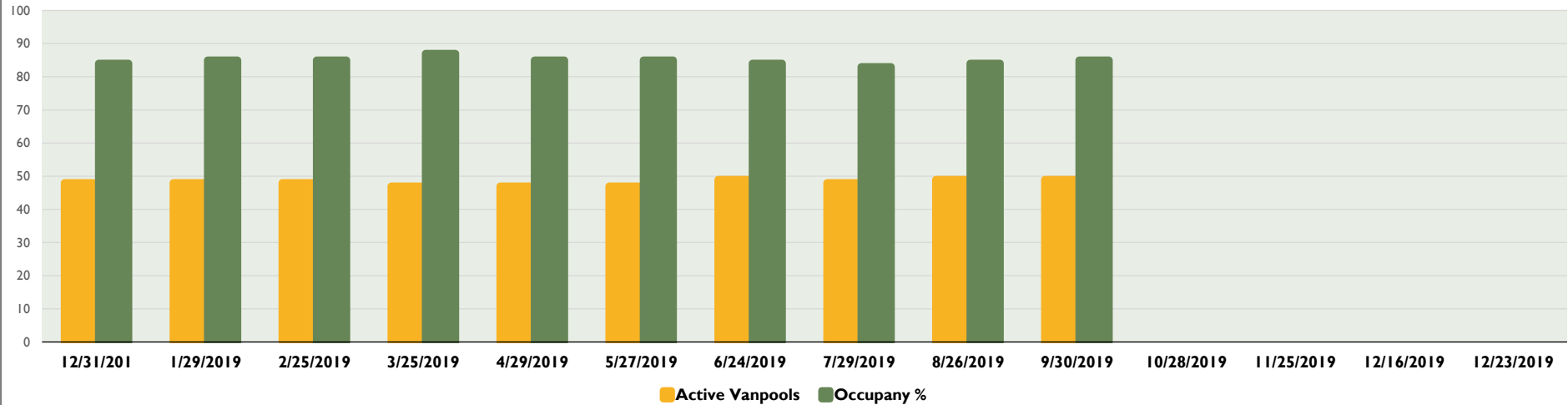


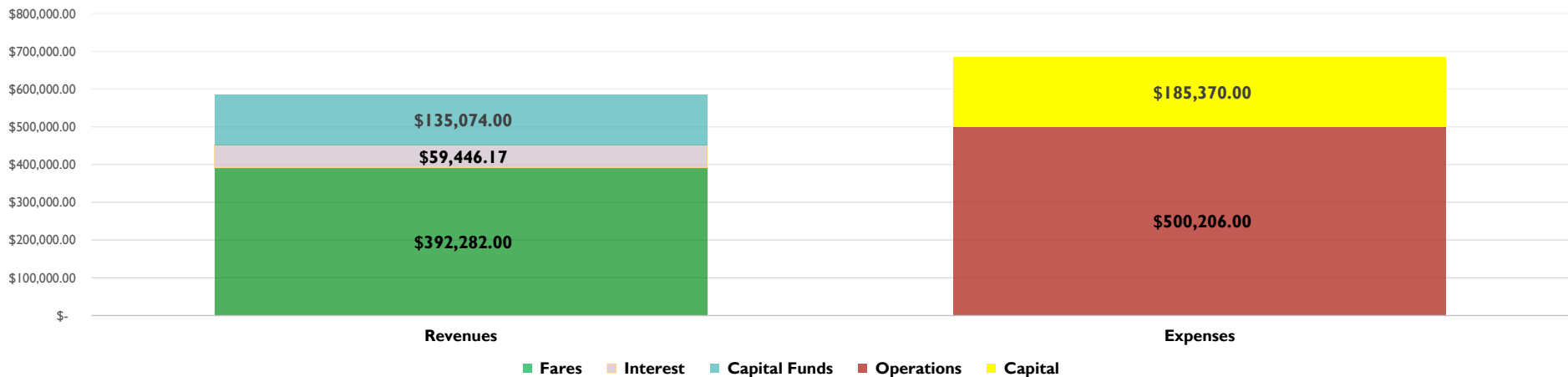
# VanGo Vanpool Program 3rd Quarter Stats Year-to-Date



### Active Vanpools & Occupancy Rate

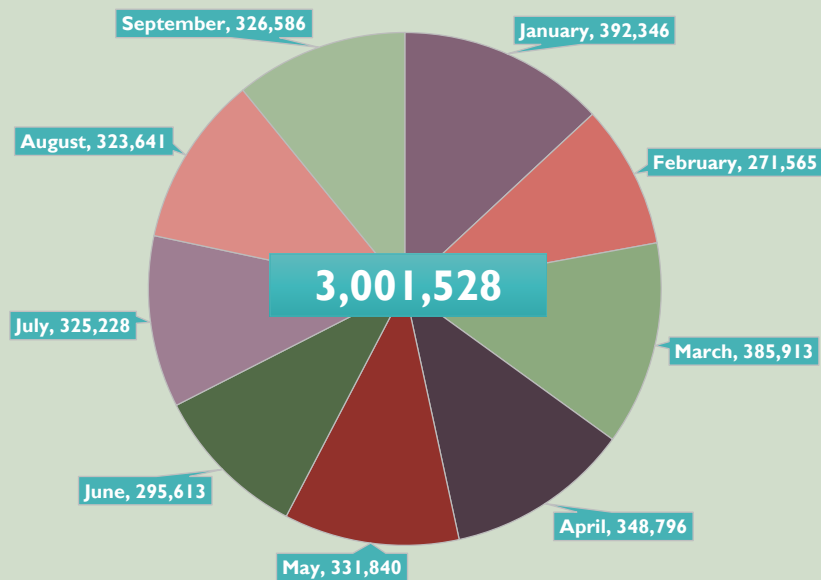


### Revenue/Expenses Year-To Date

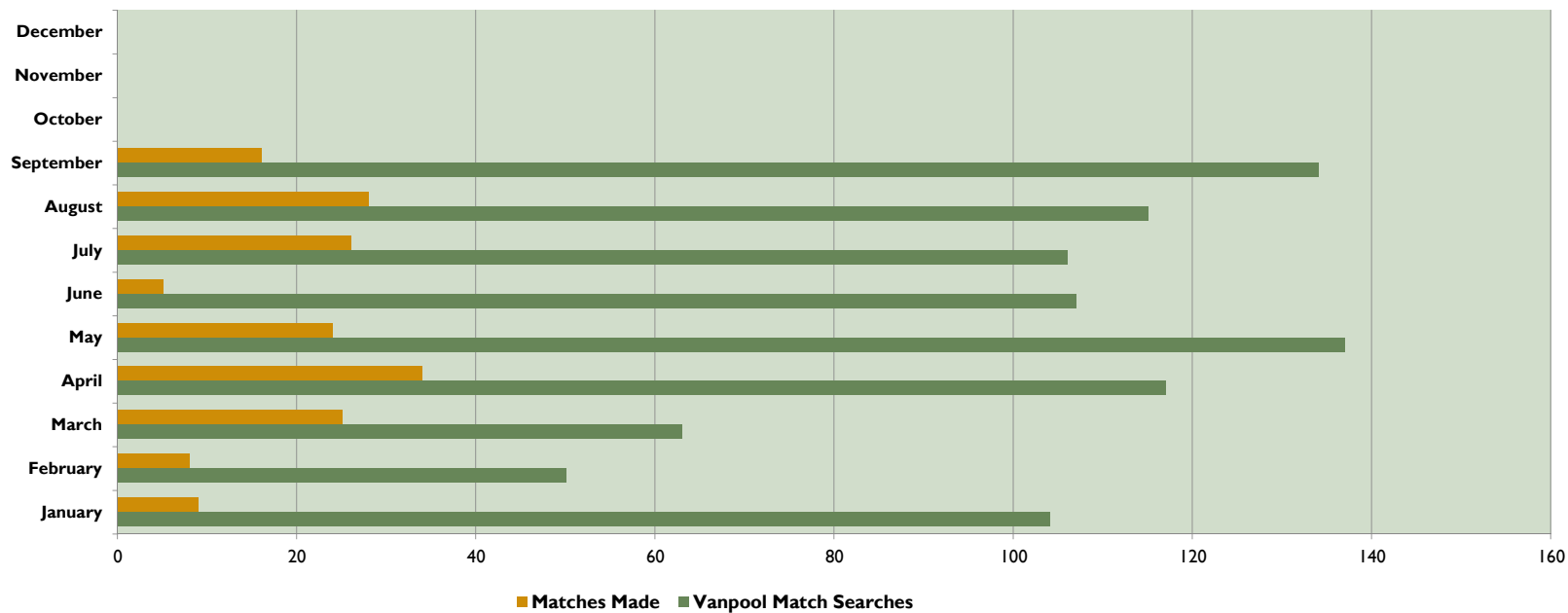


VanGo is the nationally-recognized vanpool program of the North Front Range Metropolitan Planning Organization (NFRMPO). This dashboard provides a snapshot of the programs operations and financials. The document will be updated online quarterly to provide transparency regarding the operating efficiency of the program to the hundreds of vanpoolers it serves.

### Miles Saved- Year to Date:



### Match Search Tracking [www.vangovanpools.org](http://www.vangovanpools.org)



IT IS A FOOL'S ERRAND TO CONCEIVE THAT COLORADO MIGHT  
MEET THE EPA STANDARD FOR OZONE.

MY PLEA TONIGHT IS FOR SOMEONE, ANYONE, TO STAND UP  
AND PROTEST THE EPA OZONE STANDARDS.

COLORADO SHOULD NOT EXPEND OUR TIME, TALENT AND  
TREASURE ON SOME NEEDLESS FEDERAL GOVERNMENT  
OVERREACH, ESPECIALLY WHILE OUR CITIZENS DESERVE YOUR  
FOCUS ON HIGHER PRIORITY HEALTH ISSUES.

COLORADO HAS CLEAN AIR! WHY DO YOU THINK PEOPLE  
MOVE HERE?

Evelyn King, October 3, 2019  
6321 West County Road 18, Loveland, CO  
Dking49326@aol.com

## **SOURCES OF VOC AND NO<sub>x</sub> EMISSIONS, INCLUDING BIOGENICS:**

Colorado should receive a reward for our clean air and emission reductions - but instead, we are getting a KICK-IN-THE-PANTS from the EPA forcing us to reclassify ozone from moderate to serious, because of the **IMPOSSIBLE** standards.

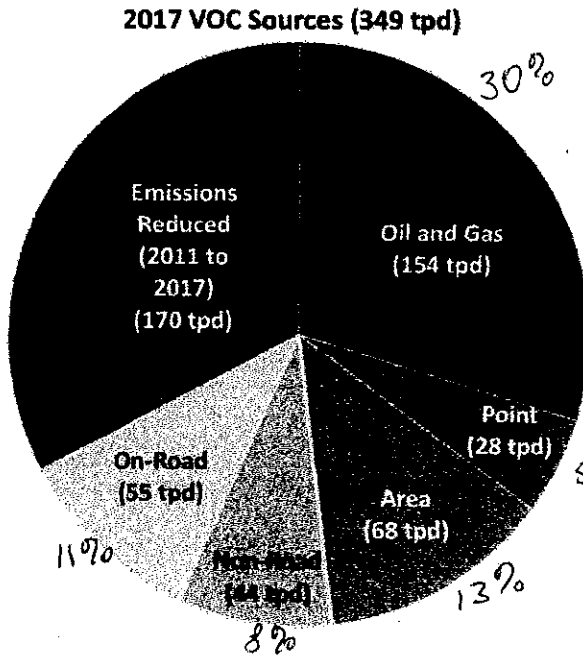
I've added the Biogenic Sources to the report Amanda Brimmer provided at the last meeting, from information she provided to me. I've also added percentage numbers of the new totals (underlined), including the Biogenic Sources. **Please note that VOC Biogenic Sources are the largest percentage VOC source at 33%.**

**The reductions on this report are impressive** and in spite of substantial population growth, the corresponding growth in Vehicle Miles Traveled and substantial growth in our Oil & Gas development.

**It will be a huge waste of time, talent and treasure to require minor sources to be permitted. This will cause a huge impact to our small businesses and Colorado jobs.**

Evelyn King, October 3, 2019

## Sources of VOC Emissions - What is Being Done?

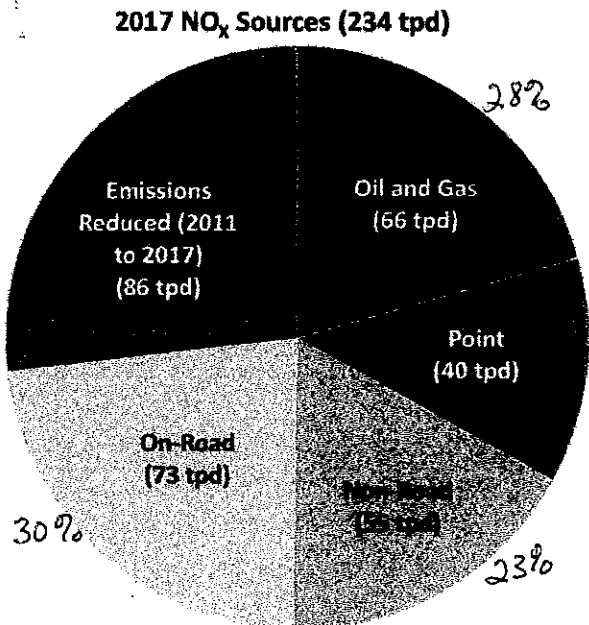


- ✓ New car/truck standards
- ✓ Cleaner fuels/ Alternative fuels
- ✓ Inspection/maintenance programs
- ✓ New vehicle technologies
- ✓ Transportation/land use policies
- ✓ Travel reduction programs
- ✓ Oil and Gas (O&G)
  - New regulations established by Air Quality Control Commission in Feb. 2014
- ✓ Lawn and garden equipment
- 5% change-out programs

Plus 170.5 tpd Biogenic = 519.5 tpd total  
 33%



## Sources of NO<sub>x</sub> Emissions - What is Being Done?



- ✓ New car/truck standards
- ✓ Cleaner fuels/ Alternative fuels
- ✓ Inspection/maintenance programs
- ✓ Diesel retrofits
- ✓ New vehicle technologies
- ✓ Transportation/land use policies
- ✓ Travel reduction programs
- ✓ Power Plants
  - Clean Air Clean Jobs Act
  - Regional Haze program
- 17% Renewable energy/ energy efficiency programs
- ✓ Small engine standards
- ✓ Non-road engine standards
- ✓ Locomotive engine standards
- ✓ Emissions Standards for Large Engines and Boilers

Plus 6.1 tpd Biogenic = 240.1 tpd total  
 2%



**EXTREME OZONE STANDARD:**

**A Huge 17.6% Standard Reduction:** 85-ppb (parts per BILLION) down to lowest standard of 70-ppb

**PROBLEMS WITH THE STANDARD:**

**It's a One-Size-Fits-All Standard for All States,** but Colorado is unique in altitude variations, topography with high mountains and low valleys causing changing winds, as well as large forests, and many lakes/reservoirs, all of which can impact ozone concentrations. Our highly variable daily high readings are always caused by all types of weather anomalies, not day-to-day changes in precursor emission sources.

**One Monitor with the 3-Year Average Violation** can put the whole region in non-compliance. This year, Chatfield (78), NREL and Rocky Flats (76) monitors put us all in non-compliance for the year. for the 75-ppb standard, but the 3-year average includes 2018 with seven monitors above 75- ppb, even though 2017 had no readings above 75-ppb.

**It's An Extreme Standard Calculation:**

**4<sup>th</sup> Maximum Number of Highest 8-Hour Daily Periods:** Just 4 days out of 365 days, or 1% of all days for a year for each monitor station.

**3-Year average** of 4<sup>th</sup> maximum numbers each year. **One high year impacts 3 consecutive years.**

**No part of the calculation indicates long term health exposure to ozone.**

**OZONE DAY COUNTS FOR COLORADO** (all active sites in AQS),  
**AND THE NFR** (sites in AQS)

**BY YEAR:** For 2000 through 2018

**BY OZONE STANDARDS IN PARTS PER BILLION:** 85-ppb, 75-ppb and 70-ppb

This report shows the number of days that were above the Air Quality Standard for that year.

Note: We have met the 85-ppb standard in different years; however, there are no years where we are even close to meeting the 8-hour, 4<sup>th</sup> maximum, 3-year average AQS for the 75-ppb standard, and, certainly not the 70-ppb standards.

I'm not a statistician, but in reviewing these numbers, I believe it is **statistically impossible to meet the 75-ppb or 70-ppb AQS**, especially with our high biogenic sources, and when all of the different weather variabilities are included.

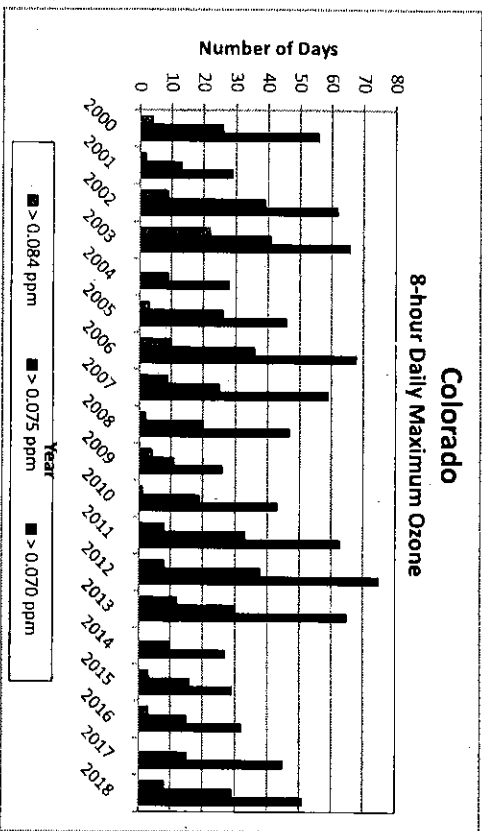
Where is the data to show the magnitude of health outcome improvements among the different standards? Do we have unhealthy, long-term exposure, to dangerous ozone levels?

Evelyn King, October 3, 2019

Ozone day counts

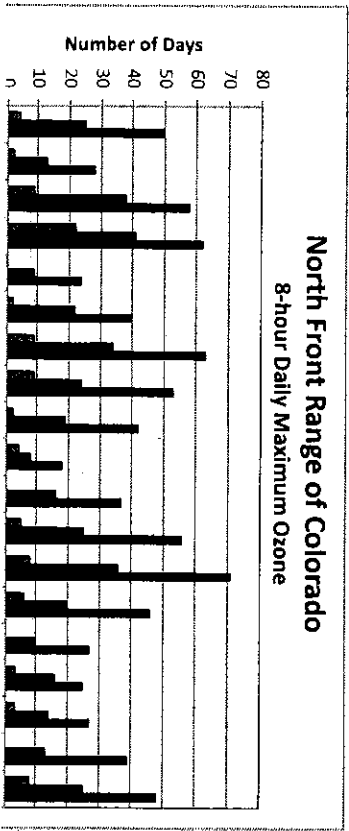
Statewide - All active sites in AQS for each year

Year	>=0.085 ppm # days	>0.075 ppm # days	>0.070 ppm # days
2000	4	26	56
2001	2	13	29
2002	9	39	62
2003	22	41	66
2004	0	9	28
2005	3	26	46
2006	10	36	68
2007	9	25	59
2008	2	20	47
2009	4	11	26
2010	1	19	43
2011	8	33	63
2012	8	38	75
2013	12	30	65
2014	0	10	27
2015	3	16	29
2016	3	15	32
2017	0	15	45
2018	8	29	51



North Front Range sites in AQS

Year	>=0.085 ppm # days	>0.075 ppm # days	>0.070 ppm # days
2000	4	25	50
2001	2	13	28
2002	9	38	58
2003	22	41	62
2004	0	9	24
2005	2	22	40
2006	9	34	63
2007	9	24	53
2008	2	19	42
2009	4	8	18
2010	0	16	37
2011	5	25	56
2012	8	36	71
2013	6	20	46
2014	0	10	27
2015	3	16	25
2016	3	14	27
2017	0	13	39
2018	8	25	48





**IMPOSSIBLE OZONE STANDARD:**

The right-hand column of this report shows the Highest Allowable 4<sup>th</sup> Maximum 8-Hour Average Value for each monitor site for 2020. If the parts-per-billion numbers are exceeded, we will be in non-compliance for 2020. The following sites are circled to show the IMPOSSIBLE, extremely low ozone readings that will be required for each site in order to meet the 70-ppb standard in 2020:

Chatfield State Park	51-ppb
NREL	57-ppb
Rocky Flats	59-ppb
Fort Collins West	60-ppb
Highland	62-ppb
Boulder Reservoir	66-ppb
Mines Peak (non-reg.)	67-ppb

In looking at the columns of actual data for the years 2017, 2018 and 2019, you will note the large differences in ozone readings from year-to-year. However, the sources producing precursor emissions don't change much from year-to-year. **It's the weather!**

I think you have to agree with Chatfield State Park at 83-ppb in 2018 and 78-ppb in 2019, it will be IMPOSSIBLE for that site to report a **51-ppb in 2020**. However, we would have a good chance to meet the 85-ppb. And, Colorado doesn't have unlimited time, talent and treasure to spend on every tiny part-per-billion of ozone.

Evelyn King, October 3, 2019

Impossible Standard 4

The 8-hour ozone standard is written such that attainment is met if the 3-year average of the 4<sup>th</sup> max. value from each of the 3 years is less than or equal to 70 ppb. This table provides information on the 4th max. values for 2017 and 2018, the current 4<sup>th</sup> max. value for 2019, the current 3-year average, and the max. possible level for 2019 in order to remain in attainment of the ozone standard. Based on the current values, projected max. possible levels for 2020 are also included.

AQS #	Site Name	2017 4 <sup>th</sup> Maximum 8-Hour Average Value (ppb)	2018 4 <sup>th</sup> Maximum 8-Hour Average Value (ppb)	2019 (thru 9/30) 4 <sup>th</sup> Maximum 8-Hour Average Value (ppb)	2017 - 2019 3-Year Average 4 <sup>th</sup> Maximum Value (ppb)	2019 Highest Allowable 4th Maximum 8-Hour Average Value (ppb)	2020 Highest Allowable 4th Maximum 8-Hour Average Value (ppb)
08-001-3001	Welby	68	69	60	65	75	83
08-005-0002	Highland	72	77	73	74	63	62
08-005-0006	Aurora East	69	72	66	69	71	74
08-013-0014	Boulder Reservoir	73	77	69	73	62	66
08-019-0006	Mines Peak (non-regulatory)	70	78	67	71	64	67
08-031-0002	CAMP	67	71	67	68	74	74
08-031-0026	La Casa	68	72	65	68	72	75
08-035-0004	Chatfield State Park	74	83	78	78	55	51
08-041-0013	Colo. Spgs. - USAF Academy	69	73	65	69	70	74
08-041-0016	Manitou Springs	70	72	64	68	70	76
08-045-0012	Rifle - Health	59	65	57	60	88	90
08-047-0003	Black Hawk (start 7/9)	---	---	69	---	---	---
08-059-0005	Welch	75	66	72	71	71	74
08-059-0006	Rocky Flats - N	75	81	72	76	56	59
08-059-0011	NREL *	74	80	75	76	58	57
08-059-0013	Aspen Park	68	71	63	67	73	78
08-069-0011	Fort Collins - West	75	81	71	75	56	60
08-069-1004	Fort Collins - CSU	66	72	64	67	74	76
08-077-0020	Pallsade - Water	64	69	63	65	79	80
08-083-0006	Cortez	59	67	60	62	86	85
08-123-0009	Greeley - Weld Tower	72	73	65	70	67	74
08-029-0007	BLM - Paonia (started 4/6/18)	---	54	59	---	---	99
08-051-9991	EPA - Gothic CASTNET	66	69	67	67	77	76
08-067-1004	USFS - Shamrock (thru n/a)	66	71	n/a	n/a	75	n/d
08-067-7001	SUIT - Ignacio	69	67	63	66	76	82
08-067-7003	SUIT - Bondad	69	67	63	66	76	82
08-069-0007	NPS - Rocky Mtn. NP	67	74	65	68	71	73
08-083-0101	NPS - Mesa Verde NP	66	72	65	67	74	75
08-103-0006	BLM - Rangely	64	68	64	65	80	80

NOTE: Values above the 3-year average 4<sup>th</sup> maximum 8-hour standard of 70 ppb are highlighted in red, above the 75 ppb standard in orange.

NOTE: Data includes values that may be influenced by natural events.

\* NOTE: Wildfire influence exceptional events concurred by EPA for NREL for 9/2/17 and 9/4/17. NREL 4th max value of 76 ppb removed.



**COLORADO**  
Air Pollution Control Division  
Department of Public Health & Environment



**OZONE AND HEALTH:**

**What are Colorado's Health Issue Priorities?**

Colorado has huge health issues with **opioid use/overdose**; as well as, increasingly our youth and adults are **vaping**, which appears to be raising respiratory health issues with the possibly of real deaths; and not to mention the long-time **smoking addiction**. **Colorado must spend our limited time, talent and treasure on serious, priority, health issues.**

The EPA never provides scientific data showing improved health outcomes through ozone reduction. Their descriptions of studies on risks are littered with the words: "**can**", "**may**", "**might**", "**suggests**", "**is linked**" and "**can possibly**" which are words that are not scientific data to show we are even trying to solve a serious health problem.

There is no routinely reported State health data to indicate that the millions of dollars spent on trying to control ozone **actually improves health outcomes**. Some respiratory health issues have **no** trend correlation with ozone data.

Fort Collins focused on in-door air quality at one time and suggested their citizens should open the windows to reduce concentrations of poor air quality for health reasons. Now, Air Alerts for Ozone are sent, suggesting we should close our windows to keep ozone out. Which is worse?

Does anyone really care about citizen health and maintain priorities and methodologies to ensure the worst health issues are funded first?

Evelyn King, October 3, 2019

**MY FINAL SUGGESTIONS:**

**Nothing Proposed Will Decrease Ozone:**

Adding more monitors will do nothing to lower ozone, but will add on-going costs to an already greater than \$25,000,000 department, which your constituents pay for when purchasing products from businesses who are required to pay the fees for your approved regulations.

Lowering permits to minor source business emissions only adds huge, unneeded, costs to small businesses, which they must pass on to We the People. This effort provides very little emissions reduction and certainly not enough to meet the IMPOSSIBLE STANDARD. How can we encourage economic development with small businesses and then dump huge/costly regulations on them? The **EPA Potential to Emit "A Guide for Small Businesses" is 56 pages long.**

Spending money to add more ozone alerts is costly, and ozone is a low priority health concern. Weather is the critical component in ozone formation, so perhaps you should try to control the weather. Or, at least let the EPA know their ozone standard is IMPOSSIBLE to meet.

We don't need to spend money to expand the emissions testing program because it currently does little to change emissions, especially when a new vehicle isn't tested the first 7 years, indicating how clean the technology is. These costs impact lower income citizens the most, which is shameful.

The ALT Fuels Program is insanity and will do little to nothing to reduce ozone levels; however, is a huge waste of money. I hope this is not the reason RAQC has asked all MPO members to contribute extra money.

**Possible Solutions:**

**Water bodies and ozone:** We have large lakes/reservoirs close to the monitors that provide the highest ozone readings. You might investigate a similar issue in Michigan: "The highest O<sub>3</sub> concentrations in our region are observed along the shores of Lake Michigan. We typically observe these conditions when a surface high pressure system sets up just to the south of the lake"

**Perhaps a study of the high days to determine what the causes were – emissions or weather.**

Should we shut down the Bandimere Speedway? A quick look at the September 30, 2019 8-Hour Ozone Summary Report shows nine of the 1<sup>st</sup> thru 4<sup>th</sup> maximum days were on July 19<sup>th</sup> (and two more in the 5<sup>th</sup> maximum), when the National Final Races were held. July 23<sup>rd</sup> and 24<sup>th</sup> were also high ozone days.

**Poor indoor air quality concentrations** are known to be worse than the expansive open-air ozone emissions, which dissipate rather quickly. How much of the respiratory health concerns are really due to indoor air quality rather than ozone?

**Attached – A report from Raleigh, NC:** "This should shock everyone responsible for North Carolina's air quality, and the nation's energy policy." "After committing \$2 billion in tax credits, and more than \$1 billion in electricity overpayments for solar power, we now learn from Duke that nitrogen oxides have actually increased, and that CO2 may be headed in the wrong direction." Might Colorado have the same problem?



# Potential to Emit

## A Guide for Small Businesses

56 Pages  
for Small  
Businesses  
to comply

RALEIGH — A seven-month investigation and numerous public information requests have revealed the move to increase solar power might be leading to an increase in the very emissions alternative energy sources aim to reduce.

Duke spokeswoman Kim Crawford confirmed that increased solar power on the state's electric grid is increasing emissions of nitrogen oxide (NOx), a dangerous air pollutant. She said that reductions in carbon dioxide (CO2) emissions could also reverse if current solar growth continues without policy changes.

Climate advocates blame increases in manmade gases like CO2 for global warming and have promoted solar power as environmentally clean.

An increase in emissions triggers the need to rethink national energy policy, experts say.

Crawford provided measurements showing that even on sunny days — when solar power is at its maximum output — more NOx pollution is released into the air than would occur if no solar electricity were used and natural gas were used instead.

That's because traditional power plants — including cleaner burning natural gas plants — must scale back electric generation to accommodate solar energy surging onto the system when the sun rises, and power back up when the sun sets and solar energy dissipates. That starting and stopping reduces efficiency and incapacitates emission control devices, increasing pollutant levels.

On other days solar energy is erratic and can result in more frequent cycling of reserve sources, further decreasing power plant efficiency. This increased cycling can result in increased emissions and undue wear and tear on the expensive equipment.

Duke's data create new questions for policymakers and regulators in North Carolina. The state had 4,491 megawatts (MWs) of installed solar capacity in the second quarter of 2018, second only to California. Under current law, that is expected to jump to 6,800 MW by 2025 in Duke Energy's Carolinas and Progress regions.

Renewable energy advocates insist solar energy could replace fossil fuel-burning power plants to combat climate change. North Carolina created taxpayer-funded subsidies to support solar growth. Federal law mandates guaranteed government contracts to purchase solar power. North Carolina's interpretation of that law gave incentives to solar operators and the state has issued 60% of the nation's contracts under that federal mandate.

"After committing \$2 billion in tax credits, and more than \$1 billion in electricity overpayments for solar power, we now learn from Duke that nitrogen oxides have actually increased, and that CO2 may be headed in the wrong direction," said Donald van der Vaart, former secretary of the N.C. Department of Environmental Quality and State Energy Policy Advisor in the McCrory administration.

"This should shock everyone responsible for North Carolina's air quality, and the nation's energy policy," van der Vaart said.

"This issue deserves a re-look, and it needs to be done fast," Dan Kish, distinguished senior fellow at the Institute for Energy Research, said after reviewing Duke's data.

"It's great for the Wall Street financiers, and those in it to make a fast buck while the sun shines, but it's leaving us with an increasingly unstable grid and externalities such as more pollution," Kish said.

"The regulators have to remember that their job is to make sure that quick buck artists don't pick the pockets of consumers and leave them with a weaker, less resilient grid."

Steve Goreham, a policy advisor to the Heartland Institute who writes and lectures on energy, climate, and pollution, thinks Duke's evidence bears deeper scrutiny by policymakers. It is the first instance he is aware of in which a utility revealed internal data showing solar energy increases harmful emissions from gas-fired backup generators.

"Typically this kind of stuff doesn't go public," Goreham said. "It's hard to get data on this."

Goreham said studies in Colorado and The Netherlands concluded that adding wind power to the electric grid increased CO2 emissions. He and Kish said it makes sense those same principles would apply to solar energy.

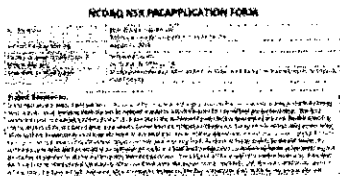
Not everyone agrees. A 2013 report by the National Renewable Energy Laboratory and other researchers concluded CO2 emissions are negligible when wind and solar are added to the electric grid. NOx emissions might be reduced slightly more than expected, but sulfur dioxide pollutants could increase.

That study relied on computer simulations and hypothetical scenarios, while Duke's numbers are based on recorded data from full-scale operations.

Duke is attempting to mitigate the situation. In response to public records requests, DEQ released documents showing Duke is seeking revisions to its air quality permits. Duke wants regulators to relax restrictions at several of its power plants to handle the surge of solar growth.

It's unclear how long the state Department of Environmental Quality has known about the solar-linked pollution, why it's been allowed to persist, and why lawmakers and the public have not been informed solar energy increases NOx emissions. DEQ spokeswoman Sharon Martin said it would be premature to comment while Duke's applications are under review.

Utility officials pitched the plan to state environmental regulators at an Aug. 23, 2018, preapplication meeting. Crawford said Duke filed formal applications on March 26 of this year. Despite repeat inquiries about the status of the applications, DEQ did not provide copies until June.



Excerpt from Duke Energy preapplication packet delivered to the N.C. Division of Air Quality: (Click to make larger)

Under its current permits in the heavily regulated market, Duke must completely shut down the backup combustion turbines when solar peaks under a full sun, then restart them when the sun recedes.

Duke wants DEQ to issue new permits allowing combustion turbines to throttle up and down from a "low load" idling operation instead of switching completely off and on as solar waxes and wanes. In its permit applications Duke said that would lower pollutant emissions and reduce stress on equipment.

In a series of e-mail exchanges for this article, Crawford provided information from a team of Duke subject matter experts confirming NOx emissions would be lower if there were no solar power on the electric grid.

Without any solar power in the mix, "a typical combined cycle combustion turbine emits NOx at approximately 9-11 lb/hr, assuming 24 hours of 'normal' operation," Crawford said. That is equivalent to 264 pounds of NOx emissions daily. When those same plants are operated to supplement solar power facilities, daily emissions more than double to 624 pounds a day, based on a table in Duke's application.

If DEQ agrees to Duke's alternative operating scenario, a combustion turbine would emit 381 pounds of NOx daily — still 44% more pollution than operating without any solar power on the grid.

"In seeking to amend their permits, Duke is doing the best they can given the solar mandates in North Carolina," Van der Vaart said.

The American Lung Association warns NOx can cause asthma in children and respiratory problems in vulnerable populations. NOx also contributes to the formation of ozone, smog and acid rain.

Nitrogen oxides are one of six pollutants for which national air quality standards under the Clean Air Act were created.

The EPA recently imposed a \$14.7 billion national settlement on automaker Volkswagen for producing vehicles that exceeded NOx emission limits. DEQ is the lead state agency developing a North Carolina mitigation plan with \$92 million from the VW consent decree.

The data on carbon dioxide emissions from Duke is less certain the NOx figures. "We expect a slight increase in CO2 emissions at the plant level from turndown versus shutting down and restarting," Crawford said.

In general, she said, increasing solar generation tends to decrease CO2 emissions if nuclear generation and other factors remain constant.

"As the amount of solar generation increases, however, this effect will diminish and could reverse at some point due to decreasing room for more efficient generation," said Crawford. More lower efficiency generators, designed for short cycles, could ultimately be used to provide contingency power for intermittent solar, according to Crawford.



A solar panel installation in Clay County | Clay County Documentary Project, David Smart Collection

She cited studies that concluded utilities must cut solar power off from the electric grid more frequently as solar production expands. That's because more electricity is produced than can be used or exported to other states.



North Carolina law does not allow utilities to shut off solar power when it's not needed, with a few minor exceptions. Crawford said if Duke does not win approval of its permit modifications to allow combustion turbines to idle instead of turning off, the utility is left with only two viable options to deal with growing solar generation.

It could export excess energy to other regions, but transmission capabilities are limited.

Alternatively, Duke could dial down nuclear generation, but doing so would increase CO2 emissions. Crawford said that "it's possible that nuclear generation could be impacted by solar; however, we cannot say that definitively at this point."

Kish said if utilities take nuclear plants offline to accommodate solar energy it would reverse previous reductions of CO2 emissions, and wreck the economics of the grid.

"Renewable energy sounds good, but it performs terribly. If you want electricity available when you need it, you don't want intermittent, unreliable, renewable energy," Kish said. "It's like a cancer on an efficient grid, with its ups-and-downs forcing other sources to pick up the slack in the most inefficient ways, which, in some cases, are more polluting."

# 10-Year Strategic Pipeline of Projects Work Session

NFRMPO Planning Council



North Front Range  
Metropolitan  
Planning  
Organization

October 3, 2019

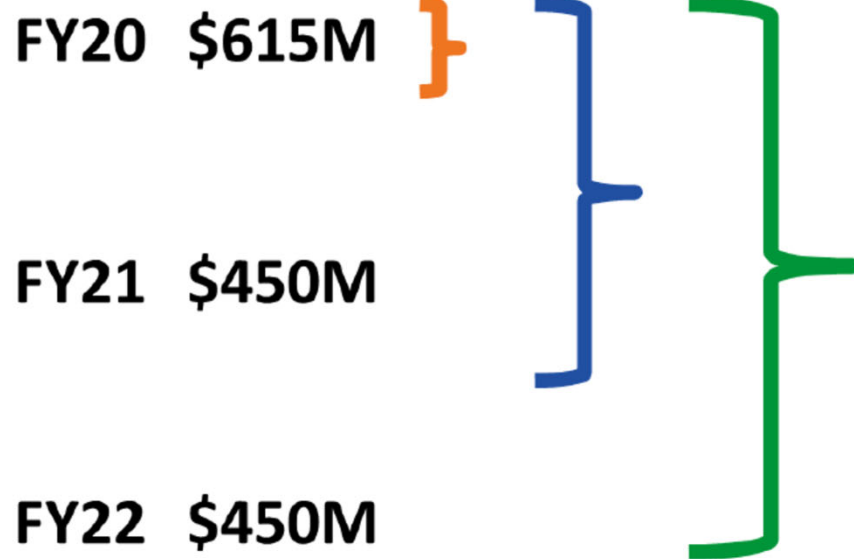
## Purpose of Work Session



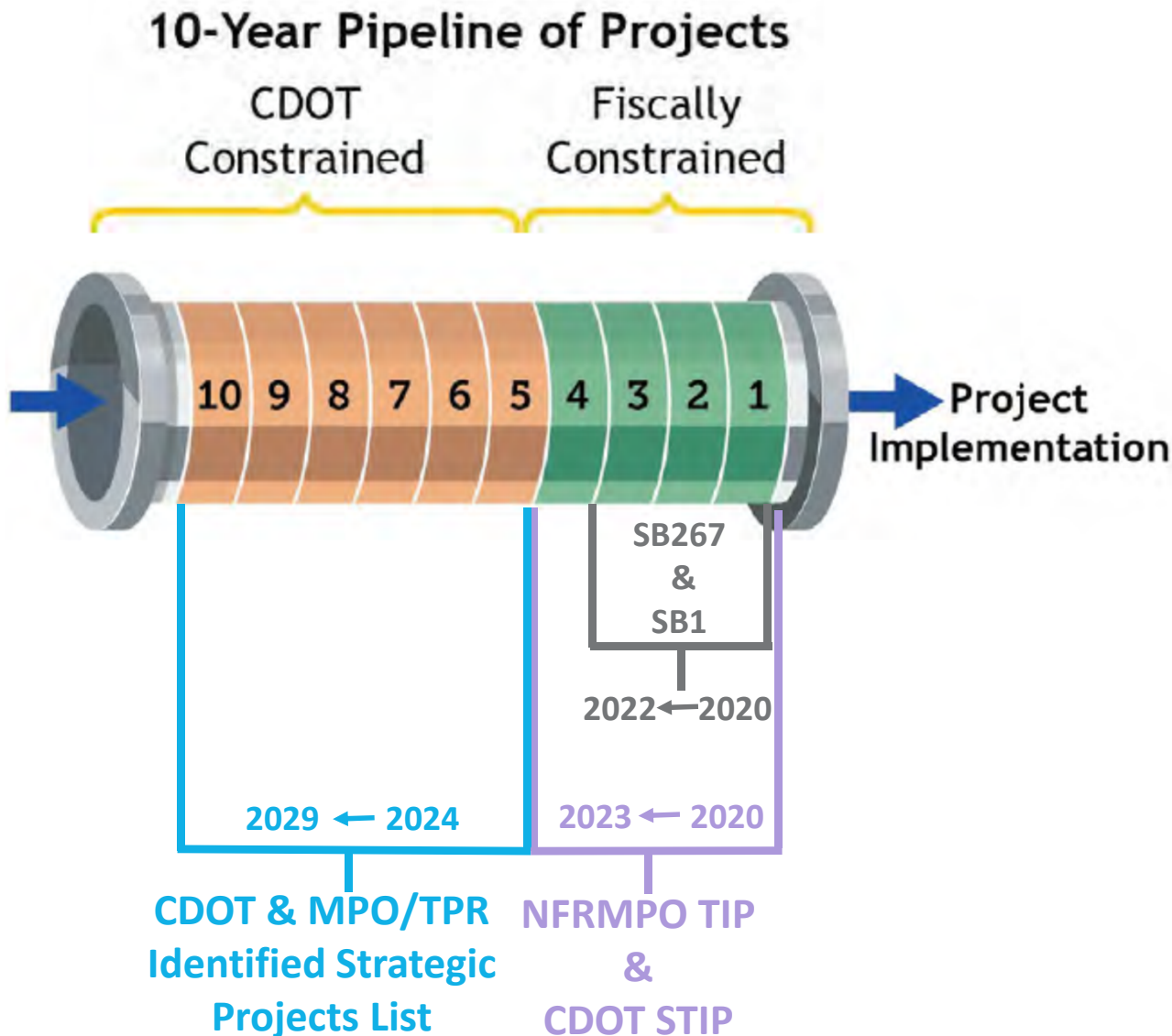
**The Planning Council needs to identify projects now:**

- 1) For upcoming SB267 and SB1 funding.**
- 2) To create a regional list for CDOT to incorporate into their upcoming Statewide 10 Year Strategic List of Projects.**
- 3) To have a regional list of priorities for consistent messaging.**

## What funding levels should we assume?



***ANSWER: Identify projects for all three years of known and potential funding.***



- First 4 years (FY2020-2023) of the 10-Year Pipeline are the fiscally constrained MPO TIPs and CDOT's STIP
- The remaining 6 years (FY2024-2029) are CDOT constrained and projects included in the list are not guaranteed to be funded



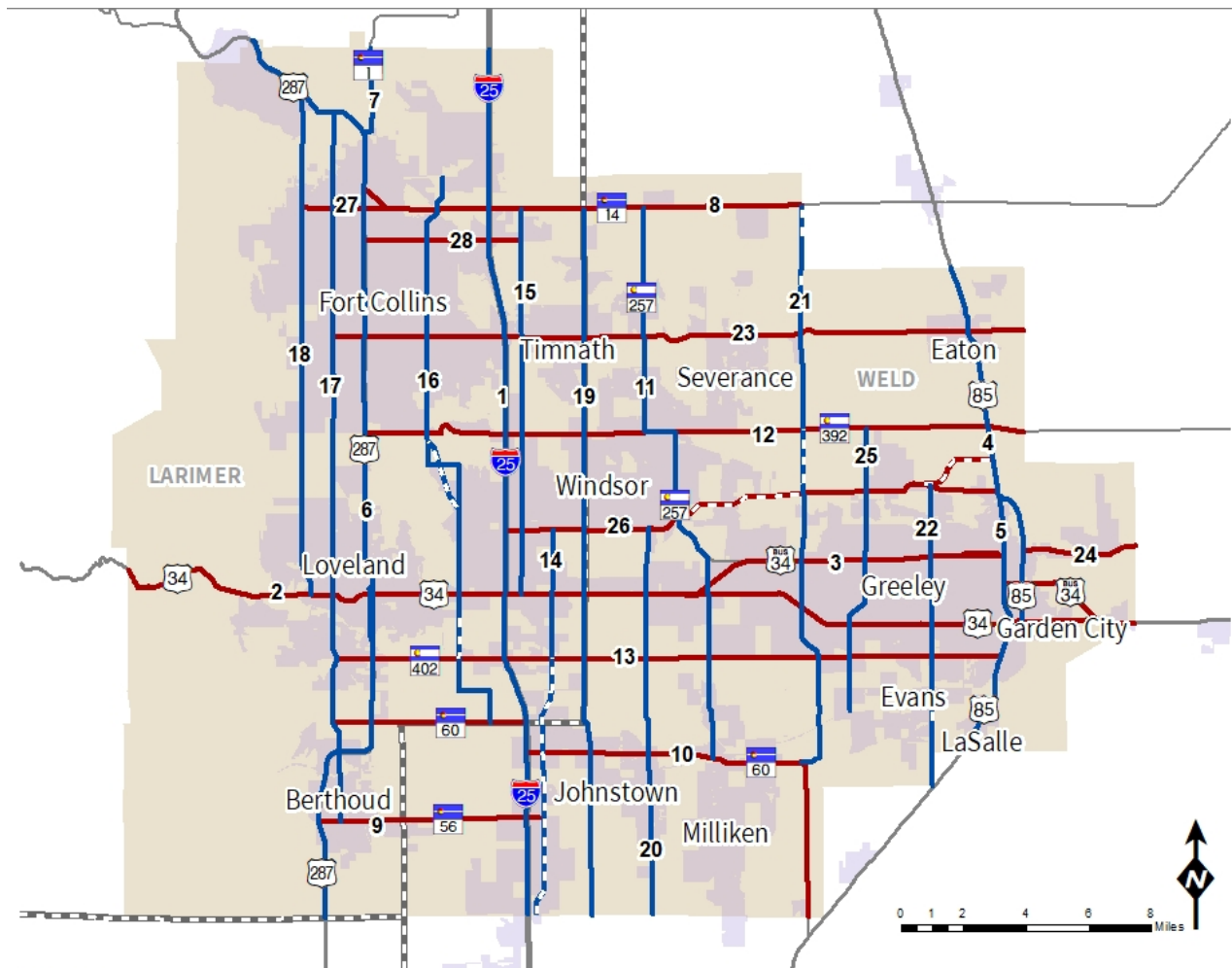
# Potential Criteria

Safety	Mobility	Economic Vitality	Asset Management	Strategic Nature	Regional Priority
<i>Potential Criteria</i>	<i>Potential Criteria</i>	<i>Potential Criteria</i>	<i>Potential Criteria</i>	<i>Potential Criteria</i>	<i>Potential Criteria</i>
Extent to which project addresses safety deficiencies at locations with known safety issues (as indicated by Level of Safety Service (LOSS) 3 or 4), or other known or projected safety issues	Extent to which project addresses a mobility need, including congestion reduction, improved reliability, new or improved connections, eliminations of "gaps" or continuity issues, new or improved multimodal facilities, improves efficiency through technology, or improved access to multimodal facilities	Extent to which a project supports the economic vitality of the state or region, including supporting freight, agricultural, or energy needs, or providing or improving access to recreation, tourism, military, job, or other significant activity centers	Extent to which project addresses asset life, including improving Low Drivability Life pavement or poor rated structures	Strategic nature of project, regional or statewide significance, leverages innovative financing and partnerships, and balances short term needs vs. long term trends.	Priority within the Region, based on planning partner input including priorities expressed in Regional Transportation Plans
<i>TC Guiding Principle</i>	<i>TC Guiding Principle</i>	<i>TC Guiding Principle</i>	<i>TC Guiding Principle</i>	<i>TC Guiding Principle</i>	<i>TC Guiding Principle</i>
Safety	Mobility Programs and projects leveraging new technology development Integrated System Impacts and Benefits	Economic Impacts Statewide Equity	Asset Management / Preservation Benefits Impact of Asset Management decision on asset life and function	Financial Leverage, Financial innovation, and Partnerships Short term projects vs. Accommodating Long-Term Projects trends How does the system look in 30 years and how does this project fit in?	Is the project informed by extensive collaborative work already done on Prop 110 project list and existing regional / local planning and what are the reasons for deviating from these? Regional flexibility / related smaller scale projects

## Discussion



**Does Planning Council want to identify a regional project without going through criteria and a selection process?**



**Legend**

- |  |  |   |
|--|--|---|
| <b>North-South RSCs</b>  | <b>East-West RSCs</b>  |  County Boundary |
|  Existing |  Existing |  NFRMPO Boundary |
|  Proposed |  Proposed |   |

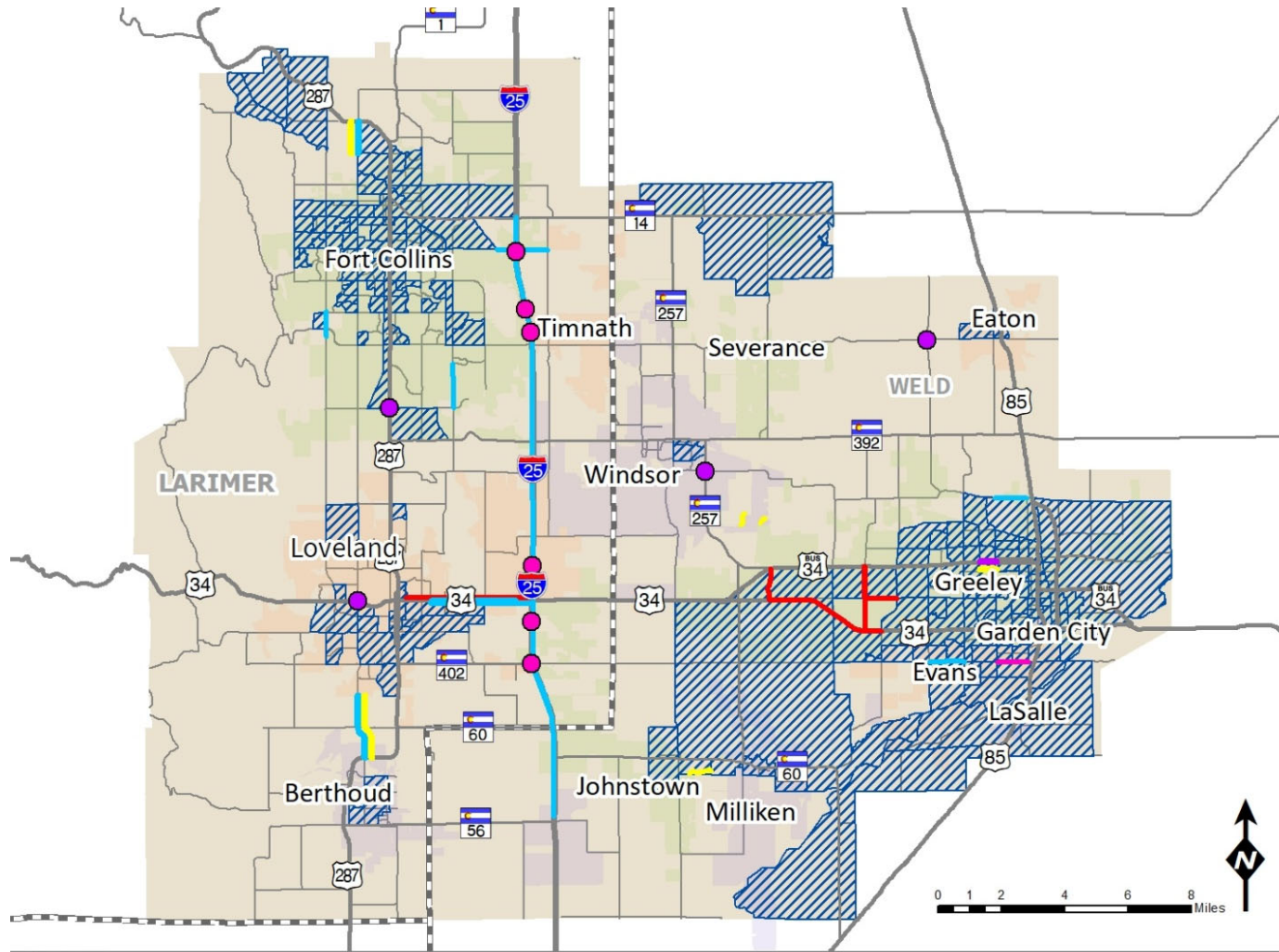
July 2019  
Sources: CDOT, NFRMPO





RSC	Name	Centerline Miles		Description
		Current	Buildout	
1	I-25	27.1	27.1	Northern MPO boundary to southern MPO boundary
2	US 34	34.4	34.4	Western MPO boundary to eastern MPO boundary
3	US 34 Business Route	15.5	15.5	US 34 MP 102 on the west to US 34 MP 115.5 on the east
4	US 85	16.3	16.3	WCR 70 on the north to WCR 48 on the south
5	US 85 Business Route	4.4	4.4	US 34 on the south to US 85 on the north
6	US 287	32.5	32.5	Northern MPO boundary to southern MPO boundary, includes Berthoud Bypass
7	SH 14	14.2	14.2	US 287 on the west to eastern MPO boundary
8	SH 1	2.8	2.8	Northern MPO boundary to US 287 on the south
9	SH 56	7	7	US 287 on the west to the RSC 14 extension on the east
10	SH 60	19.8	19.8	US 287 on the west to the southern MPO boundary
11	SH 392	21.3	21.3	US 287 on the west to US 85 on the east
12	SH 257	18.6	18.6	SH 14 on the north to SH 60 on the south, includes offset in Windsor

# FY2020-2023 TIP Projects



## Legend

- Bridge Reconstruction
- CNG Fueling Station
- Intersection Improvements
- Bike/Ped Facility
- Operation Improvements
- Pavement Improvements
- Roadway Widening
- Environmental Justice Areas
- County Boundary
- NFRMPO Boundary

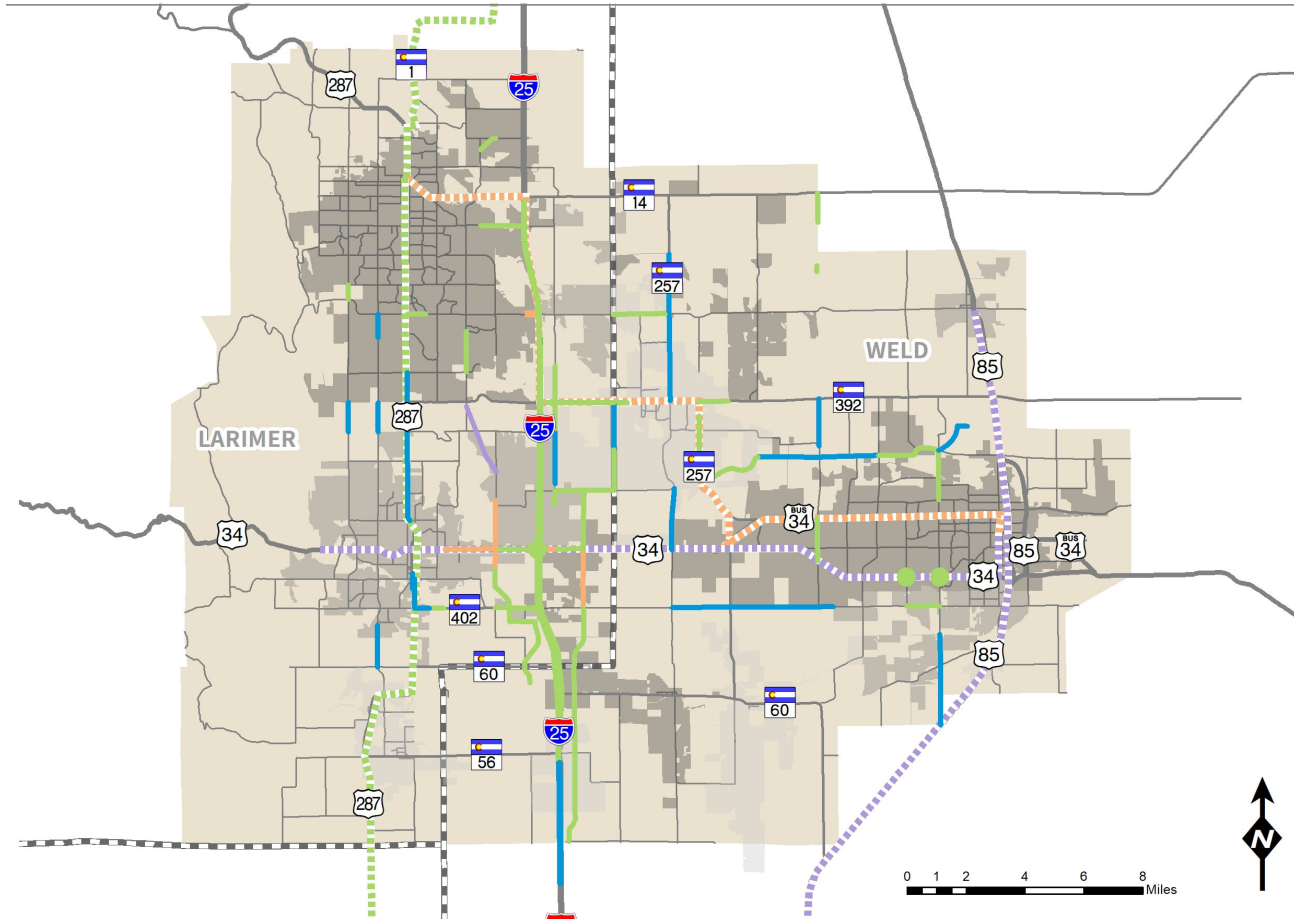
North Front Range  
 Metropolitan  
 Planning  
 Organization  
 March, 2019  
 Sources: CDOT, NFRMPO

10-Year Strategic Pipeline  
of Projects Work Session

# 2045 RTP Fiscally Constrained Projects (On-System)

RSC	Facility	Project Limits	Improvement Type	Length (Mi)	Remaining Project Cost (\$M, YOY)	Sponsor
1	I-25	SH402 to SH14	Add tolled express lane in each direction, improve the US34 interchange, and other interchange reconstructions	14.0	\$360.0	CDOT
1	I-25	SH56 to SH402	Add tolled express lane in each direction and interchange reconstructions	5.0	\$0.6	CDOT
1	I-25	WCR38 to SH56	Add tolled express lane in each direction and interchange reconstructions	3.0	\$236.9	CDOT
2	US34	Boyd Lake Ave to Boise Ave	Widen from 4 lanes to 6 lanes	1.7	\$8.6	Loveland
2	US34	Centerra Pkwy to Rocky Mountain Ave	Widen from 4 lanes to 6 lanes	1.0	\$6.8	Loveland
2	US34	US34 and 35 <sup>th</sup> Ave	New interchange	N/A	\$34.5	Greeley
2	US34	US34 and 47 <sup>th</sup> Ave	New interchange	N/A	\$34.5	Greeley
2	US34	LCR3E to Centerra Pkwy	Widen from 4 lanes to 6 lanes	1.0	\$5.6	Loveland
2	US34	Rocky Mountain Ave to Boyd Lake Ave	Widen from 4 lanes to 6 lanes	1.0	\$5.6	Loveland
6	US287	SH402 to 1 <sup>st</sup> St	Widen from 4 lanes to 6 lanes	1.4	\$23.8	Loveland
6	US287	LCR32 to Trilby Rd	Widen from 4 lanes to 6 lanes	1.0	\$14.7	Fort Collins
6	US287	LCR30 to LCR32	Widen from 4 lanes to 6 lanes	1.0	\$7.0	Larimer/ CDOT
6	US287	29 <sup>th</sup> St to LCR30	Widen from 4 lanes to 6 lanes	3.1	\$12.8	Loveland
11	SH257	Crossroads Blvd to Garden Dr	Widen from 2 lanes to 4 lanes	2.2	\$4.6	Windsor
11	SH257	SH392 to WCR74	Widen from 2 lanes to 4 lanes	3.0	\$11.6	Windsor
11	SH257	WCR74 to WCR78	Widen from 2 lanes to 4 lanes	2.0	\$7.9	Windsor
12	SH392	LCR3 to Westgate Dr	Widen from 2 lanes to 4 lanes	1.5	\$1.8	Windsor
12	SH392	WCR21 to WCR19	Widen from 2 lanes to 4 lanes	1.0	\$3.6	Windsor
12	SH392	17 <sup>th</sup> St to LCR3	Widen from 2 lanes to 4 lanes	1.3	\$3.8	Windsor
13	SH402	Boise Ave to St. Louis Ave	Widen from 2 lanes to 4 lanes	0.5	\$6.7	Loveland
13	SH402	I-25 to LCR9	Widen from 2 lanes to 4 lanes	1.5	\$11.0	Loveland
13	SH402	St. Louis Ave to US287	Widen from 2 lanes to 4 lanes	0.5	\$6.0	Loveland

# 2045 RTP Fiscally Constrained Projects



## Legend

### Roadway Projects by Staging Period

- 2020
- 2021-2030
- 2031-2040
- 2041-2045

### Transit Projects by Staging Period

- - - 2020
- - - 2021-2030
- - - 2031-2040
- - - 2041-2045



County Boundary



NFRMPO Boundary

July 2019  
Sources: CDOT, NFRMPO

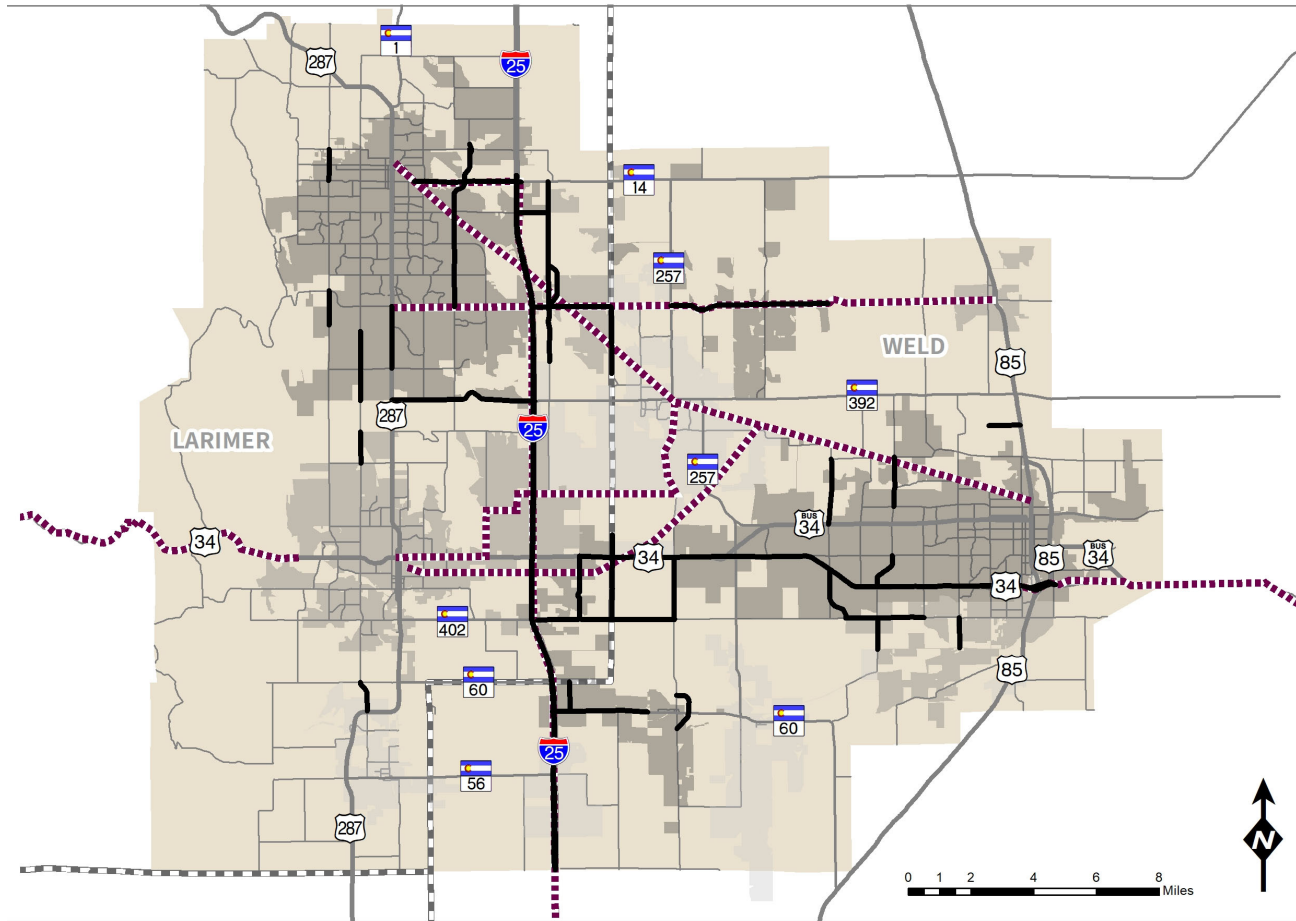


10-Year Strategic Pipeline  
of Projects Work Session

2045 RTP Fiscally Unconstrained  
Projects (On-System)

RSC	Facility	Project Limits	Improvement Type	Remaining Project Cost (\$M, YOY)	Agency
1	I-25	WCR 38 to SH56	Widen from 4 to 6 general purpose lanes	\$17.90	CDOT
1	I-25	SH56 to SH402	Widen from 4 to 6 general purpose lanes	\$27.80	CDOT
1	I-25	SH402 to SH14	Widen from 4 to 6 general purpose lanes	\$119.00	CDOT
2	US34	MP 113.65 to LCR3	Widen from 4 to 6 lanes	\$215.60	Multiple
6	US287	Trilby to Fossil Creek	Widen from 4 to 6 lanes	\$15.40	Fort Collins
6	US287	Fossil Creek to Harmony	Widen from 4 to 6 lanes	\$11.90	Fort Collins
8	SH14	Summit View to Timberline	Widen from 4 to 6 lanes	\$3.00	Fort Collins
8	SH14	Timberline to Riverside	Widen from 4 to 6 lanes	\$23.80	Fort Collins
8	SH14	I-25 to Summit View	Widen from 4 to 6 lanes	\$14.90	Fort Collins
10	SH60	WCR-15 to I-25	Widen from 2 to 4 lanes	\$23.40	Johnstown
12	SH392	1-25 to LCR9	Widen from 2 to 4 lanes	\$5.90	Fort Collins
12	SH392	Timberline to Lemay	Widen from 2 to 4 lanes	\$5.90	Fort Collins
12	SH392	LCR9 to Timberline	Widen from 2 to 4 lanes	\$5.90	Fort Collins
12	SH392	Lemay to College	Widen from 2 to 4 lanes	\$8.90	Fort Collins

# 2045 RTP Fiscally Unconstrained Projects



## Legend

### Fiscally Unconstrained Projects

— Roadway Projects

- - - - - Transit Projects



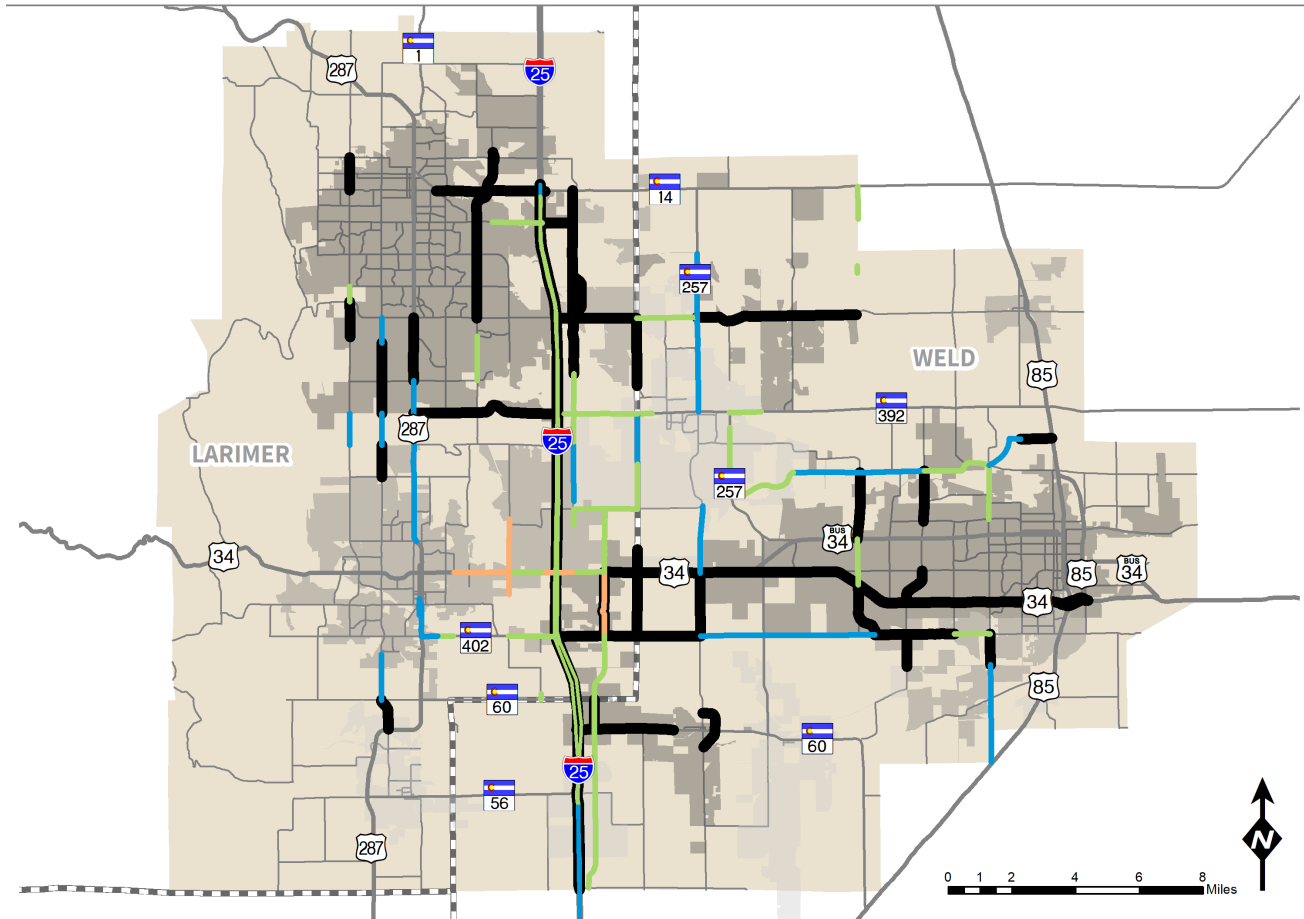
County Boundary



NFRMPO Boundary

July 2019  
Sources: CDOT, NFRMPO





## Legend

### Roadway Projects by Staging Period

- 2020
- 2021-2030
- 2031-2040
- 2041-2045

### Fiscally Unconstrained Projects

- Roadway Projects



County Boundary

NFRMPO Boundary

September 2019  
Sources: CDOT, NFRMPO



North Front Range  
Metropolitan  
Planning  
Organization

# Prop 110 Ballot Projects List for NFRMPO

Region	TPR	County	Project Name	Project Description	Phasing	Total Project Cost (P70) (Escalated to construction midpoint)	Other Funding Expected to be Available	Other Funding Assumptions	Tentative Commitment, 1st 2 Years of SB 267	DRAFT Ballot & Years 3-4 of SB 267 Commitment	NFRMPO Documents/ Studies	
											2045 RTP	Others (PELs, etc.)
4	North Front Range, Greater Denver Area	Adams/ Broomfield /Weld/ Larimer	I-25 North: SH7 to SH14	Addition of one Tolled Express Lane in each direction, interchange reconstruction, mainline reconstruction, safety, and Intelligent Transportation System (ITS) improvements on Segments 5 (SH66 to SH56) and 6 (SH56 to SH402)	Design to Budget. Subsequent phase (not reflected in updated costs) includes: SH7 to SH66 (Express Lane) ~\$127 M SH402 to SH14 (replace interchanges and infrastructure) ~\$300 M US34 and Centerra Interchanges ~\$180 M SH14 Interchange ~\$55 M SH14 to Wellington ~\$238 M SH66 to SH14 (GP Lanes 3+1) ~\$172M	\$653,000,000	\$100,000,000	Tolling	\$200,000,000	\$353,000,000	Yes	North I-25 EIS
4	North Front Range	Larimer/ Weld	US34: Widening, Interchanges, and Operational Improvements	Widening of roadway from four to six lanes, construction of three interchanges, and operational improvements.	Design to Budget. Project could be divided into phases: MP 93.5 - 97.8 Widening ~\$25 M MP 97.8 - 113.65 Widening ~\$170 M	\$90,000,000	\$0		\$0	\$90,000,000	Yes	US34 EA, North I-25 EIS, & US34 PEL



# Prop 110 Ballot Projects List for NFRMPO, cont'd.

Region	TPR	County	Project Name	Project Description	Phasing	Total Project Cost (P70) (Escalated to construction midpoint)	Other Funding Expected to be Available	Other Funding Assumptions	Tentative Commitment, 1st 2 Years of SB 267	DRAFT Ballot & Years 3-4 of SB 267 Commitment	NFRMPO Documents/ Studies	
											2045 RTP	Others (PELs, etc.)
4	North Front Range	Weld	US34 / US85 Interchange Reconfiguration	Improvements to the safety and capacity of "Spaghetti Junction" interchange by making the geometric configuration more intuitive, adding grade separations, and improving access points.	Design to Budget. Project could be divided into phases- Phase 1: Replace aging infrastructure ~\$113M Phase 2: System to System connections ~\$50M	\$113,000,000	\$0		\$0	\$113,000,000	Yes	US34 & US85 Interchange PEL
4	Upper Front Range, North Front Range, Greater Denver Area	Adams/Weld	US85: Corridor Improvements	Construction of new Peckham interchange, railroad siding extensions, and closure of county roads to reduce access points and construction of alternative routes as outlined in the US85 PEL	Design to Budget. Construction of new Peckham interchange, railroad siding extensions, and closure of county roads to reduce access points and construction of alternative routes as outlined in the US85 PEL	\$101,840,000	\$58,400,000	\$58.4M TC Program Reserve	\$0	\$43,440,000	Yes	US85 PEL
4	North Front Range	Larimer	SH402: Widening, Intersection and Safety Improvements	Widening, safety, and intersection improvements for Devolution.	Design to Budget.	\$20,000,000	\$0		\$0	\$20,000,000	Yes	North I-25 EIS & SH402 EA

Facility	Project Limits	Project Cost (\$M, YOE)
I-25	Segment 5 within NFRMPO (SH56 to WCR38)	\$237
US34-Greeley	US34/35 <sup>th</sup> & US34/47 <sup>th</sup> Interchanges	\$69
US34-Loveland	LCR3e to Boise Ave	\$26.6
SH402	I-25 to LCR9 & Boise Ave to US287	\$23.7

## Discussion



**For FY2024-2029, would Planning Council like to support one of the existing lists of projects or select a new list of projects?**

# New Project List Development Process



Steps	TAC Meeting Dates	Planning Council Meeting Dates
<p>Prioritize the RSCs on the State System from the <u>2045 RTP</u>:</p> <ul style="list-style-type: none"> <li>Identifying parameters in the selection of these top corridors</li> <li>Identifying criteria for selecting projects</li> </ul>	<p>October 16, 2019 (Discussion)</p> <p>November 20, 2019 (Action)</p>	<p>November 7, 2019 (Discussion)</p> <p>December 5, 2019 (Action)</p>
<p>Identify the top three to five regional corridors</p>	<p>November 20, 2019 (Discussion)</p> <p>December 18, 2019 (Action)</p>	<p>December 5, 2019 (Discussion)</p> <p>January 9, 2020 (Action)</p>
<p>Document the process to update this list to keep it relevant and accommodate shifting regional priorities</p>	<p>N/A</p>	<p>December 5, 2019 (Discussion)</p> <p>January 9, 2020 (Action)</p>

## Next Steps



- **TAC RSC Prioritization Discussion – October 16, 2019**
- **Planning Council RSC Prioritization Discussion – November 7, 2019**
- **TAC RSC Prioritization Recommendation – November 20, 2019**
- **Planning Council RSC Prioritization Action – December 5, 2019**
- **TAC Regional Priority Corridors Discussion – November 20, 2019**
- **Planning Council Regional Priority Corridors Discussion – December 5, 2019**
- **TAC Regional Priority Corridors Recommendation – December 18, 2019**
- **Planning Council Regional Priority Corridors Action – January 9, 2020**
- **Planning Council Project List Process Discussion – December 5, 2019**
- **Planning Council Project List Process Action – January 9, 2020**

## Discussion



- 1) Does Planning Council want to identify a regional project without going through criteria and a selection process?**
- 2) For FY2024-2029, would Planning Council like to support one of the existing lists of projects or select a new list of projects?**