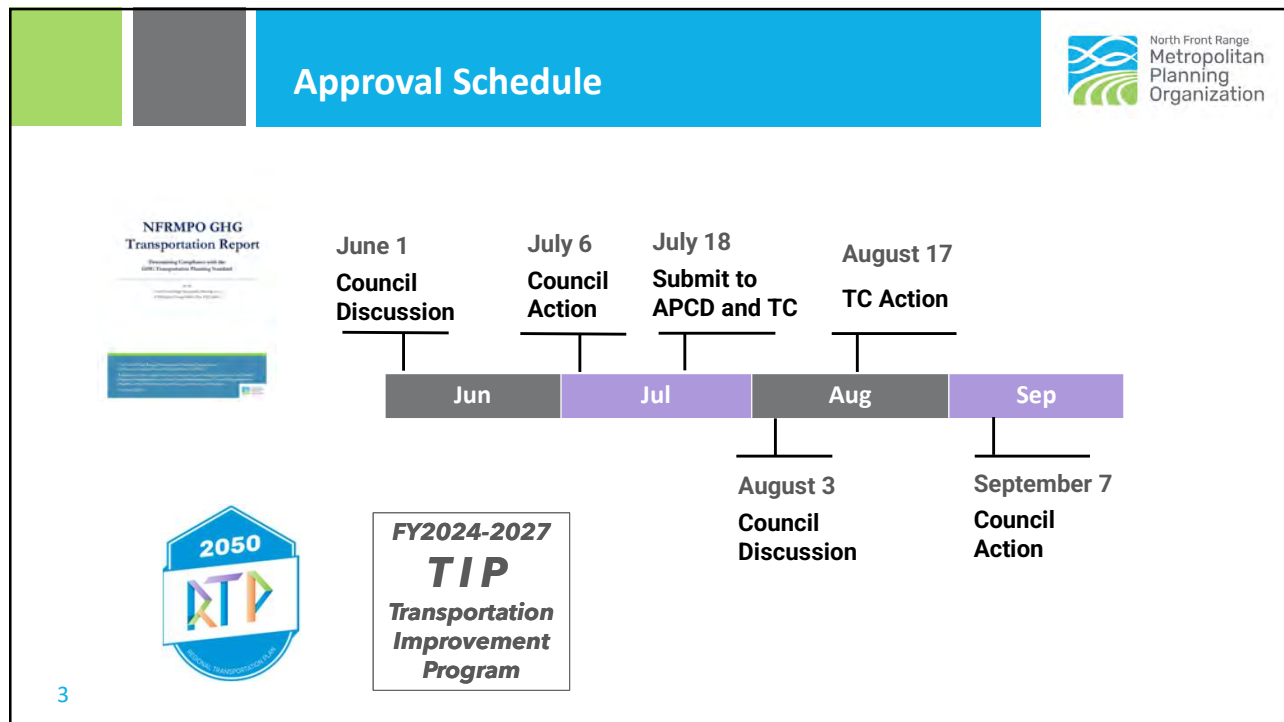
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Colorado's Greenhouse Gas (GHG) Transportation Planning Standard

- Standard adopted by Colorado Transportation Commission (TC) in 2021
- MPOs and CDOT must demonstrate reductions in GHG emissions compared to “baseline plans”
- Applies to NFRMPO Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP)
- GHG Report reviewed by Air Pollution Control Division (APCD); approved by TC

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3

GHG Transportation Report

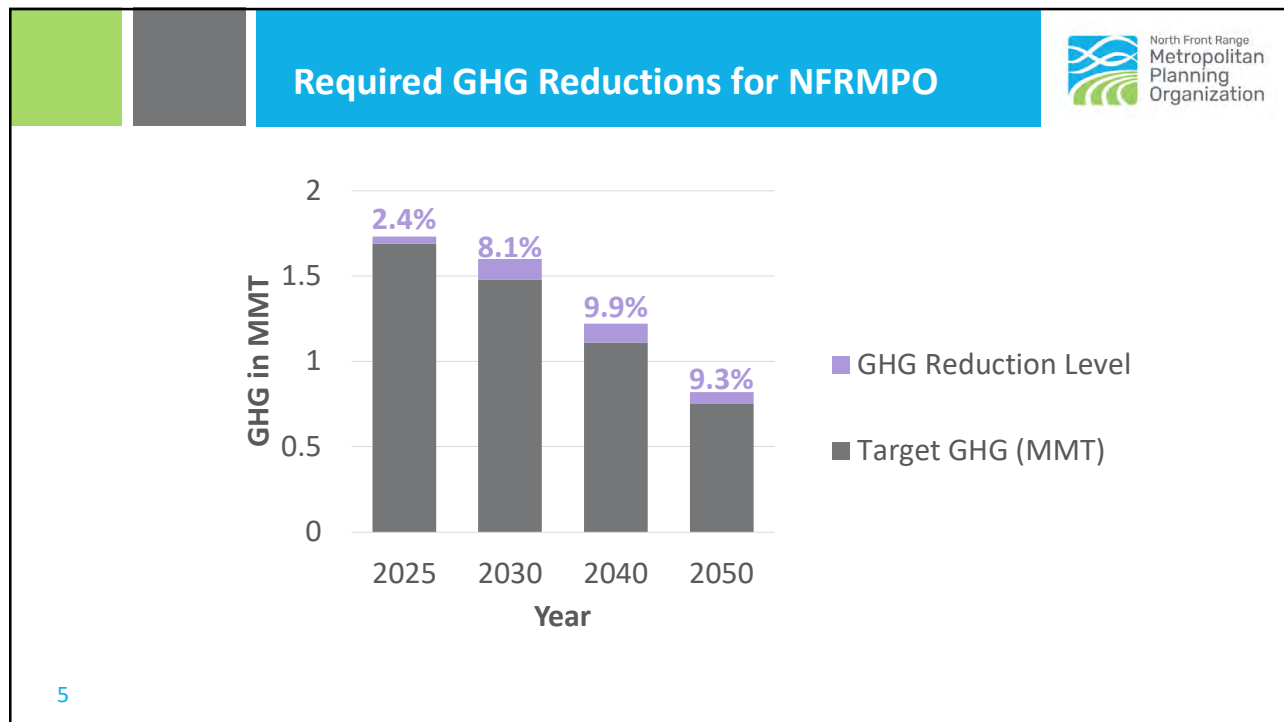
- **What's New?**
 - Additional compliance year (for the TIP)
 - Updated land use and travel model
 - Updated roadway projects
 - More specificity on GHG strategies
- **What's Staying the Same**
 - Baseline is the 2045 RTP (from 2019)
 - Draft model runs show compliance in all years
 - Same four sets of GHG strategies
 - No GHG mitigation measures

2050 RTP

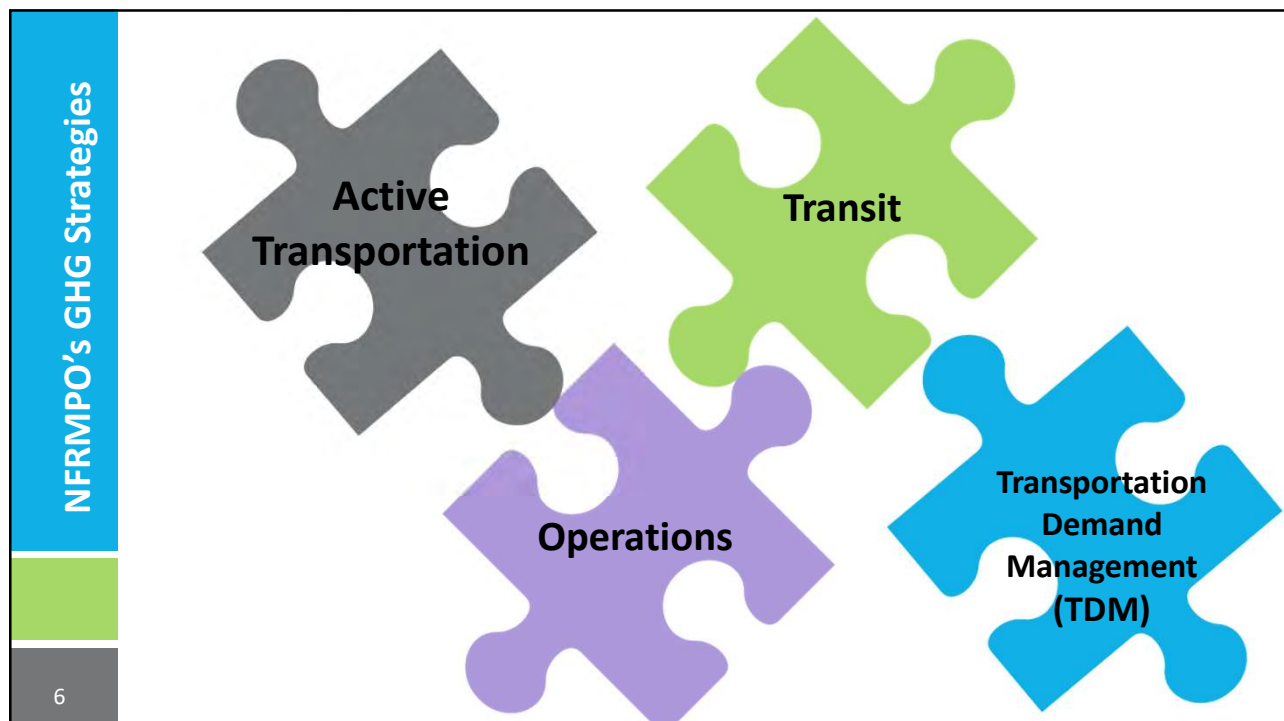
FY2024-2027 TIP
Transportation Improvement Program

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6

Updated Plan



- **Transit**
 - Expanded transit service on COLT, Bustang, and Regional Transit Corridors (RTCs)
 - Five mobility hubs / transit centers
- **Transportation Demand Management (TDM)**
 - Increase in work from home since 2019
 - Development of regional TDM programs by 2030 with expansion through 2050



Image Credit: CDOT

Mobility Hubs



Image Credit: NFRMPO

Bustang

7

7

Updated Plan



- **Operations**
 - Arterial signal timing improvements
- **Active Transportation**
 - Expansion of local bicycle and pedestrian network
 - Increased prevalence of e-bikes and scooters



Image Credit: Fort Collins

Bike and Scooter Share



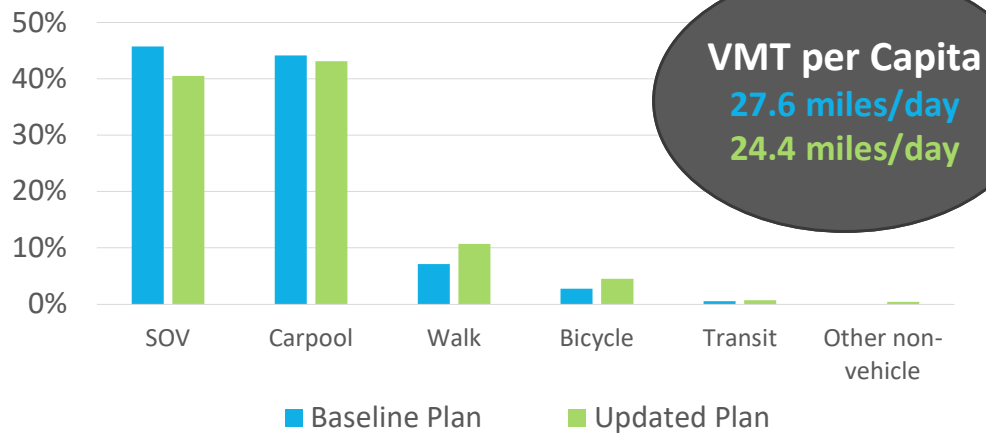
Image Credit: Greeley

On-Street Bike Lanes

8

8

Draft 2050 Forecast: Then and Now



9

Draft NFRMPO GHG Emissions Analysis



GHG Emissions Results, Million Metric Tons (MMT) per Year					
	2025	2027*	2030	2040	2050
Baseline Plan: 2045 RTP	1.73	1.68	1.60	1.22	0.82
Updated Plan: 2050 RTP	1.68	1.60	1.48	1.11	0.72
Reduction	0.05	0.08	0.12	0.11	0.11
Required GHG Reduction Level	0.04	0.08	0.12	0.11	0.07
Pass/Fail	PASS	PASS	PASS	PASS	PASS

*All values for 2027 are interpolated.
Note: Some numbers in this chart may not add correctly due to rounding.

10

Questions



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11

11