

## MEMORANDUM

**To: NFRMPO Transportation Advisory Committee (TAC)**

**From: Becky Karasko**

**Date: July 20, 2022**

**Re: 2045 RTP Update and Greenhouse Gas (GHG) Analysis**

### Background

At the June Planning Council meeting, NFRMPO staff presented preliminary GHG modeling analysis for the 2045 RTP Update. Additional modeling has been completed to better reflect planned investments in the transportation system, including improved transit service and arterial signal timing improvements. In addition, APCD and NFRMPO found and corrected errors in the baseline GHG emissions estimates for 2025 and 2030. See the attachment for an update on the GHG modeling analysis.

To allow additional time for GHG analysis and discussion, NFRMPO staff are adjusting the schedule of the 2045 RTP Update. The revised schedule includes:

- TAC Preliminary Discussion: July 20, 2022
- Planning Council Preliminary Discussion: August 4, 2022
- TAC Discussion of the 2045 RTP Update and GHG Transportation Report: August 23, 2022
- Planning Council Discussion: September 1, 2022
- TAC Action: September 21, 2022
- Council Action: Late September or October 6, 2022 (to be determined)

The GHG Transportation Report must be submitted to the Air Pollution Control Division (APCD) and the Transportation Commission (TC) prior to Planning Council's scheduled adoption of the 2045 RTP Update by 45 days and 30 days, respectively, as specified in the GHG Planning Standard. This means the GHG Transportation Report will be submitted to APCD and TC in mid-August and the Planning Council meeting on August 4, 2022 will be the last opportunity for Planning Council to provide direction prior to submitting the report for review by APCD and TC.

### Action

Staff requests TAC members discuss the GHG strategies and preliminary GHG modeling analysis.



## **2045 RTP Update: Preliminary GHG Modeling Analysis as of 7/20/2022**

### **Required Reductions**

The NFRMPO is required to update the 2045 RTP to comply with the GHG Planning Standard specified in the Code of Colorado Regulations ([2 CCR 601-22](#)). The GHG Planning Standard set GHG reductions levels for the NFRMPO in four compliance years. The GHG reduction levels range from 0.04 million metric tons (MMT) in 2025 to 0.12 MMT in 2030, with reduction levels between those extremes for 2040 and 2050, as shown in **Table 1**.

The GHG reductions are relative to baseline GHG emissions. The baseline is the forecasted GHG emissions of the NFRMPO's 2045 RTP as adopted in September 2019. Baseline GHG estimates for the 2045 RTP are shown in **Table 1**, along with the GHG reduction percentage for each compliance year. Given the NFRMPO's travel model extends to 2045, not 2050, estimates for 2050 are extrapolated from 2045 using methodology developed by CDOT and APCD to set the GHG reduction levels for 2050 in the GHG Planning Standard.

**Table 1. GHG Reduction Levels in Million Metric Tons (MMT) by Compliance Year**

NFRMPO	2025	2030	2040	2050
<b>GHG Reduction Level</b>	0.04	0.12	0.11	0.07
<b>Baseline GHG Estimates (2045 RTP)</b>	1.73	1.60	1.22	0.82
<b>GHG Reduction Percentage</b>	2.3%	7.5%	9.0%	8.5%

### **GHG Strategies**

The 2045 RTP and its associated modeling identify the major capacity projects, including major roadway and transit capacity expansion, that are planned for the region through 2045. The region will also invest in other critical elements of the transportation system, such as local bicycle and pedestrian facilities, Transportation Demand Management (TDM) programming, and enhancements to transit service, such as mobility hubs, which were not captured in the 2045 RTP as adopted or in modeling. These investments have an impact on the GHG emissions from transportation.

To address the gap, NFRMPO staff is identifying planned investments in GHG-reducing transportation strategies and incorporating them into the modeling of the region's future transportation system. Incorporating these investments into the model provides a more comprehensive picture of the region's transportation system and allows for the interactions between different travel choices to be more accurately represented. By identifying these strategies in the 2045 RTP Update, these strategies can be used to demonstrate compliance toward the new GHG Planning Standard.

Modeling results demonstrate the region meets the required GHG Reduction Levels in 2025 and 2030 based on the strategies identified in **Table 2**. Achieving the GHG Reduction Levels in 2040 and 2050 require additional strategies compared with 2030 due to the higher GHG Reduction Percentage in those years



compared with 2030. Three options for achieving compliance in 2040 and 2050 are identified in **Table 2**. These options include:

- More intensive Transportation Demand Management (TDM) programs
  - TDM Programs Light: up to 1% of reduction in drive alone trips based on trip type and location
  - TDM Programs Moderate: up to 2% of reduction in drive alone trips based on trip type and location
- Half fare or free fare transit service
- Transit Signal Priority (TSP) on select transit routes
- Converting signalized intersections to roundabouts

**Table 2. Proposed Sets of GHG Strategies Achieving Compliance by Compliance Year**

Strategy	2025	2030	2040/2050		
			Option A	Option B	Option C
Planned Transit Service Expansion	X	X	X	X	X
Planned Mobility Hubs and Transit Centers	X	X	X	X	X
Work From Home Increases	X	X	X	X	X
Arterial Signal Timing Improvements		X	X	X	X
Bicycle and Pedestrian Improvements, ebikes/scooters		X	X	X	X
10-Minute Headways on all Local Transit Routes			X	X	X
TDM Programs – Light		X		X	
TDM Programs – Moderate			X		X
Half Fare Transit Service			X		
Fare Free Transit Service				X	
TSP on Select Routes				X	
5 Roundabouts					X
25 Roundabouts				X	

Staff presented Options A-C to Planning Council at their July 7, 2022 meeting. The direction staff received was to look at roundabouts and arterial signal timing. After the meeting, staff reviewed the options, and to remain within fiscal constraint, is recommending Option A. **Table 3** shows the elements in each option as well as the cost estimate for implementation.



**Table 3. 2040/2050 Compliance Options**

Option	Cost Estimate	Additional Reporting Requirements*
<b>A - Moderate TDM and Half Fare Transit</b>	<b>\$74M</b>	<b>N</b>
B - Light TDM, Fare Free Transit, Transit Signal Priority, 26 roundabouts	\$305M	Y
C - Moderate TDM and 5 Roundabouts	\$58M	Y

*\*Additional Reporting Requirements is the Annual Status Report required for the Mitigation Action Plan, if the NFRMPO was required to complete one to meet the GHG Reduction targets.*

# Northern Colorado Bike & Ped Collaborative

Executive Summary – Wednesday, July 13, 2022

Hybrid Meeting – GoToMeeting & Windsor

## Metroplan (Little Rock MPO) Visit Discussion

Amanda Miller, The Place Setting Company, described the purpose of the visit from Metroplan elected officials and staff. The group discussed a possible walk audit, and decided to hold a walk audit in Severance the week before and do a report out with Metroplan. The group also discussed highlighting the education and programming that happens in the region. A few people volunteered to represent NoCo Bike & Ped during the visit. The group also asked for information about how the decision was made for Metroplan to spend STBG funds on building out regional greenways.

## Discharge Forms

Fodge walked through the forms developed via partnership between CSU and the CSU Health Center that provide more information about bicycle and pedestrian crashes, incidents, and infractions. The effort is part of CSU's Vision Zero efforts on campus. After an incident, a Vision Zero subcommittee performs a site audit and assessment. A GIS template was developed to fit into the forms CSU Health Center already requires. Information about incidents are shared but no HIPAA information is provided. The group discussed if it would be possible to expand these efforts to the region and different hospitals. Young Winne described the effort undertaken in Tennessee that provides more crash data information.

## MPO Items

Gordon updated the group on the MMOF Call for Projects, where projects were taken to the Planning Council for discussion. Gordon also stated bicycle and pedestrian improvements are also a major strategy in the NFRMPO's proposed actions to meet greenhouse gas emissions reductions. Gordon also stated the NFRMPO Community Advisory Committee has an application open for new members.

## Roundtable Updates

The group discussed holding the Severance Walk Audit in lieu of the August meeting. Gordon and Barzak will lead the process.

Guthrie stated Loveland's Everybody Bike Day had 18 stations, 1,100 participants, and a cowbell at every station. Willis stated Windsor's Bike Everywhere Day had 100 participants and a drawing for a \$500 gift card to a local bike shop. Dixon stated there were 6,000 participants in Fort Collins Bike to Wherever Day across 82 stations.

## Cycling Without Age Demonstration

Jones provided context on Cycling Without Age and then provided rides on the organization's trishaws.

**Next agenda topics:** Severance Walk Audit | **Next meeting:** August 10, 2022

Project	Local	Number	Description	Budget	Expend	Encumbered	Balance	FHWA End Date	Activity Status
22282	Greeley	FSA M570-053	Greeley Evans Transit Bus Yard	\$160,000	\$0	\$160,000	\$0	No Federal Funds	1-WARNING, Greater Than A Year Since Activity
23944	Berthoud	MTF M070-909	Berthoud Pkwy Trail Gap Elimination	\$200,000	\$0	\$200,000	\$0	No Federal Funds	1-WARNING, Greater Than A Year Since Activity
23927	Loveland	MTF M830-103	US287 West Sidewalk Gap	\$117,500	\$0	\$117,500	\$0	No Federal Funds	1-WARNING, Greater Than A Year Since Activity
23047	Loveland	STU M455-129	LCR19 (Taft Hill) Improvements	\$658,368	\$0	\$658,368	\$0	10/31/2022	1-WARNING, Greater Than A Year Since Activity
23933	Greeley	MTF M570-061	Greeley Comp. Transportation Plan	\$325,000	\$60,104	\$264,896	\$0	No Federal Funds	2-ALERT, Greater Than 9 Months Since Activity
23926	Windsor	MTF M377-010	7th St MMOF Transportation Study	\$150,000	\$78,782	\$71,218	\$0	No Federal Funds	3-Caution, Greater Than 6 Months Since Activity
23934	Fort Collins	MTF M455-138	West Elizabeth Corridor in Fort Collins	\$750,000	\$0	\$750,000	\$0	No Federal Funds	3-Caution, Greater Than 6 Months Since Activity
20389	Greeley	AQC M570-048	10th Street in Greeley: Phase II	\$4,743,069	\$2,631,260	\$1,461,808	\$650,000	10/31/2022	4-Good, Activity in the last 6 Months
21997	Loveland	AQC M830-093	Traffic Signal Progression Imprv. US34	\$760,780	\$758,115	\$2,665	\$0	9/30/2022	4-Good, Activity in the last 6 Months
20825	Fort Collins	BRO M455-121	Spring Ck at Riverside (FCRVSDE-S.2PRST)	\$1,444,500	\$1,388,188	\$56,312	\$0	4/30/2023	4-Good, Activity in the last 6 Months
23491	Loveland	BRO M830-100	Loveland 1st St Irrigation Canal Bridge	\$625,000	\$0	\$625,000	\$0	6/30/2025	4-Good, Activity in the last 6 Months
22461	Fort Collins	FSA M455-126	College & Troutman Signal Upgrades	\$250,000	\$26,678	\$223,322	\$0	No Federal Funds	4-Good, Activity in the last 6 Months
23943	Platteville	MTF M053-004	Division St Sidewalks Construction	\$248,226	\$199,212	\$49,014	\$0	No Federal Funds	4-Good, Activity in the last 6 Months
23948	Severance	MTF M192-003	WCR23/Great Western Trail Connection	\$75,000	\$9,089	\$65,910	\$1	No Federal Funds	4-Good, Activity in the last 6 Months
23925	Evans	MTF M415-023	Evans Transportation Master Plan	\$150,000	\$145,340	\$4,660	\$0	No Federal Funds	4-Good, Activity in the last 6 Months
23945	Greeley	MTF M570-062	Greeley No.3 Canal Trail 2020	\$350,000	\$0	\$0	\$350,000	No Federal Funds	4-Good, Activity in the last 6 Months
23949	Loveland	MTF M830-104	Centerra Trail	\$459,476	\$0	\$66,963	\$392,513	12/31/2025	4-Good, Activity in the last 6 Months
23028	Berthoud	SAR M070-907	Berthoud Safe Routes Phase 1	\$375,000	\$355,776	\$19,224	\$0	4/30/2022	4-Good, Activity in the last 6 Months
23025	Fort Collins	SAR M455-127	Hampshire Bikeway Arterial Crossing	\$619,814	\$83,572	\$536,242	\$0	7/31/2022	4-Good, Activity in the last 6 Months
23026	Loveland	SAR M830-097	North Wilson Avenue Sidewalk	\$475,000	\$410,730	\$64,270	\$0	4/30/2022	4-Good, Activity in the last 6 Months
21966	Fort Collins	SHO M455-124	US 287 & Trilby Road Intersection	\$924,998	\$0	\$924,998	\$0	9/30/2022	4-Good, Activity in the last 6 Months
23049	Evans	STU M415-021	Widening 37th St/47th Ave	\$1,351,153	\$0	\$0	\$1,351,153	No Federal Funds	4-Good, Activity in the last 6 Months
21996	Fort Collins	STU M455-125	Timberline Road Corridor Improvements	\$2,694,602	\$0	\$2,694,602	\$0	4/30/2025	4-Good, Activity in the last 6 Months
21994	Greeley	STU M570-052	O St Widening - O St to 59th	\$1,605,276	\$0	\$0	\$1,605,276	No Federal Funds	4-Good, Activity in the last 6 Months
21998	Loveland	STU M830-094	US 34 Widening Boise Ave to I25	\$3,225,027	\$2,264,247	\$960,780	\$0	4/30/2023	4-Good, Activity in the last 6 Months
23632	Larimer County	TAP CO60-090	Non Motorized Sidewalk 57th St/US287	\$143,750	\$53,924	\$89,826	\$0	9/30/2022	4-Good, Activity in the last 6 Months
23639	Severance	TAP M192-002	WCR 23/Great Western Trail Connection	\$600,000	\$72,714	\$527,286	\$0	4/30/2025	4-Good, Activity in the last 6 Months
21992	Johnstown	TAP M690-001	Little Thompson River Trail Phase 1a	\$118,055	\$96,117	\$21,938	\$0	2/28/2023	4-Good, Activity in the last 6 Months
23631	Loveland	TAP M830-102	Centerra Trail	\$764,306	\$0	\$113,823	\$650,483	12/31/2025	4-Good, Activity in the last 6 Months

**FHWA End Date Expiring Within 6 Months**

**FHWA End Date Expired**