ON TO 2050 plan update system performance report appendix

September 2022 draft

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Introduction

Ten years ago, MAP-21 instituted a national performance measurement system for the highway and transit programs. After several years of rulemaking, CMAP, IDOT, and transit agencies each have adopted targets for federal measures. As the four-year target period approaches for many of the targets adopted with ON TO 2050 in 2018, the region can begin to see how it is making progress towards our federal goals. This report provides details of the federal performance measures as part of the ON TO 2050 plan update.

The targets identified tie directly to ON TO 2050 policy priorities. In addition, they are linked to several long-range plan indicators and, where possible, the financial plan. Seven of 16 plan mobility indicators[1] are also federal performance measures. These were selected as the measures that best aligned with plan goals and policies. While federal measures set targets for the next one to four years, plan indicator targets are for the year 2050. Additionally, the federal condition measures for transit and highway systems are key metrics used in the financial plan to estimate maintenance and modernization needs.

This appendix contains all current federally-required performance targets for the CMAP MPO. It is organized into 5 sections:

- Highway Safety
- Highway Asset Condition
- System Performance
- Transit Asset Management
- Transit Safety (New)

Each section includes a description of the research that informed the target selection and a description of CMAP's efforts to integrate the targets into the programming process and the Transportation Improvement Program (TIP). ON TO 2050 also includes a number of long-range quantitative indicators that partly overlap the federally-required performance measures. For these overlapping measures, this appendix presents the short-range target (for 2023, 2025, or 2026, depending on the measure), while the indicators appendix presents the longer-term target for the measure.

Outreach on federal measures is primarily done through committees and as a component of the outreach for the long-range plan update. The following reports were taken to committees since ON TO 2050 was adopted in 2018. In addition, the CMAQ and TAP project selection committee meets regularly to discuss matters related to the system performance measures.

[1] CMAP, "Plan Indicators webpage" https://www.cmap.illinois.gov/2050/indicators

- February 2022 –Transportation Committee – Plan update on federal performance measures
- January 2022 – MPO Policy – ON TO 2050 update – Federal performance measures
- January 2022 – CMAP Board and MPO policy – Highway safety performance targets
- December 2021 – Transportation Committee – Highway safety performance targets
- March 2021 – CMAP Board and MPO Policy - Transit safety targets
- March 2021 – CMAP Board and MPO Policy – NHS pavement condition targets
- February 2021 – Transportation Committee – Pavement condition targets
- February 2021 – Transportation Committee – Transit safety targets
- January 2021 - CMAP Board and MPO Policy – Regional highway safety performance targets
- December 2020 – Transportation Committee – Highway safety targets
- October 2020 – MPO Policy – CMAQ Performance Report
- April 2020 – Transportation Committee – Safety targets
- January 2020 - CMAP Board and MPO Policy – Regional highway safety performance targets
- November 2019 –Transportation Committee – Regional highway safety performance targets
- August 2019 – Transportation Committee – Highway safety – CMAP and IDOT
- January 2019 - CMAP Board and MPO Policy – Regional highway safety performance targets
- November 2018 – Transportation Committee – Regional highway safety targets
- October 2018 – CMAP Board and MPO Policy – Plan adoption – 2018 System Performance Report

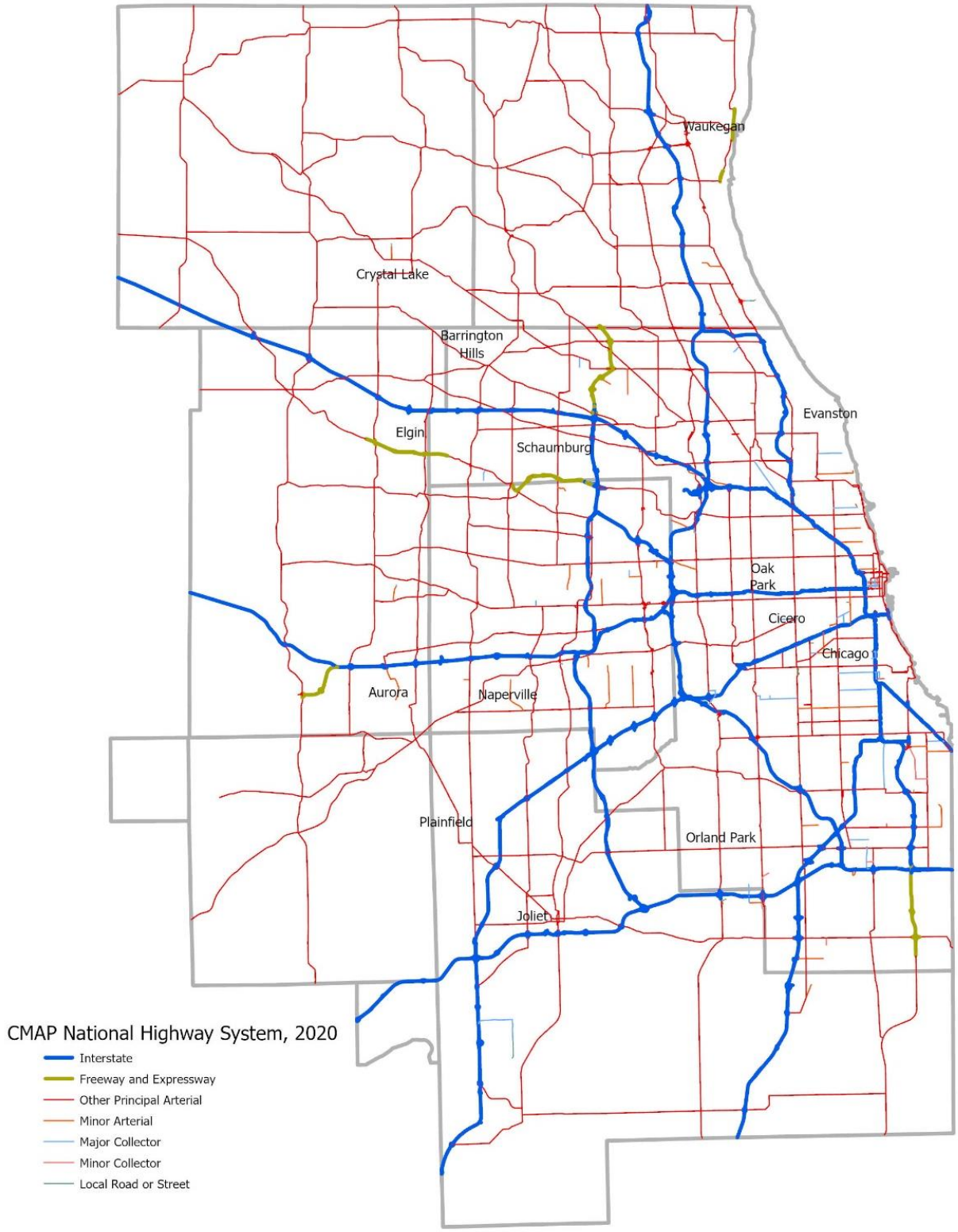
Performance Measures and the Transportation Improvement Program

As required by federal law, CMAP is describing the anticipated effect of projects in the TIP[2] toward achieving performance targets. This process will evolve over time, as additional data are collected and trends become clearer. CMAP is currently requesting that implementers identify projects that impact performance measures in the eTIP by checking the box or boxes corresponding to seven performance target groups: safety, transit asset condition, pavement condition, bridge condition, travel reliability/congestion, non-SOV travel, and emissions reduction. Additional questions, directly related to each performance measure, will be added in the future in order to better understand the magnitude of a project's impact.

The National Highway System (NHS) is the focus of the road performance measurement requirements. The NHS is a federal designation for roadways considered important to the nation's economy. In the CMAP region, this includes all interstates, many principal arterials, and limited mileage of intermodal connectors that provide important access to the NHS. The NHS has changed over time. Historic data reflects the NHS approved in the reporting year and has not been adjusted to reflect the 2018 NHS update or expected future changes.

[2] Link to TIP documentation to be updated.

National Highway System in northeast Illinois, 2020



Highway Safety

The safety performance measures require state DOTs and MPOs to establish safety targets as five-year rolling averages on all public roads for:

(1) Number of fatalities
(2) Rate of fatalities per 100 million vehicle miles traveled (VMT)
(3) Number of serious injuries
(4) Rate of serious injuries per 100 million VMT
(5) Number of non-motorized fatalities and non-motorized serious injuries

Metropolitan Chicago has unique safety needs. The CMAP region greatly influences the safety performance trends at the statewide level because of its share of the state's population and multimodal transportation system. The region accounts for 47 percent and 56 percent of the state's five-year average for fatalities and serious injuries, respectively. When it comes to non-motorized fatalities and serious injuries, the region accounts for roughly 78 percent of the state's total. This is due to the high number of pedestrians and cyclists compared to the rest of the state.

Injuries and fatalities from traffic crashes vary considerably from year to year due to numerous factors; the five-year average is meant to smooth large changes. Following national trends, both the state and region have experienced an increasing trend in the five-year average for fatalities and rate of fatalities per 100 million VMT and at the same time a decreasing trend for the number of serious injuries and rate of serious injuries per 100 million VMT. The non-motorized measure saw a decrease in the 2020 five-year average compared to previous years. According to FHWA's most recent assessment, IDOT did not meet or make significant progress toward meeting the 2015-2019 fatality-related and non-motorized targets. However, significant progress was made on the serious injuries-related targets.

Under federal guidelines, MPOs can choose whether to set quantitative targets or commit to help implement the state's target by planning for and programming safety projects. CMAP has chosen to support IDOT's 2022 safety targets.[3] For each measure, baseline data is shown for both the state and CMAP area. All targets shown for safety are state targets. The CMAP data is provided for context and informational purposes only.

[3] Note that by agreeing to support IDOT's safety targets, the MPO is not agreeing to any specific share of the decrease in fatalities and serious injuries. Instead it is agreeing to integrate the targets as goals in the metropolitan planning process and to plan and program projects that help meet the State's targets.

Research and projects

The ON TO 2050 white paper on traffic safety[4] builds from the understanding that traffic deaths and injuries are preventable. Infrastructure improvements can improve the safety of our roads, particularly when paired with policy recommendations such as increasing the importance of traffic safety in programming decisions. In general, however, the paper concludes that behavioral change is by far the most important factor in safety improvement.

In addition to the traffic safety white paper, two other reports have significant analysis of safety in the region. The Highway System Performance Trends[5] report looks at safety trends for the CMAP region in comparison to the rest of the state. In addition, it details the location and type of facility for serious injuries and crashes. The Non-motorized Transportation report[6] dives deep into pedestrian and bicycle crashes in the region and identifies steps that local communities can take to improve safety for these users.

In the fall of 2020, CMAP announced a new Safety Action Agenda, a multi-pronged traffic safety program aimed at understanding and addressing the range of issues that threaten users of the region's transportation network. The Safety Action Agenda is a multi-year effort to develop a regional strategy for improving traffic safety. This project lays out policy research that CMAP and potentially other agencies need to undertake to help improve traffic safety at the state, regional, and local level. CMAP staff formed a resource group consisting of regional partners working on various aspects of safety to help guide and develop a regional strategy for improving traffic safety. For FY22, the resource group identified speed management and bicycle and pedestrian safety as focus areas. CMAP staff continue to engage with the group to compile best practices and develop actionable recommendations and strategies to reduce traffic fatalities and serious injuries on all roadways, regardless of jurisdiction.

In addition, CMAP applied for and was awarded a State Planning and Research (SPR) grant to take a deeper dive into speeding related crashes and identify problem locations. The SPR grant includes funding to purchase data and hire a consultant to analyze regional vehicle speed data to identify corridors where vehicle speed issues coincide with high rates of crashes. CMAP plans to potentially work with the agency that has jurisdiction over the identified corridor and help implement safety countermeasures and policies to make the corridor safer for all roadway users through speed management. In addition to purchasing and analyzing the speed data, the SPR grant will allow CMAP to purchase equipment that can track vehicle speed through a

[4] Chicago Metropolitan Agency for Planning, "Traffic Safety White Paper," ON TO 2050 Report, April 2018, https://www.cmap.illinois.gov/documents/10180/845900/Traffic+Safety+white+paper.pdf.

[5] Chicago Metropolitan Agency for Planning, "Highway System Performance Trends," ON TO 2050 Snapshot Reports, September 2017, https://www.cmap.illinois.gov/documents/10180/71423/Highway+Performance_FINAL_9-15-17.pdf/6b33ea28-1138-cf8f-8691-bdd4a8af575c.

[6] Chicago Metropolitan Agency for Planning, "Non-Motorized Transportation," ON TO 2050 Report, October 2017, https://www.cmap.illinois.gov/documents/10180/620327/Non-motorized+transportation+report.pdf.

corridor. This equipment, along with crash data, will be used to capture the impact of the countermeasure and/or policies implemented along the corridor.

CMAP coordinates with IDOT on safety both at the staff level and with IDOT representation on several committees. IDOT has prepared a Highway Safety Plan (HSP)[7] and Strategic Highway Safety Plan (SHSP)[8], as required by federal law. These state documents set priorities for the primary safety-focused programs in Illinois.

Plans and reports from IDOT, CMAP, and other partners informed selection of the federal performance targets below and the recommendations in the ON TO 2050 long-range plan. In addition, these recommendations will be incorporated into the programming process and reflected in the TIP.

Incorporating safety measures into local programming

While numerous actions are needed by the public and private sectors to improve traffic safety, CMAP has a particular role in some areas. Building upon CMAP's role in project selection for locally-programmed federal funds, CMAP has incorporated safety performance as a larger priority in transportation project selection. Incorporating safety performance measures into programming decisions helps achieve regional safety targets and make sure this vital aspect of transportation receives adequate consideration.

To facilitate progress on highway safety targets, many of the recommendations identified in the 2017 traffic safety white paper are currently being implemented. CMAP has incorporated highway safety into its annual work plan and programming decisions. Traffic safety has become an annual work plan item and CMAP is assisting communities in traffic safety planning through CMAP's Local Technical Assistance (LTA) and Shared Fund programs. In addition, traffic safety continues to be included as a component of project evaluation for CMAP's planning and programming efforts.

Local solutions will be critical to addressing challenges in different types of communities. CMAP's LTA program has expanded its focus on traffic safety by including traffic safety specific project types in its program and has incorporated traffic safety in projects where possible. The initial traffic safety-related project awarded through the LTA program, a local road safety plan for the Village of Flossmoor is being develop through stakeholder engagement, collaboration, and data analysis to tailor it to the local safety issues on all roads in the village. Furthermore, the CMAP LTA program just awarded three communities (Bellwood, Calumet City, and Riverdale) with site-specific safety plans for four intersections and one corridor. For the

[7] Illinois Department of Transportation, "Highway Safety Plan," accessed December 17, 2021, https://idot.illinois.gov/transportation-system/safety/highway-safety-plan.

[8] Illinois Department of Transportation, "Strategic Highway Safety Plan," accessed December 17, 2021, https://idot.illinois.gov/transportation-system/transportation-management/planning/SHSP.

intersection locations, CMAP will work with the community and a consultant to develop an intersection design study and safety action plan. A consultant, with input from CMAP and the community, using a complete streets approach will complete the corridor safety study. CMAP continues to include traffic safety in program and project evaluations. The CMAQ and STP-L Shared Fund programs incorporate safety into project evaluations and many of the 11 Council of Mayors STP project evaluation included safety as a measure. Traffic safety is included in the evaluation of regional significant projects[9] in the ON TO 2050 regional plan and plan update.

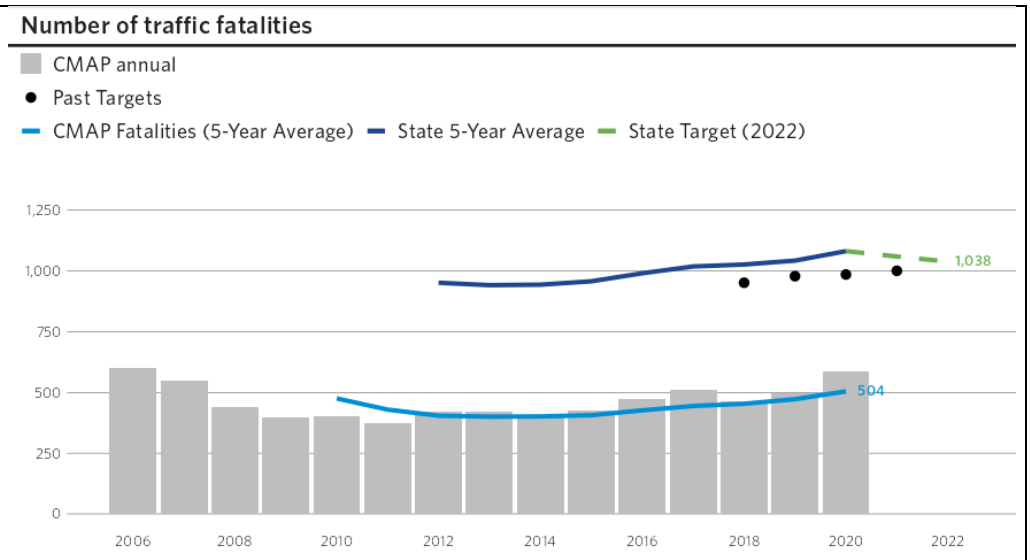
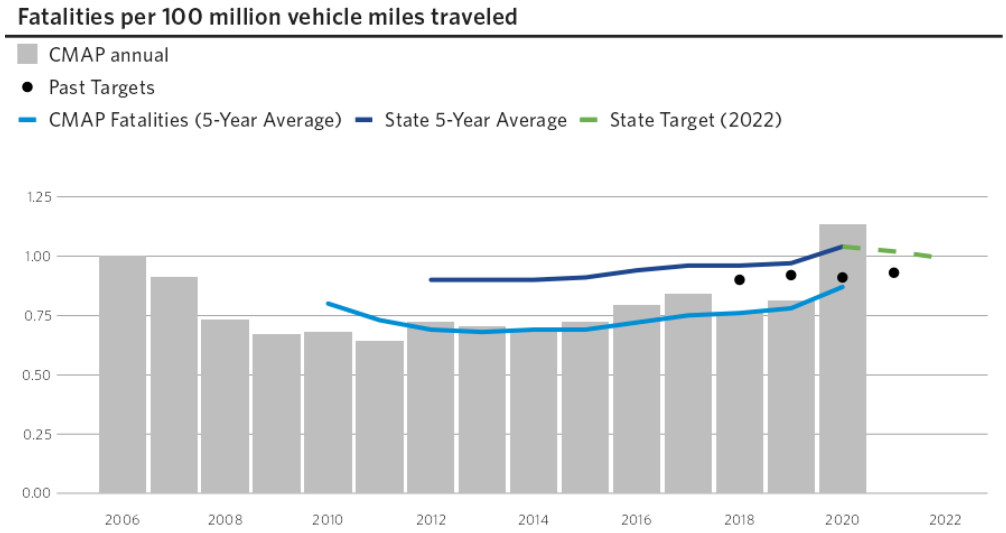
While these efforts will continue and ideally expand, making a significant impact on deaths and serious injuries requires more work. Further work across the region, for example, will be necessary to address other dimensions such as racial inequities or disparities for other sensitive populations. CMAP will continue to work with its partners to explore new avenues to address traffic safety through its planning and programming activities.

Fatalities

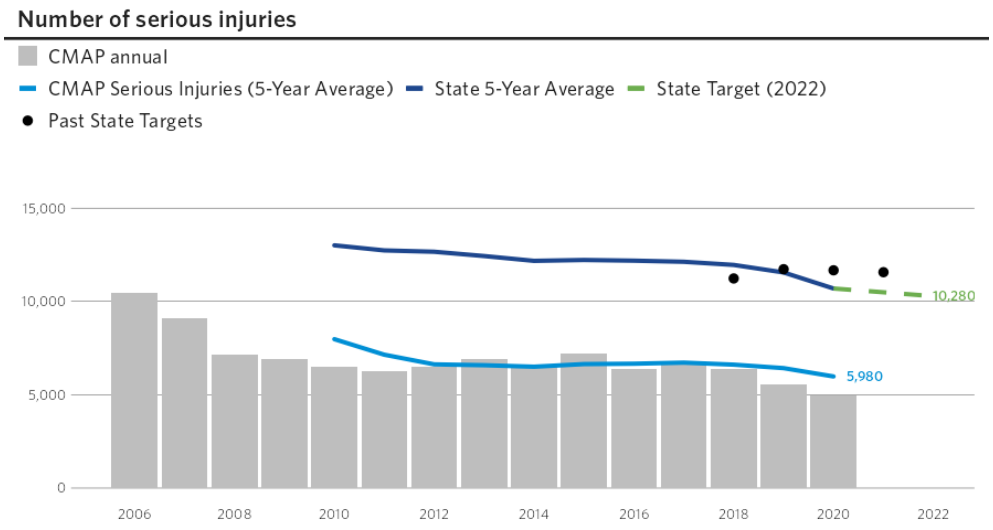
Measure	This measure tracks the five-year rolling average of the number and rate of vehicle-related fatalities in the CMAP region on all public roads.
Methodology	Traffic fatalities are identified in the Fatality Analysis Reporting System (FARS). This data is used to calculate the number of fatalities that occur per year within the CMAP region. VMT data comes from CMAP analysis of IDOT published data.
Proposed Targets	CMAP supports IDOT's goals:[10] To reduce the statewide traffic fatalities from 1,081.0 (2016-20 average) to 1,038.2 by December 31, 2022.

[9] Regionally Significant Projects Benefits Report, CMAP https://www.cmap.illinois.gov/documents/10180/1439048/ON+TO+2050+Update+Regionally+Significant+Projects+Benefit+Report+Appendix.pdf/

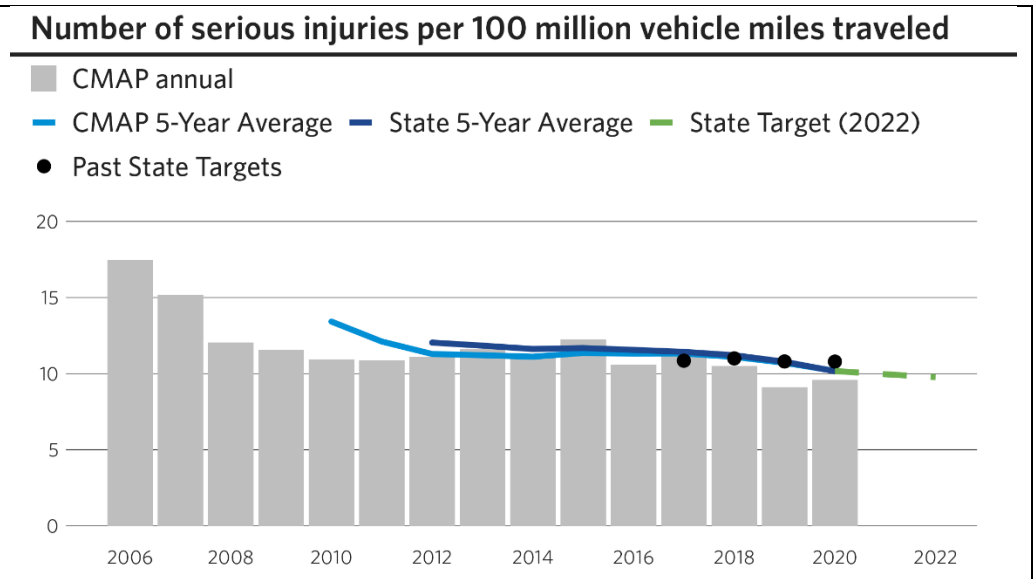
[10] Illinois Department of Transportation, "Highway Safety Plan."

	 And To reduce the statewide traffic fatality rate per 100 million vehicle miles traveled (VMT) from 1.04 (five-year 2016-20 average) to 0.99 (five-year 2018-22 average) by December 31, 2022. 
Plan Update revisions	This measure has not been modified

Serious injuries

Measure	This measure tracks the five-year rolling average number and rate of serious injuries resulting from traffic crashes in the CMAP region on all public roads.
Methodology	Illinois traffic crash data provided by IDOT are used to calculate the number of serious injuries that occur per year within the CMAP region. VMT data comes from CMAP analysis of IDOT published data.
Proposed Targets	CMAP supports IDOT's goals:[11] To reduce the statewide severe injuries from 10,704.00 (five-year 2016-20 average) to 10,280.10 (five-year 2018-22 average) by December 31, 2022.  And To reduce the statewide severe injury rate per 100 million vehicle miles traveled (VMT) from 10.17 (five-year 2016-20 average) to 9.77 (five-year 2018-22 average) by December 31, 2022.

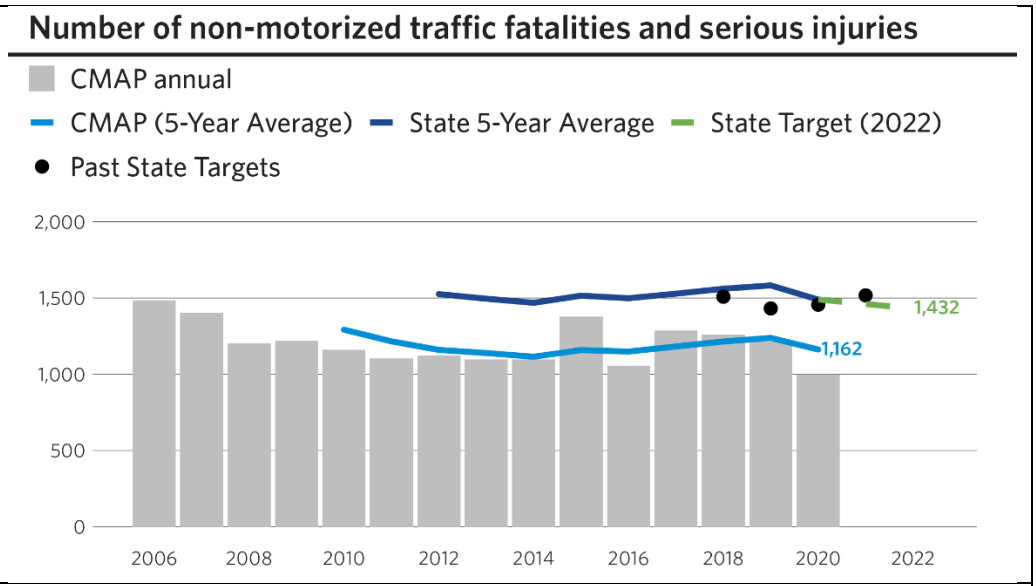
[11] Illinois Department of Transportation.

	
Plan Update revisions	This measure has not been modified.

Non-motorist fatalities and serious injuries

Measure	This measure tracks the five-year rolling average of the number of non-motorist fatalities and serious injuries resulting from traffic crashes.
Methodology	Traffic fatalities are identified in the Fatality Analysis Reporting System (FARS). Illinois traffic crash data provided by IDOT are used to calculate the number of serious injuries that occur per year within the CMAP region.
Proposed Targets	CMAP supports IDOT's goal:[12] To reduce the number of statewide non-motorized fatalities and serious injuries from traffic crashes from 1,490.60 (five-year 2016-20 average) to 1,431.60 (five-year 2018-20 average) by December 31, 2022.

[12] Illinois Department of Transportation.

	
Plan Update Revisions	This measure has not been modified

Highway Asset Condition

A well-maintained system is a primary concern of every transportation agency. Given the maturity of the system in the Chicago area, the majority of highway agency investment has been devoted to maintaining roads and bridges. As a result, over the past decade and a half, road and bridge condition has improved on the NHS, but that improvement has stalled in the past few years as agency budgets have diminished. Furthermore, many major reconstruction projects needed on the expressway system remain unfunded, however this may change in the future because of new funding opportunities with the passage of the Rebuild Illinois Capital Plan and the Infrastructure Investment and Jobs Act.

Research and projects

In preparation for the ON TO 2050 plan, CMAP compiled the Highway System Performance Trends[13] report that examines the condition of the highway system and strategies for improvement. CMAP's research on transportation asset management was summarized in a memorandum[14] and committee presentation. Findings included opportunities to expand and better utilize pavement management systems as well as supporting IDOT and local agencies as they develop asset management plans.

This recommendation has been realized at the local level, with CMAP's pavement management program that has assisted over 65 municipalities and 1 county in northeastern Illinois. The pavement management program started as a pilot program with 12 municipalities. To continue the program, CMAP applied for and was awarded a State Planning and Research (SPR) grant to greatly expand the program. While the majority of the roads that the pavement management plans cover are not part of the NHS, it is a very beneficial program CMAP offers to its partners. Pavement management allows an agency to move from worst-first, reactive planning to proactive, performance-based planning to make the most effective use of available funds over time.

In addition, CMAP actively participates with the Construction Materials – Asset Management (CAM-AM) group. CAM-AM is made up of pavement engineers from across the region to discuss and share best practices on asset management.

Because of CMAP's concern with infrastructure investment and trends that affect infrastructure condition, many other CMAP reports indirectly touch on pavement and bridge condition. For example, a changing climate has potential to significantly impact pavement and bridges.

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[13] Chicago Metropolitan Agency for Planning, "Highway System Performance Trends."

[14] Chicago Metropolitan Agency for Planning, "Transportation Asset Management Recommendations," Memo, January 2017, https://www.cmap.illinois.gov/documents/10180/517091/AssetManagementRecommendations.pdf/d23d60e1-4092-cd58-f7e8-e1601d234f76.

CMAP's Climate Resilience Strategy Paper[15] details how the region will be impacted by climate change and highlights the need to build a resilient transportation network that has strong infrastructure, multiple transportation options, and adopts best practices in infrastructure management.

Incorporating pavement and bridge condition into local programming

Of the locally programmed federal fund sources, only the Surface Transportation Block Grant program is used for pavement and bridge condition improvement. Pavement condition measures are widely included in Councils of Mayors project selection methodologies, with some prioritizing projects on the NHS. The federal performance measures are incorporated into programming for bridges and pavement for the "shared fund" component of the local Surface Transportation Program.

National highway system pavement condition

<table>
<tr><td>Measure</td><td>This measures the percentage of NHS lane miles in the region that have "good" or "poor" pavement condition. Pavement condition is calculated using a combination of three pavement distresses for asphalt and jointed concrete (JCP) and two pavement distresses for reinforced concrete (CRCP). The International Roughness Index (IRI), cracking percent, rutting and faulting are the pavement distresses used to determine if a pavement is in good, fair, or poor condition.

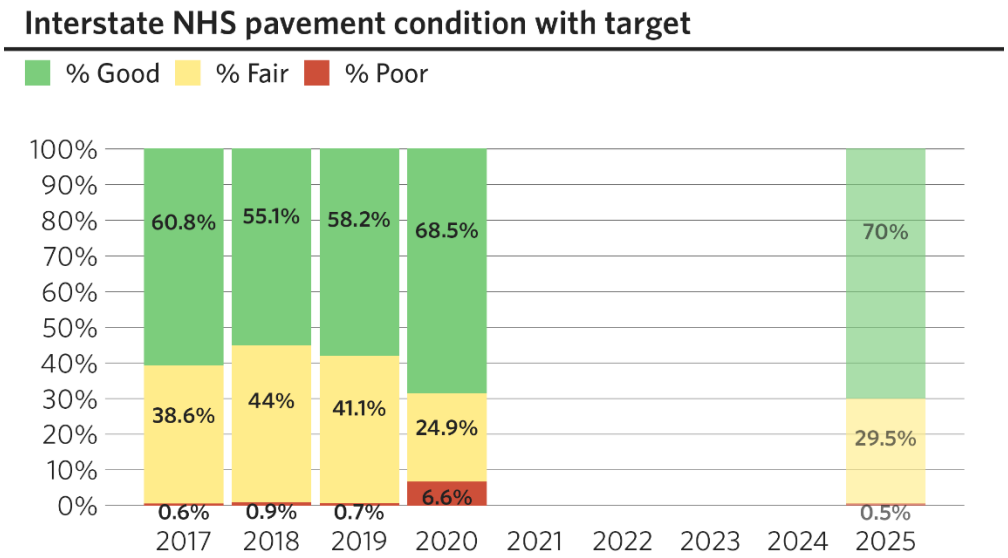
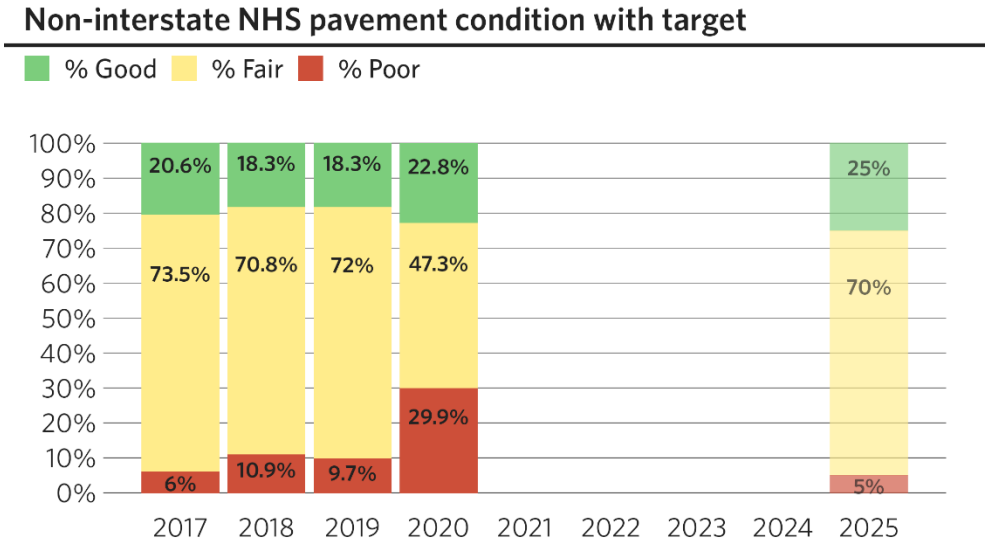
Table 1: Pavement distress and condition metrics

Pavement Distress	Good	Fair	Poor
IRI (inches/mile)	<95	95-170	>170
Rutting[1] (inches)	<0.20	0.20-0.40	>0.40
Faulting[2] (inches)	<0.10	0.10-0.15	>0.15
Cracking (%)	<5	5-20 (asphalt) 5-15 (JCP) 5-10 (CRCP)	>20 (asphalt) >15 (JCP) >10 (CRCP)

1 - Only applicable to asphalt pavements
2 - Only applicable to jointed concrete pavement

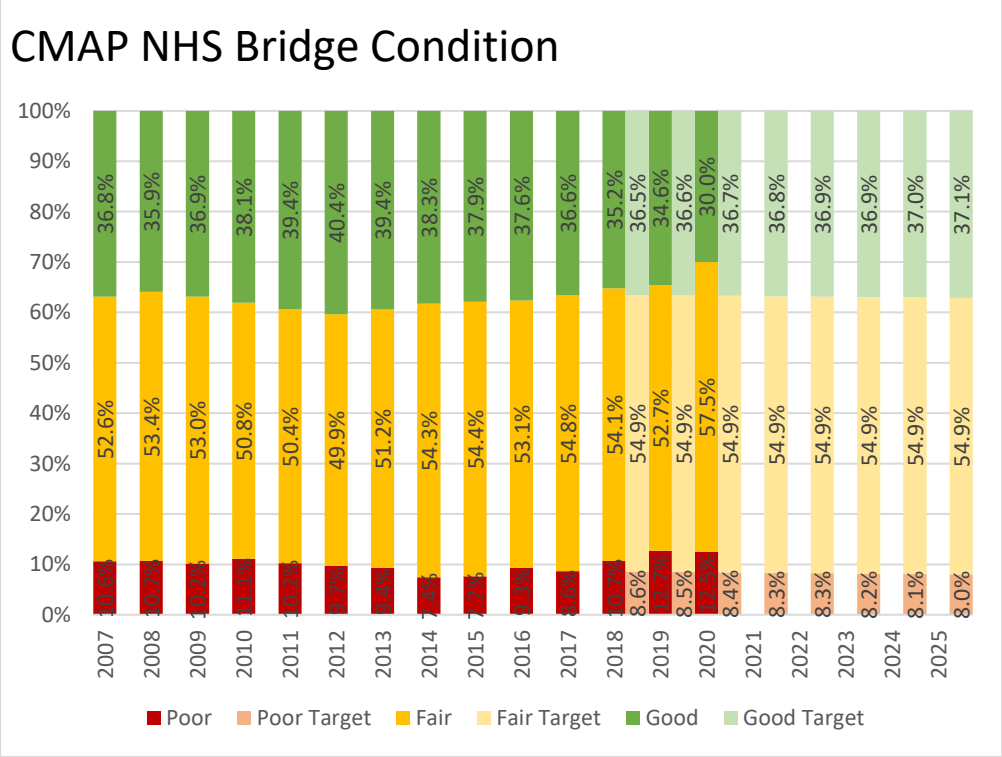
In order for a JCP or asphalt pavement to be in good condition, all three pavement distress metrics must be in good condition and for CRCP both pavement distress metrics must be in good condition. If two or more pavement distress metrics are in poor condition, the pavement is in poor condition. For all other pavement distress metric combinations, the pavement is in fair condition. Pavements that are in good condition suggests</td></tr>
</table>

[15] Chicago Metropolitan Agency for Planning, "Climate Resilience," ON TO 2050 Strategy Paper, December 2016, https://www.cmap.illinois.gov/documents/10180/470714/Climate%20Resilience%20Strategy%20Paper/dd610883-d00f-407d-808b-484f9800a3f6.

	no major investment is needed and pavements in poor condition suggests major reconstruction is needed. Pavement condition provides a partial understanding of the condition of the roadway, the current metrics only measure surface distress and not the condition of the base of the roadway.
Methodology	The pavement condition data is provided by IDOT, and the lane miles for each pavement condition classification are summed for all roads in the NHS. Interstate and non-Interstate roads are tracked separately.
Proposed Targets	**Interstate NHS** **2025 targets**: At least 70.0 percent good, no more than 0.5 percent poor  **Non- Interstate NHS** **2025 targets:** At least 25.0 percent good, no more than 5.0 percent poor 

Plan Update revisions	CMAP used international roughness index or IRI data to set the target in the 2018 plan because data on cracking needed for the full measures was not available. Complete data is now available and was used.

National highway system bridge condition

Measure	This measures the percentage of bridge deck area of NHS that are in "good" or "poor" condition. While a "poor" classification is the lowest condition rating for a bridge, it should be noted that it does not necessarily mean that a specific bridge is unsafe, only that it requires more frequent inspection.
Methodology	Data come from the Federal Highway Administration's (FHWA) annual NBI. NBI data is available for all bridges that carry NHS routes and that are over 20 feet in length. Bridge condition is determined through a scheduled inspection process and classified by the lowest rating of NBI condition ratings for deck, superstructure, substructure, or culvert. If the lowest rating is greater than or equal to 7, the bridge is classified as good; if it is less than or equal to 4, the classification is poor. Bridges with all components rated 5 or 6 are classified as fair.
Proposed Targets	**2025 targets:** At least 37.1 percent good and no more than 8.0 percent poor 
Plan Update revisions	This measure has not been modified

System Performance

"System performance," the term utilized in the federal performance measure rulemakings, includes a variety of measures relating to the effectiveness of the Congestion Mitigation and Air Quality Improvement (CMAQ) program, truck travel time reliability, and use of alternative modes of transportation. These are relevant measures for the CMAP region, and ON TO 2050 emphases better utilization and management of the existing transportation system rather than significant capacity expansion. System enhancements typically have higher benefit-to-cost ratios than capacity expansion projects. Better utilizing the existing system means fewer single-occupant trips, more reliable and less-congested roads, and fewer toxic emissions. The Chicago region is also the nation's premier freight hub with $3 trillion in goods moving through the region each year; unreliable travel times not only impact commuters but can impact the economic competitiveness of the region's freight industry.

The pandemic has had a significant positive impact on several system performance measures. CMAP has been monitoring these changes and reporting out in a series of transportation system analysis[16]. Travel for all purposes decreased early in the pandemic and working from home increased dramatically. This has helped the region significantly exceed targets related to congestion in the short term. While there are some signs that traffic could return to historic levels, it is too soon to fully know the long-term consequences of the pandemic on travel. Even before the pandemic, work from home was the non-single occupant vehicle component that was growing the fastest. This will certainly be accelerated by the pandemic.

Research and projects

A number of CMAP's ON TO 2050 papers address measures included under system performance. The Non-motorized Transportation Report[17], Transit Modernization Strategy Paper[18], and Transit Ridership Growth Study[19] each look at providing new and improving existing alternatives to driving such as transit, biking, and walking. Driving is expected to continue to be the most used mode in the region even after recommended improvements to other modes. The Highway Operations Strategy Paper[20] provides a variety of strategies for improving reliability and reducing congestion on the road network. Freight is an important part

[16] https://www.cmap.illinois.gov/covid-response

[17] Chicago Metropolitan Agency for Planning, "Non-Motorized Transportation."

[18] Chicago Metropolitan Agency for Planning, "Transit Modernization," Strategy Paper, ON TO 2050 Strategy Paper (Chicago, Illinois: Chicago Metropolitan Agency for Planning, 2017), http://www.cmap.illinois.gov/onto2050/strategy-papers/transit-modernization.

[19] Chicago Metropolitan Agency for Planning, "Transit Ridership Growth Study," Strategy Paper, ON TO 2050 Strategy Paper (Chicago, Illinois: Chicago Metropolitan Agency for Planning, August 2017), http://www.cmap.illinois.gov/onto2050/strategy-papers/transit-ridership-growth.

[20] Chicago Metropolitan Agency for Planning, "Highway Operations," ON TO 2050 Strategy Paper, February 2017, https://www.cmap.illinois.gov/documents/10180/517371/Highway+Operations+Strategy+Paper/26cff0fc-876a-4843-9fe5-c9aedbf73ddd.

of the region's economy. CMAP has done extensive work on the freight industry including a summary of regional freight infrastructure[21] and a Regional Strategic Freight Direction.[22]

CMAP is actively participating in the Regional Transportation Management Center (RTMC) study IDOT is leading which if constructed will have a significant impact on how CMAP's partners operate the transportation network in real-time. The RTMC will provide a central location (in-person or virtual) where operators will be able to address transportation system issues in real time and be proactive in addressing reliability issues as they come up on the Interstate and non-Interstate NHS. The RTMC will enable operators and planners to track system performance and enhance signal timing and other operations-related improvements to make the system less congested and more reliable.

CMAP recently updated the Regional Intelligent Transportation System (ITS) Architecture. The Regional ITS Architecture is a roadmap for transportation systems integration and represents a shared vision of how each transportation agency's systems will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the region. Many of the projects in the ITS Architecture will make the system operate more reliably

Incorporating system performance into local programming

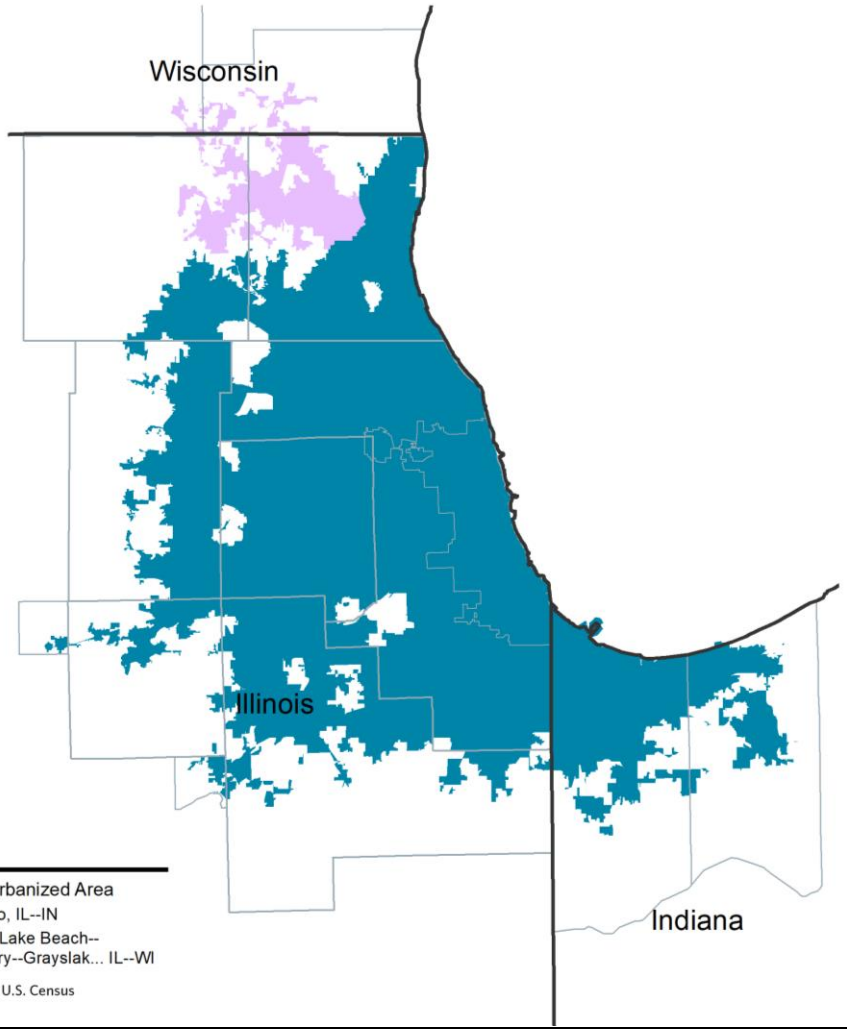
In northeastern Illinois, CMAP programs CMAQ funds through the MPO Policy Committee. The purpose of CMAQ is to fund transportation projects or programs that contribute to the attainment or maintenance of National Ambient Air Quality Standards in specific areas. The CMAP region receives CMAQ funds because of nonattainment and maintenance areas in the region. The primary consideration for CMAQ projects is the cost-effectiveness of their air emissions reductions, measured as either the cost per kilogram of volatile organic compounds (VOC) reduced or the cost per kilogram of fine particulate matter (PM2.5) reduced. Projects are ranked by their air quality cost-effectiveness within in their project type category. Additional Transportation Impact Criteria supplement project evaluation and cover performance areas similar to the federal system performance measures, including improving travel time reliability, increasing transit ridership, and reducing congestion.

Percent of trips to work via non-SOV modes

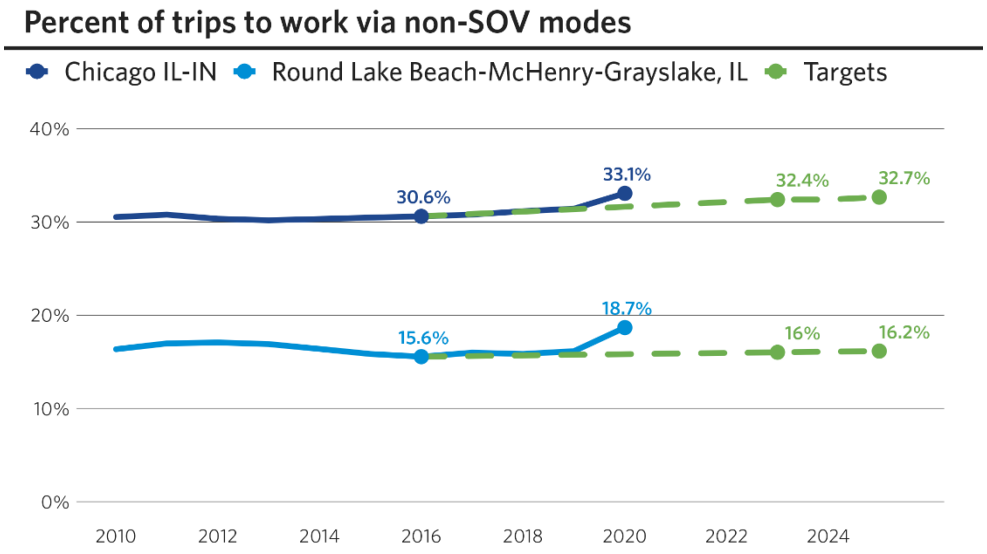
Measure	This measure tracks the share of trips to work by non-single occupancy vehicle (non-SOV) modes for trips to work. These modes include carpooling,

[21] Chicago Metropolitan Agency for Planning, "The Freight System," ON TO 2050 Snapshot, May 2017, https://www.cmap.illinois.gov/documents/10180/517119/FY17-0095+Freight+Snapshot.pdf/3ae1174d-d8f4-4005-8a9f-e02eb87eeac2?t=1494536618000.

[22] https://www.cmap.illinois.gov/documents/10180/826017/FINAL+Regional+Strategic+Freight+Direction+with+cover_2-6-18.pdf

	public transit, walking, "other means" and working from home. This measure is similar to the ON TO 2050 Indicator, but uses slightly different geography and Census data. The non-SOV travel is included in the required MPO CMAQ Performance Plan[23] which is done on a two- and four-year timeline and turned into FHWA.
Methodology	Five-year estimates from U.S. Census Bureau's American Community Survey (ACS) dataset – table DP03 – are used to track mode share in the urbanized area. CMAP boundaries cover two census-defined urbanized areas. The Chicago urbanized area includes portions of Indiana, and the Round Lake Beach-McHenry-Grayslake urbanized area includes portions of Wisconsin. (see map below.) This measure tracks the percentage of commuters that predominantly do not commute by driving alone in a car, van, or truck. The below table shows this data for 2010-20. 

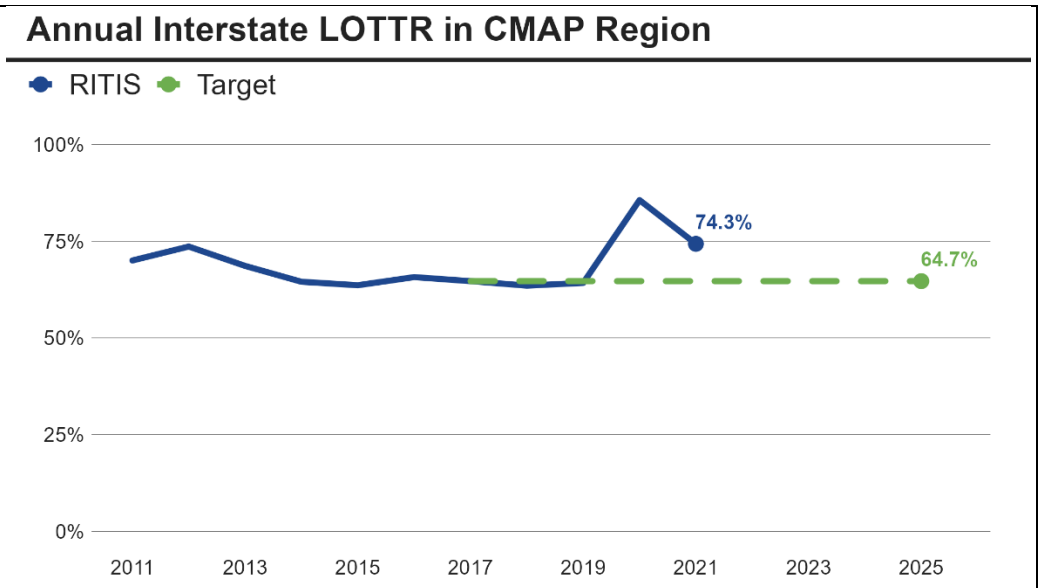
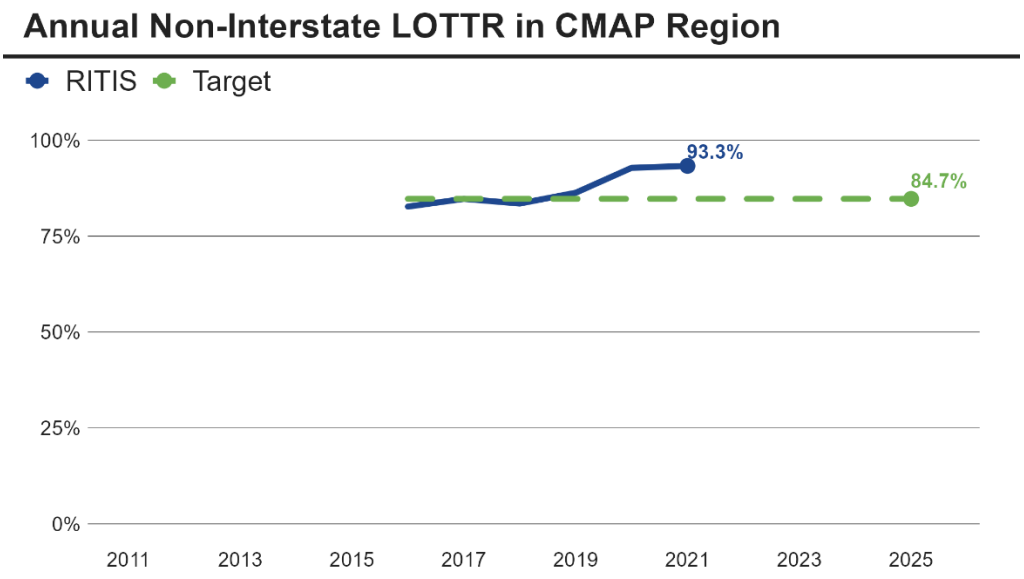
[23] https://www.cmap.illinois.gov/documents/10180/38326/CMAQ+Mid-Point+Performance+Plan+2020_Oct2020.pdf/5eaee75e-2261-5259-e78c-992a54e9f767?t=1644609857416

Proposed Targets	**Chicago, IL-IN targets** **2023:** At least 32.4 percent **2025:** At least 32.7 percent. **Round Lake Beach--McHenry—Grayslake IL-WI** **2023:** At least 16.0 percent **2025:** At least 16.2 percent  Targets are set in coordination with all States and Metropolitan Planning Organizations associated with the Urbanized Area. (NIRPC, INDOT, CMAP, and IDOT)
Plan Update revisions	In 2018, this measure was only required of urbanized areas with a population greater than 1 million. Starting in 2022, it is required of areas with a population of 200,000. With a population of 287,012 in 2019, Round Lake Beach-McHenry-Grayslake urbanized area now requires a separate target.

Highway Reliability

Measure	The Level of Travel Time Reliability (LOTTR) is defined as the ratio of longer travel times (80th percentile) to a "normal" travel time (50th percentile) for a given roadway segment. The measure is the percentage of person-miles (vehicle miles multiplied by occupancy) traveled on the NHS where this ratio is less than 1.5, which is considered reliable. Using person-miles rather than vehicle-miles gives equal weight to all individuals using the roads.

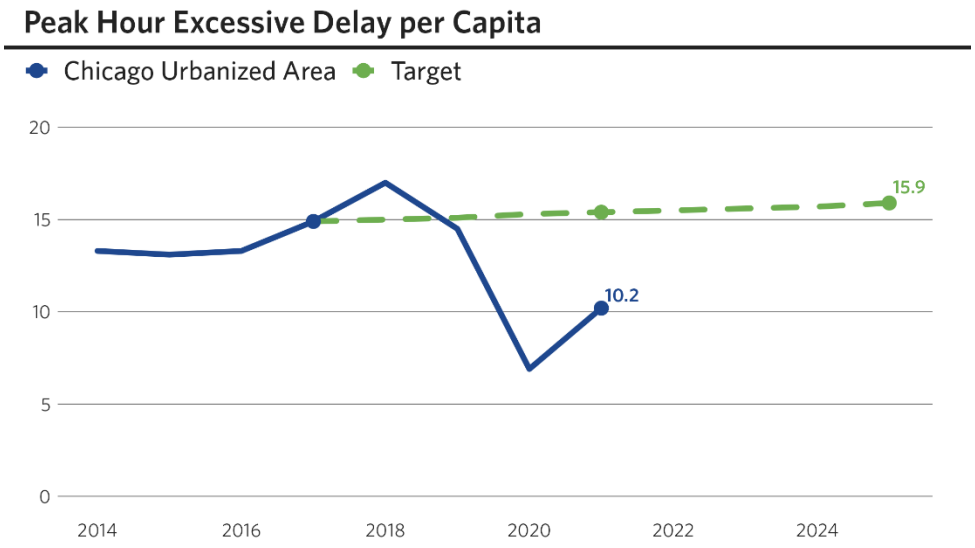
	Non-interstate travel is generally more reliable than interstate travel for several reasons. Reasonable alternative routes are more often available for trips on non-interstates, especially in parts of the region with a grid street network. Lower volumes and speeds mean that incidents on non-interstates typically have a smaller impact.
Methodology	This measure is calculated using data from the FHWA's National Performance Management Research Data Set (NPMRDS). The NPMRDS provides travel time by road segment for the NHS in 15-minute intervals. Travel times are provided for passenger, freight, and combined values. Along with the travel time information, a geographic file of the road segments is provided through the NPMRDS. The geographic file includes information for each road segment including length in miles, average annual daily traffic, functional classification, and other roadway attributes. The measure is calculated for both the interstate and non-interstate systems using the combined vehicle travel times. The LOTTR ratio is generated by dividing the 80th percentile travel time of all vehicles by the normal travel time (50th percentile) of all vehicles for four reporting periods. The four reporting time periods include: • 6 a.m. – 10 a.m. weekdays • 10 a.m. – 4 p.m. weekdays • 4 p.m. – 8 p.m. weekdays • 6 a.m. – 8 p.m. weekends The segments' length is multiplied by the annual traffic volume of the segment and the occupancy factor for vehicles. An occupancy factor of 1.7 was used, following the guidance published by the FHWA. The sum of reliable segments (LOTTR below 1.50 for all time periods) is divided by the total of all segments. This results in the ratio of person-miles of travel that are reliable to total person-miles of travel and expressed in the nearest 0.1 percent. NPMRDS data is collected by INRIX and processed by University of Maryland CATT Lab. This data is made available to CMAP on the Regional Integrated Transportation Information System (RITIS) platform.
Proposed Targets	**Interstate NHS** **2025 target:** At least 64.7 percent

	 **Non-interstate NHS** **2025 target:** At least 84.7 percent 
Plan Update revisions	Targets were set in 2018 using observed data from both HERE and INRIX. Sufficient history is available from INRIX via RITIS now so HERE data is no longer included. Targets set in 2018 remain unchanged.

Annual hours of peak hour excessive delay per capita on the national highway system

Measure	The Peak Hour Excessive Delay (PHED) measures traffic congestion. It is the extra amount of time people spend in congested conditions in their urban area during peak periods. The PHED is calculated using the travel time of 20 mph or 60 percent of the speed limit on the NHS in the urbanized area. It is weighted by vehicle volume and occupancy. The PHED is included in the required MPO CMAQ Performance Plan[24] which is done on a two- and four-year timeline and turned into FHWA.
Methodology	This measure is calculated using data from the FHWA's NPMRDS. The NPMRDS provides travel time by road segment for the NHS in 15-minute intervals. Travel times are provided for passenger, freight, and combined values. Along with the travel time information, a geographic file of the road segments is provided through the NPMRDS. The geographic file includes information for each road segment including length in miles, average annual daily traffic, functional classification, and other roadway attributes. A conflation process was used to assign speed limit information to the NPMRDS data. The 4:00 p.m. – 8:00 p.m. afternoon peak is used to be consistent with CMAP's travel model time periods. The PHED is calculated for each 15-minute interval in the peak periods for all segments in the Chicago urban area. The 15-minute interval PHED is calculated in the following steps: • Segment length divided by a segments speed threshold (larger of 20 mph, or 60 percent of speed limit) times 3,600 • Segment travel time minus the result from above step • If result from above step greater than 0, then result divided by 3600 • Result from above step multiplied by the 15-minute volume and the average vehicle occupancy for the segment • The results from the above steps are summed for the urban area and divided by the urbanized area population The total PHED is divided by the urbanized area population to calculate the peak-hour excessive delay per capita. IDOT provided access to the Regional

[24] https://www.cmap.illinois.gov/documents/10180/38326/CMAQ+Mid-Point+Performance+Plan+2020_Oct2020.pdf/5eaee75e-2261-5259-e78c-992a54e9f767?t=1644609857416

	Integrated Transportation Information System (RITIS)[25] tool that was used to calculate this measure.
Proposed Target	**Chicago, IL-IN target** **2025:** 15.9 hours per capita  Targets are set in coordination with all States and Metropolitan Planning Organizations associated with the Urbanized Area. (NIRPC, INDOT, CMAP, and IDOT)
Plan Update revisions	This measure has not been modified.

[25] Regional Integrated Transportation Information System www.ritis.org

Total emissions reduction of on-road mobile source emissions

Measure	This performance measure tracks the emissions reduced by transportation projects funded through the CMAQ program[26] and is referred to as Total Emissions Reduction. The Total Emissions Reduction is included in the required MPO CMAQ Performance Plan[27] which is done on a two- and four-year timeline and turned in to FHWA. Northeastern Illinois' non-attainment criteria pollutants are Ozone and Particulate Matter 10 microns (PM_{10}) as reported in Environmental Protection Agency's Green Book[28]. The emissions that are the primary precursors for Ozone are Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NOx). In the recent past, the region was also in non-attainment for Particulate Matter 2.5 microns ($PM_{2.5}$). While in attainment for $PM_{2.5}$ emissions, it still poses a significant health risk to many residents of northeastern Illinois. Because of this, targets are being shown for $PM_{2.5}$ but are not required at this time. Currently, PM_{10} emissions are not calculated as part of the CMAQ project evaluation process. Currently Lyons Township in western Cook County and southeast Chicago are declared maintenance areas for PM_{10}. The maintenance areas are not the result of mobile source emissions, but a point source problem related to quarry activities within the township and industry. Because the emissions are unrelated to transportation and mobile sources the target will be listed as zero.

[26] Details of the CMAQ program in northeastern Illinois can be found here: http://www.cmap.illinois.gov/mobility/strategic-investment/cmaq

[27] https://www.cmap.illinois.gov/documents/10180/38326/CMAQ+Mid-Point+Performance+Plan+2020_Oct2020.pdf/5eaee75e-2261-5259-e78c-992a54e9f767?t=1644609857416

[28] Environmental Protection Agency, "Green Book website," accessed March 2022, https://www.epa.gov/green-book

<table>
<tr><td>Methodology</td><td>The Total Emissions Reduction measure for each of the criteria pollutants or applicable precursors for all projects reported to FHWA's CMAQ Public Access System[29] are calculated to the nearest one thousandth by using the daily kilograms of emission reductions. CMAP calculates the daily kilograms of emission reductions as part of the project evaluation and selection process and provides that information to IDOT for entering into FHWA's CMAQ Public Access System.

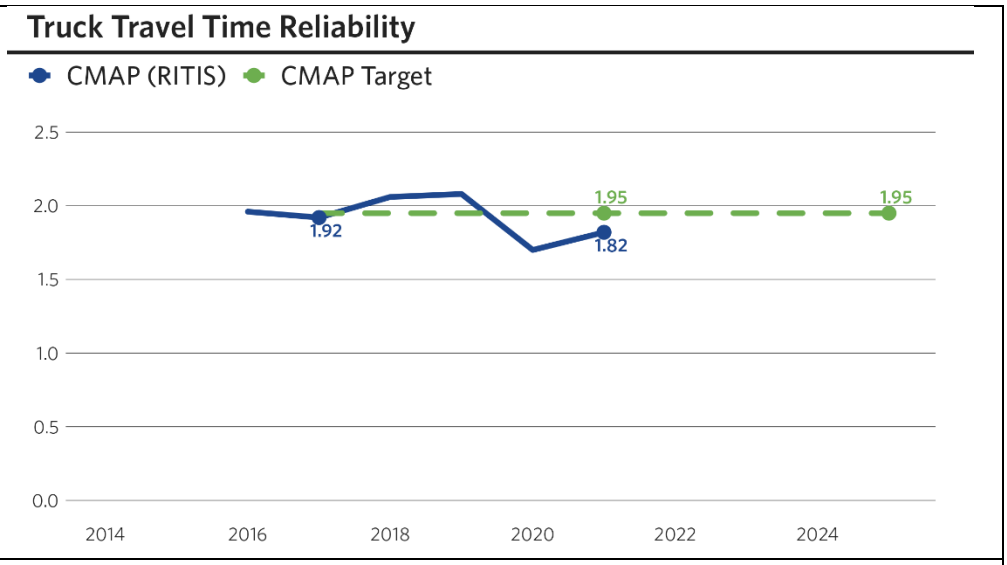
CMAP has combined the total daily emissions for the current five-year CMAQ program (2022 through 2026) to develop an annual estimate which was used to generate the two-year and four-year targets.
<table>
<tr><td></td><td>Daily VOC (kg)</td><td>Daily NOx (kg)</td><td>Daily $PM_{2.5}$ (kg)</td><td>Daily PM_{10} (kg)</td></tr>
<tr><td>2022-2026 Total Program</td><td>523.377</td><td>2755.257</td><td>105.830</td><td>0.000</td></tr>
<tr><td>Annual Estimate</td><td>104.675</td><td>551.051</td><td>21.166</td><td>0.000</td></tr>
</table></td></tr>
<tr><td>Proposed Targets</td><td>
<table>
<tr><td></td><td>Daily VOC (kg)</td><td>Daily NOx (kg)</td><td>Daily $PM_{2.5}$ (kg)</td><td>Daily PM_{10} (kg)</td></tr>
<tr><td>2023 (2-year Target)</td><td>209.351</td><td>1102.103</td><td>42.332</td><td>0.000</td></tr>
<tr><td>2025 (4-year Target)</td><td>418.702</td><td>2204.206</td><td>84.664</td><td>0.000</td></tr>
</table></td></tr>
<tr><td>Plan Update revisions</td><td>This measure has not been modified.</td></tr>
</table>

Truck Travel Time Reliability (TTTR) Index

Measure	The Truck Travel Time Reliability (TTTR) is defined as the ratio of the longer travel times (95th percentile) to a "normal" travel time (50th percentile) for a given segment on the interstate system. Higher values for this measure indicate that interstate travel is more unpredictable for local and national freight companies. The Chicago region is the nation's freight hub, so

[29] Federal Highway Administrations, "CMAQ Public Access System website", accessed May 2018 https://fhwaapps.fhwa.dot.gov/cmaq_pub/

	unreliable travel time on the interstate system can impact the entire country.
Methodology	This measure is calculated using data from the FHWA's NPMRDS. The NPMRDS provides travel time by road segment for the NHS in 15-minute intervals. Travel times are provided for passenger, freight, and combined values. Along with the travel time information, a geographic file of the road segments is provided through the NPMRDS. The geographic file includes information for each road segment including length in miles, average annual daily traffic, functional classification, and other roadway attributes. The measure is calculated using freight travel times. Travel time for all vehicles may be used where there are no data for trucks. The TTTR ratio is generated by dividing the 95th percentile travel time by the normal travel time (50th percentile) for interstate segments only for five reporting periods. The five reporting time periods include: • 6 a.m. – 10 a.m. weekdays • 10 a.m. – 4 p.m. weekdays • 4 p.m. – 8 p.m. weekdays • 8 p.m. – 6 a.m. all days • 6 a.m. – 8 p.m. weekends The maximum TTTR ratio of the five periods is selected and multiplied by the segment length. The sum of all segments is then divided by the total interstate system mileage. NPMRDS data is collected by INRIX and processed by University of Maryland CATT Lab. This data is made available to CMAP on the Regional Integrated Transportation Information System (RITIS) platform.
Proposed Targets	**2025 target:** Less than 1.95

	
Plan Update revisions	Targets were set in 2018 using observed data from both HERE and INRIX. Sufficient history is available from INRIX via RITIS, so HERE data is no longer included. Target remains unchanged from 2018

Transit Asset Condition

Past plans from CMAP and the RTA both called for additional funding for transit capital programs. Since these plans were adopted, Rebuild Illinois and the Infrastructure Investment and Jobs Act were passed, providing new capital funds for transit at the state and federal level. While these two bills provide needed, near-term capital funding boosts, sustained long term capital funding increases are needed to reduce the capital backlog. In addition, transit providers across the nation face new gaps in operating budgets because of declining fare revenue as people shift to more remote or hybrid work because of the pandemic. It is not clear how both funding and operations will change as a result.

The region's transit agencies face a massive state of good repair (SOGR) backlog, with limited resources expected to be available over the ON TO 2050 planning horizon. CMAP works with the RTA, CTA, Metra, and Pace to coordinate and support transit investment in the region. In addition to the work that each operating agency does, the RTA has prepared "Capital Asset Condition Assessment Reports"[30] for the entire region that are used to inform the ON TO 2050 financial plan and update. CMAP was partner in the RTA led transit strategic plan[31] called Invest In Transit and staff are participating in the process of developing the next plan to be released in 2023.

Research and projects

In preparation for ON TO 2050, CMAP staff developed several reports that make recommendations regarding transit asset management. Many aspects of the transit system were illustrated in the Transit Trends Snapshot.[32] CMAP brought together a group of partners and experts to make recommendations for the Transit Modernization Strategy Paper.[33] Finally, asset management practices for the region were reviewed in a Transportation Asset Management Recommendations Memo.[34] CMAP continues to collaborate with the RTA on development of their COST capital asset tool.

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[30] Regional Transportation Authority, "Capital Asset Condition Assessment Reports website," accessed May 2018 https://www.rtachicago.org/index.php/finance-management/program-management.html

[31] Regional Transportation Authority, "Invest In Transit The 2018-2023 Regional Transit Strategic Plan for Chicago and Northeast Illinois," 2018, http://www.rtachicago.org/index.php/plans-programs/regional-transit-strategic-plan.html

[32] Chicago Metropolitan Agency for Planning, "Transit Trends," ON TO 2050 Snapshot, November 2017, https://www.cmap.illinois.gov/documents/10180/814344/FY18-0043+Transit+Trends+Snapshot_web_FINAL.pdf/08b323bc-b94c-558f-482b-20f5a26fe5f8?t=1517957135943.

[33] Chicago Metropolitan Agency for Planning, "Transit Modernization."

[34] Chicago Metropolitan Agency for Planning, "Transportation Asset Management Recommendations."

Following the passage of Rebuild Illinois, the RTA began a process of evaluating the capital funding allocation process. CMAP provided input and support for the RTA's performance-based capital allocation process[35] and Framework for Transit Capital Investment.[36]

In addition to the capital planning work done by the RTA quantified the impacts of the new funding[37] and, each transit agency is required to develop a Transit Asset Management Plan (TAM)[38]. These plans document the people, processes and tools that come together to achieve policy goals. Plans are available online from CTA[39], Metra[40], and Pace.[41]

Incorporating transit asset management into local programming

With one of the oldest transit systems in the nation, the Chicago region spends a significant portion of transit capital funding on maintenance and repairs. When programming projects, CMAP with transit agencies make progress toward reducing their state of good repair backlog. In addition to the programming processes at each agency and the RTA, TERM asset condition score is included by CMAP in evaluation for CMAQ, STP-Shared Fund and Regionally Significant Projects. A guiding principle of the ON TO 2050 plan is to invest in the existing system, with limited expansion. This is reflected in the measures and projects selected.

Transit rolling stock

Measure	Percent revenue vehicles that have met or exceeded their useful life. This measures the percent of active revenue public transit vehicles that have met or exceeded their useful life, or the age when it is typically most cost effective to replace the vehicles.
Methodology	A snapshot of the active vehicle fleet is reported each year to the National Transit Database (NTD), including the year of manufacture. The useful life

[35] Regional Transportation Authority, "Presentation on Performance-Based Capital Allocation," https://www.rtachicago.org/sites/default/files/documents/aboutus/meeting_documents/6-17-21/BRD061721-6e%20Final.pdf.

[36] Regional Transportation Authority, "Framework Transit Capital Investments," 2020, https://www.rtachicago.org/sites/default/files/documents/businessandfinance/Framework-Transit-Capital-Investments_0.pdf.

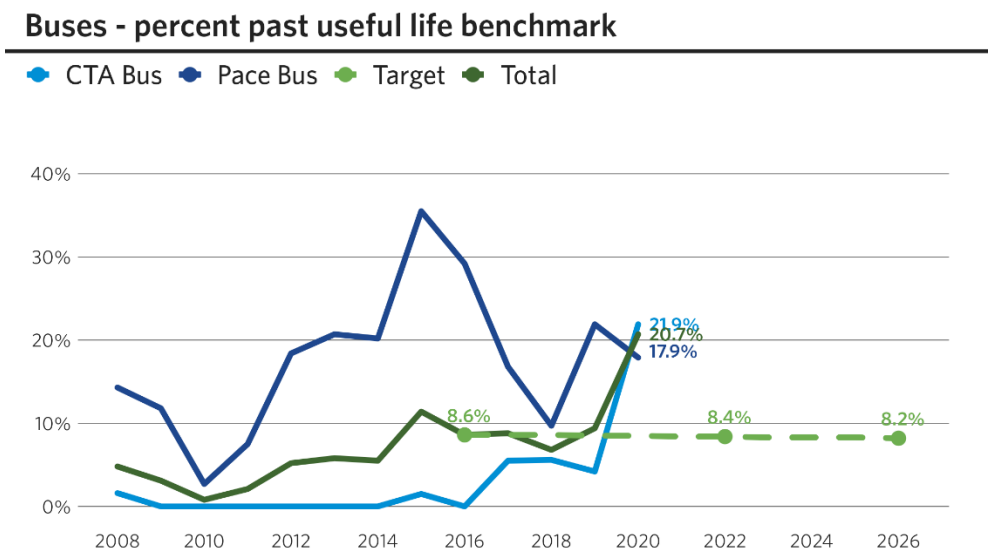
[37] Regional Transportation Authority, "Potential Impacts of State Funding on Transit State of Good Repair," July 2020, https://www.rtachicago.org/sites/default/files/documents/businessandfinance/Analysis%20of%20Impacts%20of%20State%20Funding%20White%20Paper.pdf.

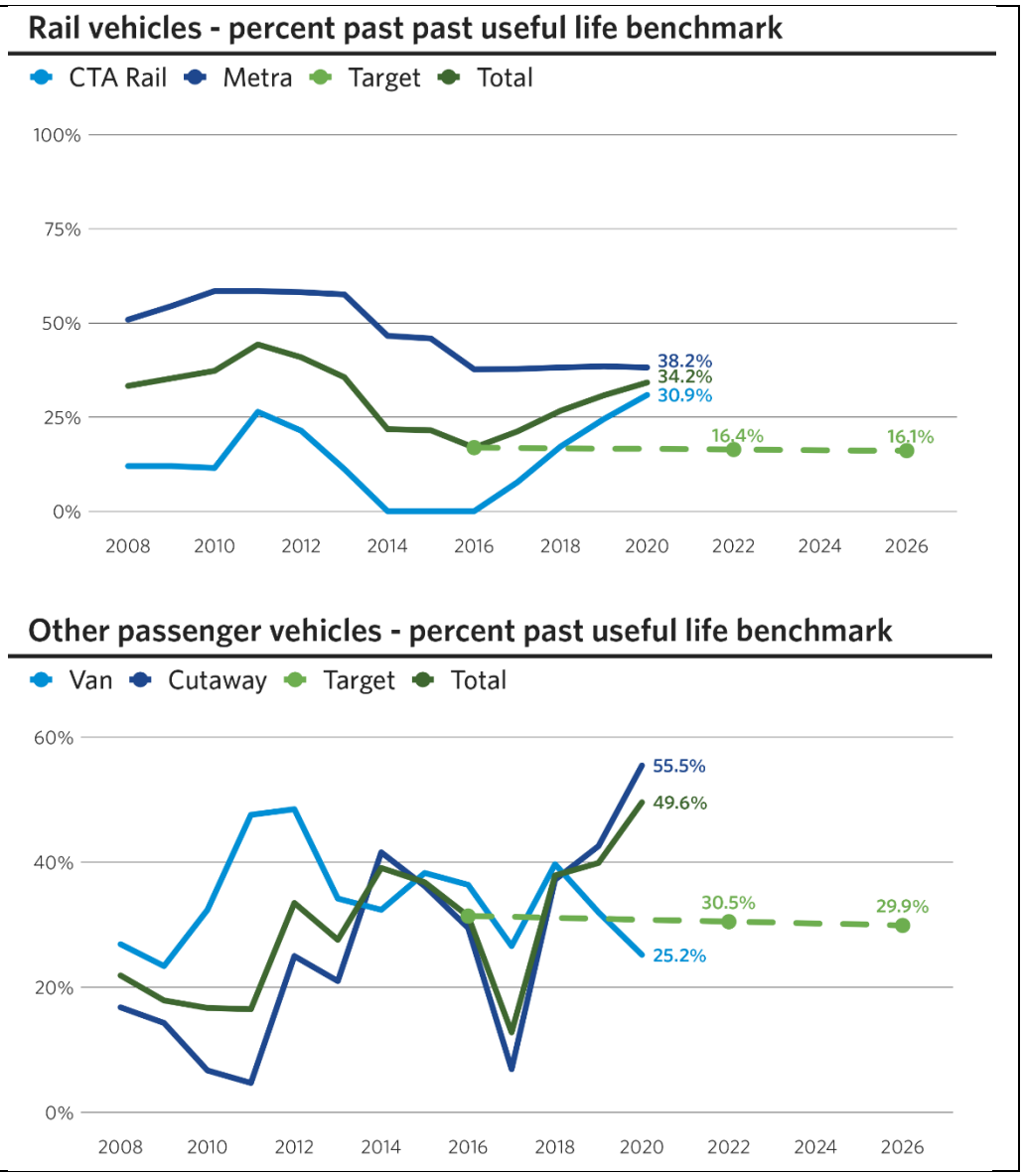
[38] 49 CFR Part 625

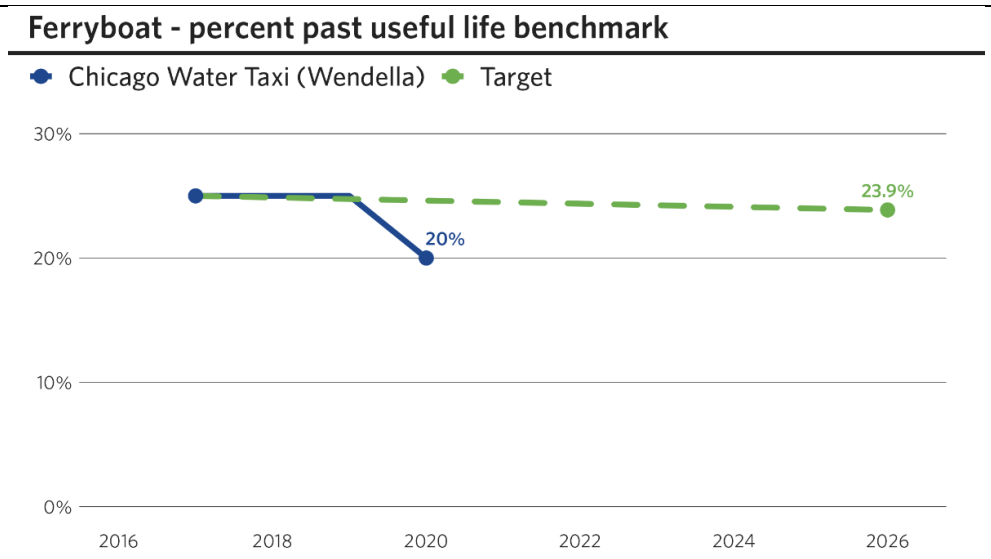
[39] https://www.transitchicago.com/performance/

[40] https://metra.com/transit-asset-management-plan

[41] https://www.pacebus.com/pace-transparency

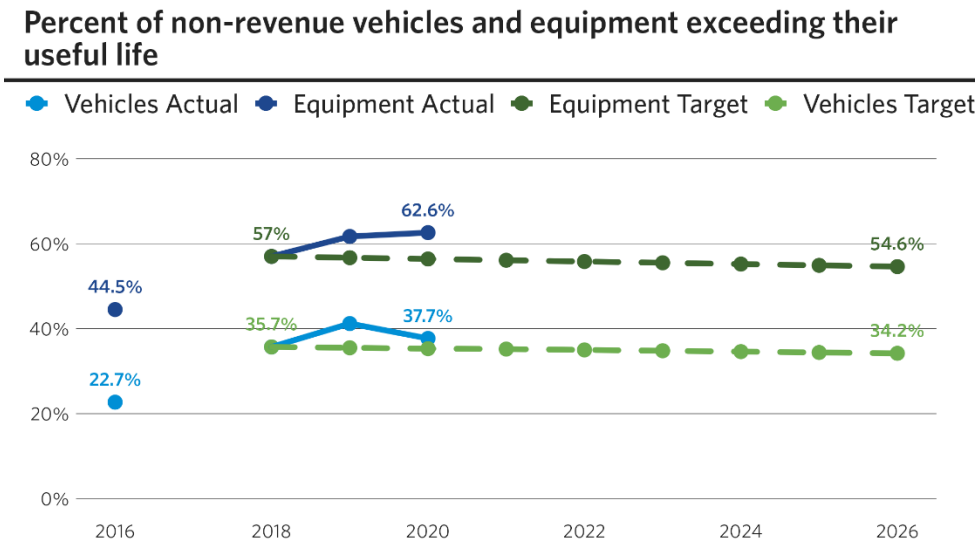
	benchmark (ULB) represents the age where maintenance cost and vehicle performance issues are likely to increase. CMAP has uses the ULB reported to NTD by each transit agency for their assets. Useful life benchmarks: Bus: CTA – 12-15 years, Pace – 12 years Rail: CTA – 34 years, Metra – 30-39 years Other passenger vehicles: Pace – four or five years (This includes a variety of services such as paratransit, vanpool, dial a ride, and on demand.) Ferryboat: Wendella – 42 years
Proposed Targets	**2026 targets:** **Bus:** Less than 8.2 percent of vehicles past ULB **Rail:** Less than 16.1 percent of vehicles past ULB **Other passenger vehicles:** Less than 29.9 percent of vehicles past ULB **Ferryboat:** Less than 23.9 percent of vehicles past ULB 


Rail vehicles - percent past past useful life benchmark
CTA Rail
Metra
Target
Total
100%
75%
50%
25%
0%
38.2%
34.2%
30.9%
16.4%
16.1%
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026
Other passenger vehicles - percent past useful life benchmark
Van
Cutaway
Target
Total
60%
40%
20%
0%
55.5%
49.6%
30.5%
29.9%
25.2%
2008
2010
2012
2014
2016
2018
2020
2022
2024
2026

	
Plan Update revisions	The formula for calculating the number of vehicles past useful life benchmark was changed from "exceeded" useful life to "met or exceeded". This change was applied to past years data. This results in a slightly higher percent of vehicles past ULB in some years. Past targets were based on all CTA buses ULB of 15 years. CTA now uses 12, 14 and 15 years for different types of fixed route buses. "Non-fixed route" was renamed "Other passenger vehicles" to better algin with FTA asset classes. Wendella Water Taxi received some FTA capital funding for vehicles but no federal operating support, and was added.

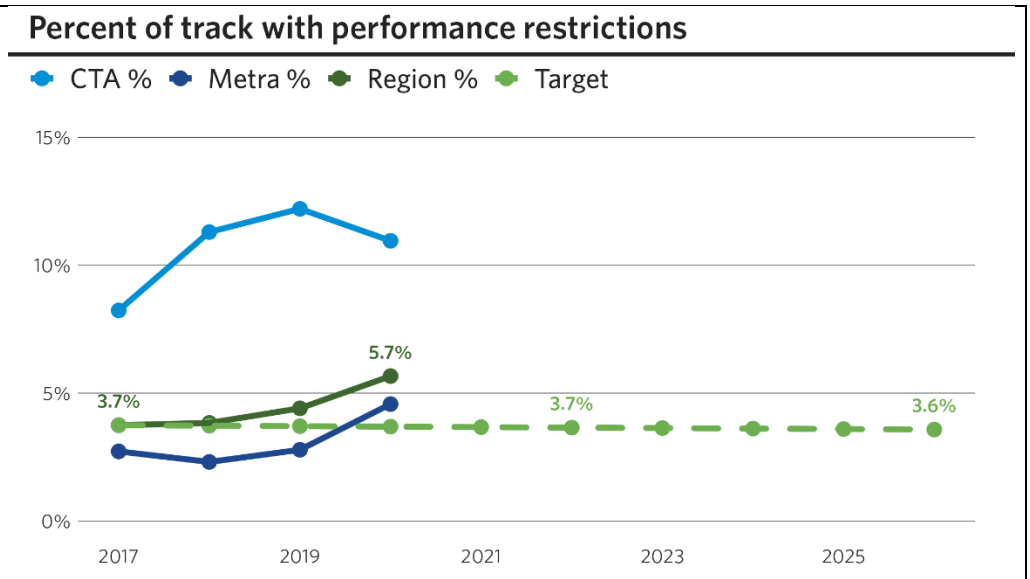
Transit non-revenue service vehicles and equipment

Measure	Percent of non-revenue vehicles and equipment that have met or exceeded their useful life. This measures the percent of non-revenue vehicles that have exceeded their useful life. This represents the number of vehicles that have reached an age where maintenance cost and vehicle performance issues are likely to increase. The vehicle types include trucks, cranes, and trailers. Much of the equipment is used for rail maintenance such as ballast cars, rail grinders, and tie pluggers.

Methodology	The useful life benchmark is determined by the transit agencies and varies by asset type for both non-revenue vehicles and equipment from 10 to 25 years. Each transit agency maintains an inventory of vehicles and equipment including the year of manufacture. Data for 2016 comes from transit agency memos because NTD data was not yet available. It is shown because it was used to set past targets, but it may not represent the same set of assets as standardized NTD data.
Proposed Targets	**2026 targets:** No more than 54.6 percent for non-revenue vehicles, no more than 34.2 percent for equipment 
Plan Update revisions	This target was first set before data was available from the National Transit Database. Starting in 2018, NTD data is available – the NTD represents a more consistent data set – so the baseline has been adjusted to use this data source.

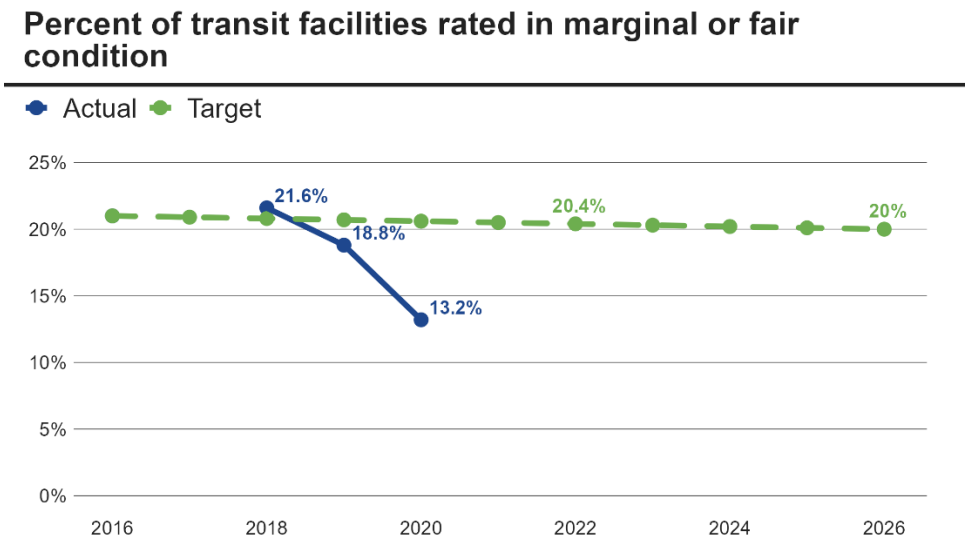
Transit infrastructure

Measure	Percent of directional rail route miles with track performance restrictions.
Methodology	This measures the percent of transit rail track with performance restrictions or "slow zones" where trains are required to operate at slower than normal speeds. This could be the result of track age, construction, power systems, signals, or other issues. Note that Metra track condition is regulated by the FRA.
Proposed Targets	**2026:** Less than 3.6 percent

	
Plan Update revisions	Metra is receiving more complete information from partner railroads, which results in increased rate relative to past years.

Transit facilities

Measure	Percent of transit facilities with an asset class condition rating below 3 on the FTA's Transit Economic Requirements Model scale. This measure quantifies the condition of transit facilities including maintenance buildings, administrative buildings, passenger stations, and parking facilities.
Methodology	The Federal Transit Administration has developed a 5-point scale for classifying the condition of assets called the Transit Economic Requirements Model (TERM). TERM Scale: 4.8-5.0: Excellent 4.0-4.7: Good 3.0-3.9: Adequate 2.0:2.9: Marginal 1.0-1.9: Poor Transit agencies assess the condition of the components (such as plumbing and HVAC) of major facilities then aggregate the component level data to obtain an overall facility condition rating. A facility is deemed to be in good

	repair if it has a condition rating of 3, 4, or 5 on this scale and is deemed to not be in good repair if it has a rating of 1 or 2.
Proposed Targets	**2026 target**: Less than 20.0 percent 
Plan Update revisions	NTD data on asset conditions is more robust.

Transit Safety

Transit safety targets are required by the performance-based planning and programming (PBPP) rulemakings enacted in accordance with the Public Transportation Agency Safety Plan (PTASP) Final Rule[42].

Metra is exempt from PTASP requirements because it is regulated for safety by the Federal Railroad Administration (FRA) rather than the FTA. Accordingly, Metra has developed a System Safety Program Plan (SSPP) under the FRA[43]. Under MAP-21, states have additional safety oversight responsibilities for heavy rail transit[44]. In Illinois, IDOT oversees two covered systems: CTA rail and Bi-State Development MetroLink light rail (St. Louis).

The National Public Transportation Safety Plan (NPTSP) guides the national effort in managing the safety risks and hazards within our nation's public transportation systems. The plan centers on the FTA's Safety Management System (SMS) approach to improving the industry's safety performance. It also established performance measures to improve the safety of public transportation systems that receive federal financial assistance. Transit agencies, MPOs, and states are required to set targets for these measures. The FTA has not established penalties for not meeting safety performance targets.

The safety performance measures require transit agencies, state DOTs and MPOs to establish safety targets for:

(1) Number of fatalities by mode
(2) Rate of fatalities per revenue mile by mode
(3) Number of serious injuries by mode
(4) Rate of serious injuries per revenue mile by mode
(5) Number of reportable events by mode
(6) Rate of safety events per revenue miles by mode
(7) Reliability — Mean distance between mechanical failure by mode

CMAP sets targets by mode for:

Heavy Rail (CTA)
Bus (CTA and Pace)
Non-fixed route: Paratransit (Pace) and Vanpool (Pace)

Ferryboats and Commuter Rail are exempt from FTA safety target setting.

[42] Public Transportation Agency Safety Plan Final Rule https://www.govinfo.gov/content/pkg/FR-2018-07-19/pdf/2018-15167.pdf

[43] For more information about FRA safety plans see 49 CFR Part 270

[44] FTA State Safety Oversight Program https://www.transit.dot.gov/state-safety-oversight

Each transit provider is required to develop an Agency Safety Plan. The plan and safety performance targets are reviewed and updated annually. The MPO is not required to set new transit safety targets each year but can choose to revisit the MPO's safety performance targets based on the schedule for preparation of its system performance report that is part of the Metropolitan Transportation Plan (MTP). In March 2021, CMAP MPO Policy Committee and Board adopted two-year transit safety targets following adoption of targets by CTA and Pace. This document adopts four-year targets to align with the planning cycle of the update to ON TO 2050.

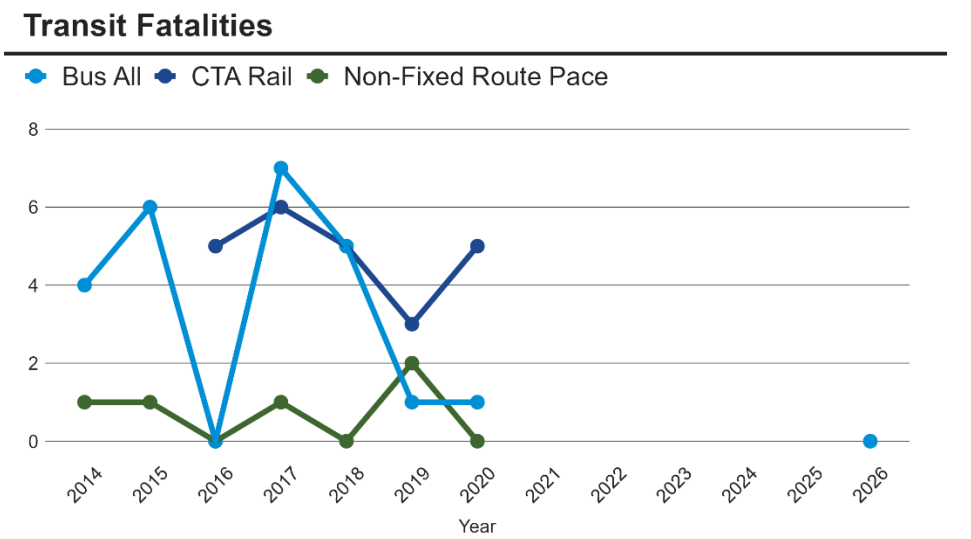
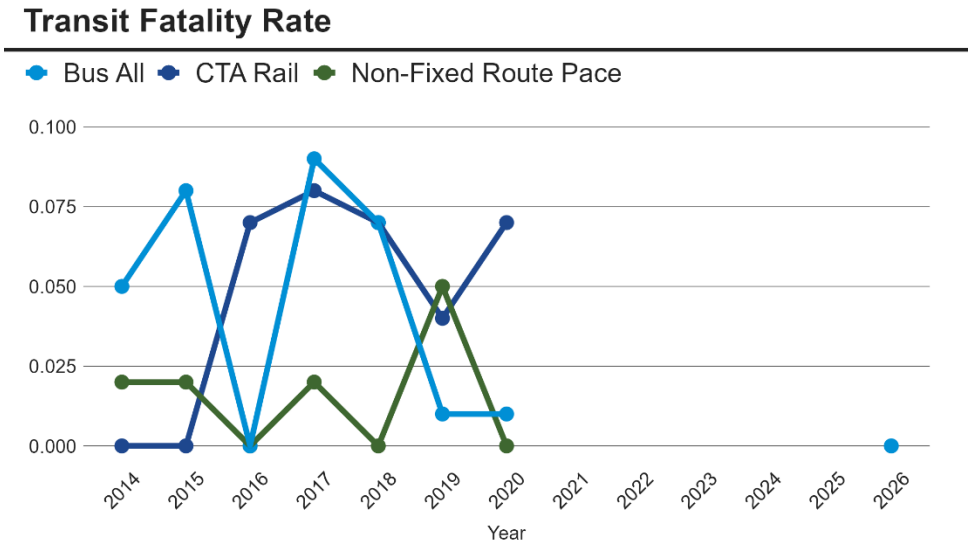
Research and projects

In preparation for target setting, CMAP hosted a transit safety summit in January 2021 that included representatives from IDOT, CTA, Pace, Metra, RTA, FTA, and CMAP. Discussion included plan development, recent safety efforts by each agency, target setting, response to COVID-19, technology, and future activities. Agencies shared that recent plans largely formalize existing safety practices in one place in a consistent manner. These plans have elevated the visibility of safety in organizations, at all levels.

Incorporating transit safety into local programming

Transit safety is the most recent federal performance measure rule to be finalized. CMAP staff and the transit agencies are just beginning to find ways to reflect and enhance how transit safety is incorporated in regional programming. Asset condition is incorporated into CMAQ and RSP evaluations. Improving the condition of the regions assets often results in both operating performance and safety improvement. Safety has long been a factor in the project prioritization of the transit agencies. This emphasis has become more formalized with recent TAM and PTASP plans. There is an opportunity to bring transit safety staff into the conversation CMAP has been leading on roadway safety. Many of the same highway safety issues, such as CMAP's current focus: speeding, are impacting buses that operate in the same environment. The experience of transit agencies will be valuable as CMAP will be focusing on pedestrian safety next as part of the safety action agenda.

Fatalities

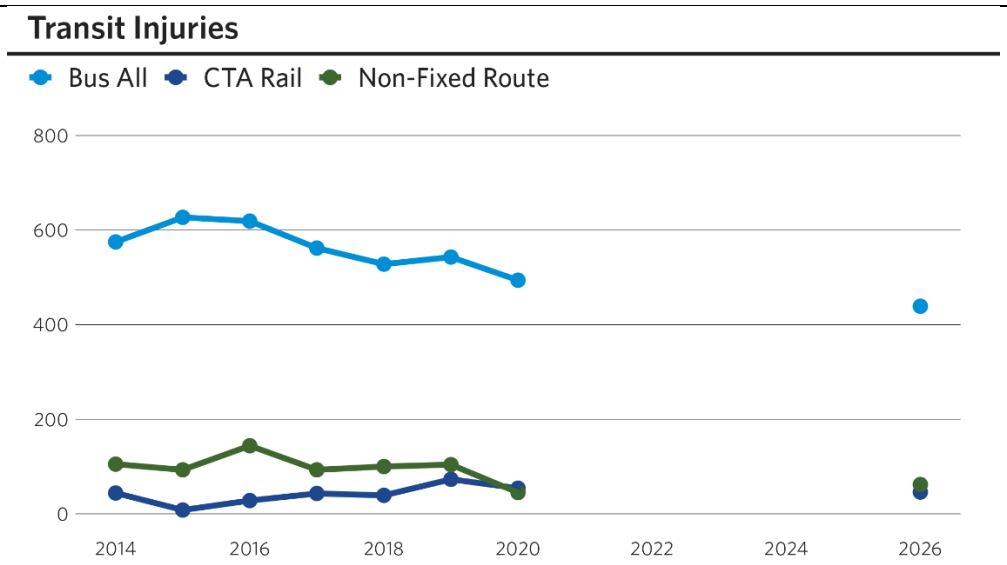
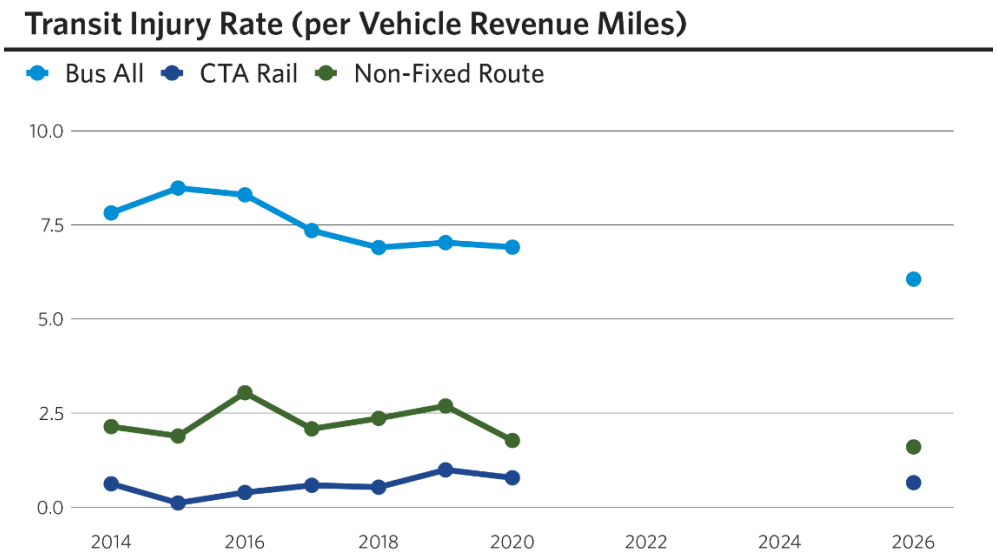
Measure	Total number and rate per million vehicle revenue miles of fatalities reported to the NTD (deaths confirmed within 30 days), excludes trespassing, security events (other crimes) and suicide-related fatalities by mode.
Methodology	Fatality data comes from the "Safety & Security Major-Only Time Series Data" table of the National transit database maintained by the FTA. Total fatalities are divided by the vehicle and passenger car revenue miles to get the rate per million revenue miles. Security events are excluded.
Proposed Targets	**2026 fatality and fatality rate target**: Zero fatalities – all transit modes  

Plan Update revisions	This measure was adjusted to reflect FTA guidance[45]. Fatalities related to security events are no longer included. All transit safety targets have been updated to reflect Public Transit Agency Safety Plan Modal Category guidance.

Serious Injuries

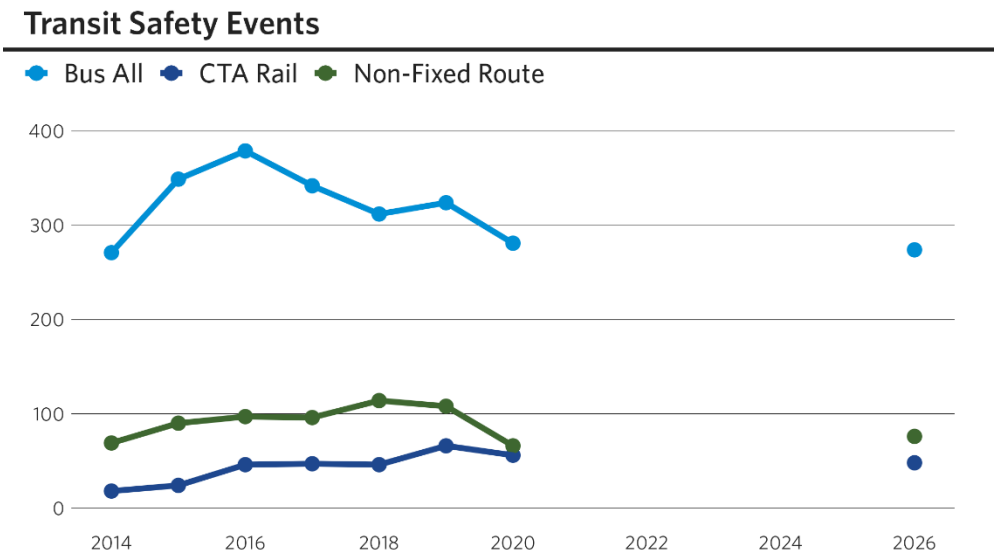
Measure	Total number and rate per million vehicle revenue miles of injuries reported to the NTD excluding injuries resulting from assaults and other crimes (security events).
Methodology	Injury data comes from the "Safety & Security Major-Only Time Series Data" table of the National transit database maintained by the FTA. Total injuries are divided by the vehicle and passenger car revenue miles to get the rate per million revenue miles. Security events are excluded. Injuries include those in which the injured party required hospitalization for more than 48 hours, commencing within 7 days from the date of the event, incurred a fracture of any bone (except simple fractures of fingers, toes, or nose), severe hemorrhages, nerve muscle, or tendon damage, internal organ injury, or second-degree burns on more than 5 percent of the surface of the body.
Proposed Targets	**2026 Injury targets**: Less than: Rail: 46 injuries and a rate of 0.65 Bus: 439 injuries and a rate of 6.06 Non- Fixed Route: 62 injuries and rate of 1.60

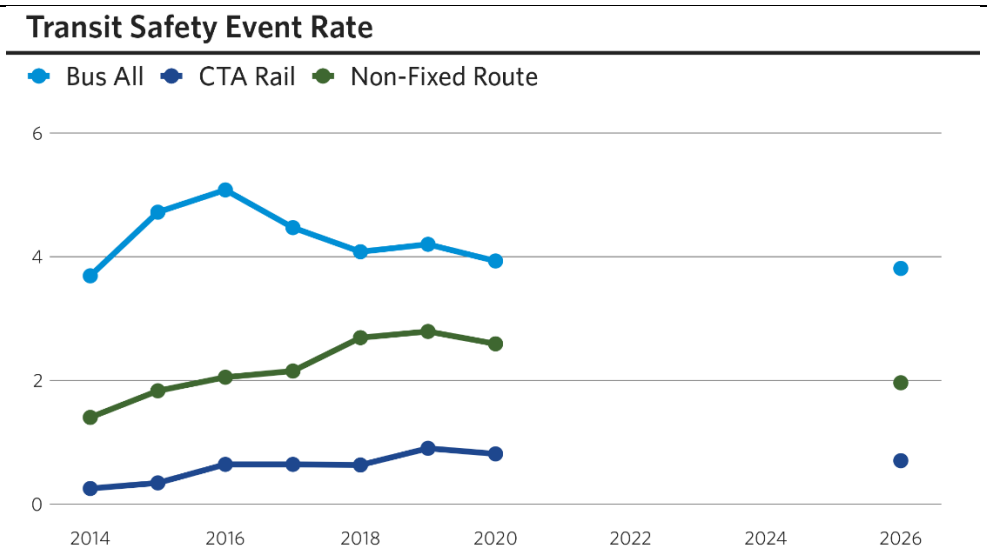
[45] https://www.transit.dot.gov/regulations-and-programs/safety/public-transportation-agency-safety-program/safety-performance

	 
Plan Update revisions	Targets are adjusted based on FTA guidance[46] to exclude injuries that result from assaults and other crimes. All transit safety targets have been updated to reflect Public Transit Agency Safety Plan Modal Category guidance.

[46] https://www.transit.dot.gov/regulations-and-programs/safety/public-transportation-agency-safety-program/safety-performance

Safety Events

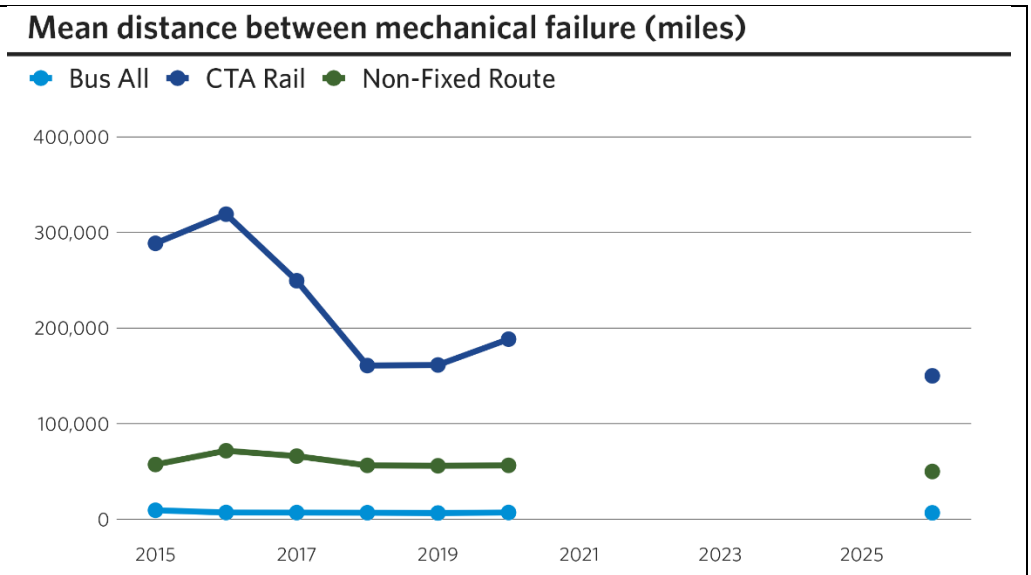
Measure	Total number of reportable events and the rate per total vehicle revenue miles by mode.
Methodology	Safety Events under the Major-Only Time Series are reported monthly to the FTA, and data is reported in the National Transit Database in five categories: 1. Collisions (includes all collision types reported to NTD, excludes suicides) 2. Derailments (includes all derailments reported to NTD) 3. Fires (includes all fires reported to NTD) 4. Security (includes all security events reported to the NTD) 5. NOC ("Not Otherwise Classified" includes all other reportable events) The all-security events (#4) such as assaults are removed, and the rate is per million revenue miles.
Proposed Targets	**2026 event targets**: Less than: **Rail:** 48 events and a rate of 0.70 **Bus:** 274 events and a rate of 3.81 **Non- Fixed Route:** 76 events and rate of 1.96 

	
Plan Update revisions	Targets are adjusted based on FTA guidance[47] to exclude events that result from assaults and other crimes. All transit safety targets have been updated to reflect Public Transit Agency Safety Plan Modal Category guidance.

Reliability

Measure	Mean distance between major mechanical failures by mode.
Methodology	The NTD defines a major mechanical system failure as a failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or starting the next scheduled revenue trip because vehicle movement is limited or due to safety concerns. This value is reported in miles.
Proposed Targets	**2026 reliability targets:** At least: **Rail:** 150,000 miles **Bus:** 6,637 miles **Non-Fixed Route:** 49,881 miles

[47] https://www.transit.dot.gov/regulations-and-programs/safety/public-transportation-agency-safety-program/safety-performance

	
Plan Update revisions	All transit safety targets have been updated to reflect Public Transit Agency Safety Plan Modal Category guidance.

Conclusion

Target setting is both a technical and policy-setting exercise. As part of updating and developing targets, CMAP staff have processed several data sets for the region. In additional to using this data for various analysis and programming tasks, staff are working on developing a dashboard that will make this data more accessible to policy makers and the public. Targets, and the region's performance toward targets, will continue to be incorporated into analysis, work plans, and committee discussions.