# 2025 Federal Transportation Improvement Program

# Performance Report



# August 2024

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# Introduction

Performance management provides the opportunity to ensure efficient and effective investment of transportation funds by refocusing on established goals, increasing accountability and transparency, and improving project decision-making. MAP-21/FAST Act require States and MPOs to implement a performance-based approach in the scope of the statewide and metropolitan transportation planning process. In addition to federal performance-based planning, the State of California has articulated through statute, regulation, executive order, and legislative intent language, numerous state policies and goals for the transportation system, the environment, the economy, and social equity.

There are different applications of performance management – performance measures, performance targets, and performance monitoring indicators or metrics. Performance measures are used to model travel demand and allow the long-range forecasting of transportation network and system-level performance (e.g. Walk, bike, transit, and carpool mode share, corridor travel times by mode, percentage of population within 0.5 mile of a high frequency transit stop). Performance targets are numeric goals established to enable the quantifiable assessment of performance measures. Performance monitoring indicators or metrics include field data such as vehicle miles traveled, mode share, fatalities/injuries, transit access, change in agricultural land, and CO2 emissions.

# **Federal Performance Management Targets**

The cornerstone of the federal highway program transformation is the transition to a performance and outcome-based program. MAP-21/FAST Act integrate performance into many federal transportation programs and contains several performance elements. States and MPOs will invest resources in projects to achieve individual targets that collectively will make progress toward national goals. Caltrans is required to set and report on progress towards four sets of performance management targets.

- Safety Performance Management (PM1): Fatalities and Injuries
- Pavement and Bridge Condition Performance Management (PM2): Infrastructure Condition
- System Performance Management (PM3): Freight movement, congestion, and reliability
- Transit Asset Management (TAM) and Public Transportation Agency Safety Plan (PTSAP):
   State of good repair and safety for transit

This report describes each federal performance metric, charts data collected to date, compares that data to currently adopted targets and describes how the FTIP makes investments that support reaching those targets. For some targets, MPO's can either agree to support the Caltrans target or establish a numerical target specific to the MPO planning area. Since this federal process started in 2018, BCAG has supported all of Caltrans statewide targets for all performance metrics.

# Safety Performance Management (PM1)

The federal goal under safety performance management (PM1) is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. Table 1. Includes those targets prepared by the state, and supported by BCAG, for California for the year 2024.

Table 1. Statewide Safety Performance Targets - Year 2024

| , ,   |        |
|---|--------|
| Measure   | Target |
| Number of Fatalities                                      | -2.84% |
| Rate of Fatalities per 100M Vehicle Miles of Travel (VMT) | -4.61% |
| Number of Serious Injuries                                | -3.69% |
| Rate of Serious Injuries per 100M VMT                     | -3.69% |
| Number of Non-Motorized Fatalities                        | -2.84% |
| Number of Non-Motorized Serious Injuries                  | -3.69% |

Note: Targets are based on a 5-year rolling average for all roadways.

Over the last 10 years, an average of 35 people died in vehicle collisions on our region's roads and highways. The latest 5-year average (2022) shows a 3.9% annual decrease from the previous year.

**Fatalities** 60 3.9% 50 Decrease from 40 2021 (5-yr Average) 20 10 2013 2014 2019 2020 2022 Yearly 21 24 42 31 5-year Average 26.4 26.6 23.6 26.8 30.0 33.0 35.0 37.2 41.2 39.6

Figure 1. 2013-2022 Fatal Collisions for BCAG Region

The region's 2022 collision fatality rate has begun to return to levels seen prior 2020. The latest 5-year average (2023) shows a 0.3% annual decrease from 2021.

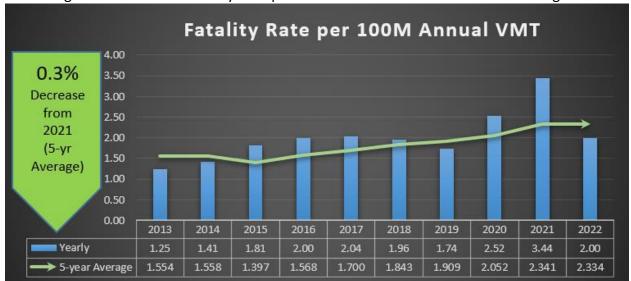


Figure 2. 2013-2022 Fatality Rate per 100M Annual Vehicle VMT for BCAG Region

Between the years 2013 and 2017, the region averaged 113 annual serious injuries. In 2018, the region's serious injuries were at 184, double that of the 97 injuries 5 years prior (2013).

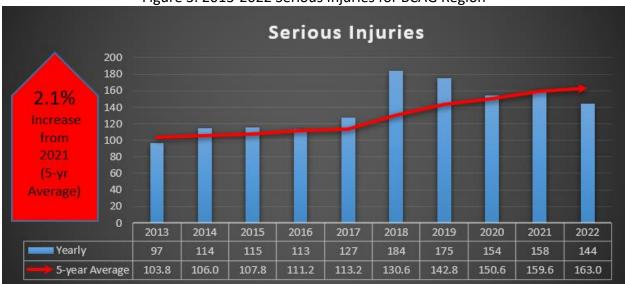


Figure 3. 2013-2022 Serious Injuries for BCAG Region

Since 2018, the region has averaged 9.5 serious injuries per 100 million annual vehicle miles of travel, a 6% increase from the 2021 5-year average.

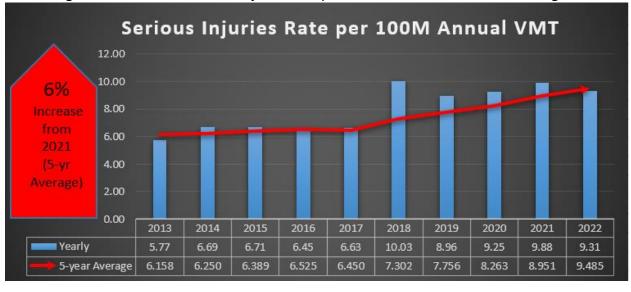


Figure 4. 2013-2022 Serious Injuries rate per 100M Annual VMT for BCAG Region

Over the last 10 years, an average of 31 people died or have been seriously injured as pedestrian or cyclist being involved in a vehicle collision. The latest 5-year average (2022) shows a 7.4% annual decrease from the previous year.



Figure 5. 2013-2022 Non-Motorized Fatalities and Serious Injuries for BCAG Region

\$514 million of the projects identified in the 2020 RTP project list are safety related. Notable projects include State Route (SR) 70 passing lane segments which utilize \$113.6 million in State Highway Operations and Protection Program (SHOPP) funds and the improvement of sixteen stop-controlled intersections within the Town of Paradise utilizing \$1.23 million of Highway Safety Improvement Program (HSIP) funds.

# Pavement and Bridge Condition Performance Management (PM2)

The federal goal under the pavement and bridge condition performance management (PM2) is to maintain the highway infrastructure asset system in a state of good repair. Table 2. Includes those targets prepared by the state, and supported by BCAG, for California for the year 2020.

Table 2. Statewide Infrastructure Condition Targets - Year 2020

| Davis and Daides Davis and and             | 10-Year    | Target | 4-Year Target |       |  |
|--|------------|--------|---------------|-------|--|
| Pavement and Bridge Performance  Measures* | (12/31/32) |        | (12/31/26)    |       |  |
| ivicusures                                 | Good       | Poor   | Good          | Poor  |  |
| Pavement on the NHS (Non-Interstate)       | 5.6%       | 29.2%  | 2.8%          | 26.5% |  |
| Bridges on the NHS                         | 15.2%      | 4.9%   | 24.3%         | 1.9%  |  |

<sup>\*</sup>Applicable to the BCAG Region

The Infrastructure Performance Measure Final Rule established performance measures for pavement and bridge conditions on the National Highway System (NHS). Caltrans set 10- and 4-year statewide targets on May 20, 2021. The statewide targets are based on Caltrans' long-range (10 year) Transportation Asset Management Plan and the 2021 State Highway System Management Plan. The plans take into consideration the availability of Senate Bill 1 funds over the target setting period and current estimated conditions of the NHS.

The local NHS consists of those roadways and bridges in Butte County that have been identified as part of the NHS and are not part of the State Highway System. These facilities are typically federally classified as "principal arterials". Tables 3 & 4 include the inventory of local NHS roadways and bridges.

Table 3. Local National Highway System – Roadways

| Jurisdiction | Street Name  | From Location   | To Location     | Jurisdiction | Street Name        | From Location           | To Location      |
|--------------|--------------|-----------------|-----------------|--------------|--------------------|-------------------------|------------------|
| CHICO        | BROADWAYST   | SHWY 32         | SHASTA WAY      | CHICO        | SHASTA WAY         | BROADWAY ST             | MAIN ST          |
| CHICO        | COHASSET RD  | ESPLANADE       | EAST AVE        | CHICO        | SKYWAY RD          | SHWY 99                 | NOTRE DAME BLVD  |
| CHICO        | CYPRESS ST   | E 12TH ST       | WOODLAND AVE    | CHICO        | W EAST AVE         | CUSSICK AVE             | ESPLANADE        |
| CHICO        | E 20TH ST    | PARK AVE        | SHWY 99         | CHICO        | WOODLAND AVE       | PINE ST                 | CYPRESS ST       |
| CHICO        | E PARK AVE   | MIDWAY          | SHWY 99         | COUNTY       | SKYWAY RD          | .42M W/SKYWAY CROSSROAD | SKYWAY CROSSROAD |
| CHICO        | EAST AVE     | ESPLANADE       | COHASSET RD     | COUNTY       | SKYWAY RD          | COUTOLENC               | PONDEROSA RD     |
| CHICO        | ESPLANADE    | MAIN ST         | LASSEN AVE      | COUNTY       | SYCAMORE ST        | KOFFORD RD              | PALM LN          |
| CHICO        | FAIR ST      | EPARK AVE       | 20TH ST         | COUNTY       | NEW SKYWAY         | .08M E/PENTZ RD         | COUTOLENC RD     |
| CHICO        | IVY ST       | 2ND ST          | 9TH-SHWY 32     | GRIDLEY      | SYCAMORE ST        | PALM AVE                | BIGGS GRIDLEY RD |
| CHICO        | MAIN ST      | PARK AVE        | ESPLANADE       | GRIDLEY      | SPRUCE ST          | W BIGGS GRIDLEY RD      | SHWY 99          |
| CHICO        | MANGROVE AVE | VALLOMBROSA AVE | COHASSET RD     | GRIDLEY      | W BIGGS GRIDLEY RD | SYCAMORE ST             | PEACH ST         |
| CHICO        | MULBERRY ST  | 20TH ST         | 12TH ST         | PARADISE     | SKYWAY RD          | SKYWAY CROSSROAD        | PENTZ RD         |
| CHICO        | OROVILLE AVE | MAIN ST         | SHWY 32         | PARADISE     | CLARK RD           | PEARSON RD              | SKYWAY           |
| CHICO        | PARK AVE     | MIDWAY          | MAIN ST         | PARADISE     | NEW SKYWAY         | PENTZ RD                | .08M E/PENTZ RD  |
| CHICO        | PINE ST      | E 12TH ST       | VALLAMBROSA AVE |              |                    |                         |                  |

Source: Caltrans GIS Data Library (2018)

Table 4. Local National Highway System – Bridges

| Jurisdiction | Street Name  | Crossing           | Location                       | Length | Deck Area (SqFt) |
|--------------|--------------|--------------------|--------------------------------|--------|------------------|
| CHICO        | PARK AVE     | LITTLE CHICO CREEK | 0.1 MI N OF 11TH ST            | 20.6   | 4004             |
| CHICO        | ESPLANADE    | LINDO CHANNEL      | 0.15 MI N OF W 11TH AVE        | 56.1   | 11119            |
| CHICO        | MAIN ST      | BIG CHICO CREEK    | 0.15 MI N OF 2ND ST            | 17     | 4263             |
| CHICO        | MANGROVE AVE | LINDO CHANNEL      | BETWEEN E 10TH & COHASSET      | 46.9   | 9601             |
| CHICO        | MANGROVE AVE | BIG CHICO CREEK    | BETWEEN 3RD & VALLOMBROSA AVE  | 16.5   | 5059             |
| CHICO        | PINE ST      | LITTLE CHICO CREEK | BETWEEN HUMBOLDT AVE & 12TH ST | 23.5   | 2917             |
| CHICO        | CYPRESS ST   | LITTLE CHICO CREEK | BETWEEN HUMBOLDT AVE & 12TH ST | 25.3   | 3122             |

Source: Caltrans GIS Data Library (2018)

\$247.4 million of the projects identified in the 2020 RTP project list are directed towards the improvement of bridges and roadway surfaces in the region. This includes the utilization of Highway Bridge Program (HBP) funds to complete \$99.4 million in improvements to bridges and Senate Bill 1 (SB 1) funds to complete \$3.9 million in roadway rehabilitation projects.

# System Performance Management (PM3)

The federal goal under system performance management (PM3) is to achieve a significant reduction in congestion on the National Highway System, improve the efficiency of the surface transportation system, improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, support regional economic development, reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

On January 18, 2017, the Federal Highway Administration (FHWA) published a final rule in the Federal Register (82 FR 5970) establishing performance measures that State Departments of Transportation (DOTs) and MPOs will use to report on the performance of the Interstate and Non-Interstate National Highway System (NHS) to carry out the National Highway Performance Program (NHPP) and traffic congestion and on-road mobile source emissions for the purpose of carrying out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

Caltrans updated 2- and 4-year statewide targets on December 16, 2022. The statewide targets were established based on an iterative process and coordination between Caltrans, MPOs, CALCOG, and the California State Transportation Agency. In developing the statewide targets, Caltrans coordinated with the MPO's through the utilization of a Technical Advisory Group (TAG). The TAG participated in several workshops and other key stakeholder meetings.

PM3 contains six specific measures, only two of which are applicable to the BCAG region – see Table 5 below.

Table 5. Statewide System Performance Targets - Year 2021

| System Performance Measure*              | Baseline 2021 | 2-Year Target | 4-Year Target |
|--|---------------|---------------|---------------|
| Percent of Reliable Person-Miles         |               |               |               |
| Traveled on the Non-Interstate NHS       | 83.7%         | 84.2% (+0.5%) | 84.7% (+1%)   |
| Total Emissions Reductions by Applicable | 2018-2021     |               |               |
| Pollutants under the CMAQ Program        | Baseline      |               |               |
| VOC (kg/day)                             | 2,551         | 2,862         | 5,724         |
| CO (kg/day)                              | 21,771        | 12,798        | 25,596        |
| NOx (kg/day)                             | 7,213         | 4,317         | 8,635         |
| PM10 (kg/day)                            | 3,830         | 2,152         | 4,305         |
| PM2.5 (kg/day)                           | 1,537         | 1,830         | 3,659         |

<sup>\*</sup>Applicable to BCAG Region

Percent of Reliable Person Miles Traveled on the Non-Interstate NHS: A key product developed by Caltrans and their consultants was a MAP-21 application within the National Performance Management Research Data Set (NPMRDS) Analytics tool. The tool allows MPOs to determine the overall Level of Travel Time Reliability (LOTTR) within their regions. The data for Travel Time Reliability in the BCAG region for year 2022 is shown in Figure 6.

Figure 6. Travel Time Reliability in BCAG Region CA - Butte County Association of Governments, Chico (BCAG)

MAP-21 Percent of the Person-Miles Traveled on the Non-Interstate NHS That Are Reliable (the Non-Interstate NHS Travel Time Reliability measure)



Target: At least 84.7% of the system should have a LOTTR less than 1.50



Calculated using 100.00% of miles in Butte County Association of Governments

Data source: NPMRDS INRIX

The data for each regions' non-interstate NHS was aggregated to the statewide level and used to establish the 2- and 4-year targets.

Total Emissions Reductions by Applicable Pollutants under the CMAQ Program: Caltrans utilized the CMAQ Public Access System (<a href="https://fhwaapps.fhwa.dot.gov/cmaq">https://fhwaapps.fhwa.dot.gov/cmaq</a> pub/) in establishing the Baseline 2021 pollutant numbers for target setting purposes and aggregated all data

available in the system to the statewide level and used in establishing 2- and 4-year targets. As of January 2024, ten projects are included for the Butte County region which are listed in Table 6.

Table 6. Projects Included in CMAQ Performance Plan for Butte County 2019-2022 Period

|      | le di i rojecto incidaca in civii i | PROJECT          | VOC      | СО       | NOx      | PM10     | PM2.5    |
|------|-------------------------------------|------------------|----------|----------|----------|----------|----------|
| YEAR | PROJECT TITLE                       | DESCRIPTION      | (kg/day) | (kg/day) | (kg/day) | (Kg/Day) | (Kg/Day) |
|      |                                     | Congestion       |          |          |          |          |          |
| 2022 | Gridley – SR 99 Multi-Use Path      | Reduction        | 0.05     | 0.524    | 0.065    |          | 0.017    |
|      | Chico – Hegan Lane Business         | Congestion       |          |          |          |          |          |
| 2021 | Park Access Improvements            | Reduction        |          | 0.091    | 0.399    |          |          |
|      | Butte County – Autry Lane,          |                  |          |          |          |          |          |
|      | Monte Vista & Lower Wyandotte       | Safety           |          |          |          |          |          |
| 2021 | Safe Routes to Schools              | Program          |          | 1.66     | 0.12     |          | 0.033    |
|      |                                     | Safety           |          |          |          |          |          |
| 2020 | Biggs – 2 <sup>nd</sup> St          | Program          | 0.01     |          | 0.03     |          |          |
|      | Gridley – Central Gridley           |                  |          |          |          |          |          |
|      | Pedestrian Connectivity and         | Safety           |          |          |          |          |          |
| 2019 | Equal Access Project                | Program          | 0.03     |          | 0.02     |          | 0.01     |
|      | Butte County – Palermo/South        | Safety           |          |          |          |          |          |
| 2019 | Oroville SRTS Project Phase 3       | Program          | 0.02     | 0.17     | 0.01     |          | 0.01     |
|      | Paradise – ATP Gap Closure          | Safety           |          |          |          |          |          |
| 2019 | Project                             | Program          | 0.03     | 0.11     | 0.02     | 0.01     |          |
|      |                                     | Safety           |          |          |          |          |          |
| 2019 | Paradise – ATP Gateway Project      | Program          | 0.18     |          | 0.18     | 0.14     |          |
|      | Paradise – Oliver Curve Class I     | Safety           |          |          |          |          |          |
| 2019 | Phase 1                             | Program          | 0.03     |          | 0.03     | 0.03     |          |
|      | Paradise – Pentz Road Trailway      | Safety           |          |          |          |          |          |
| 2019 | Phase 2                             | Program          | 0.05     |          | 0.05     | 0.04     |          |
|      | Total En                            | nission Benefits | 0.4      | 2.555    | 0.924    | 0.22     | 0.07     |

\$308.6 million of the projects identified in the 2020 RTP project list are directed towards the reduction of congestion and vehicle emissions and improving the reliability of the transportation system in the region. This includes \$77.22 million in transit projects, \$83.2 million in bike and pedestrian projects, \$206.56 million in capacity increasing projects, and \$566.9 million towards improving maintenance, operations, and safety.

### Transit Asset Management (TAM) and Public Transportation Agency Safety Plan (PTSAP)

The federal goal under transit asset management (TAM) is to provide a cost-effective, systematic, interruption free pattern of transit operation. Table 7. Includes those targets prepared by Butte Regional Transit (BRT), the transit operator for the Butte County region, for the 2022/23 fiscal year and Table 8. contains the progress made towards achieving the targets.

Table 7. Transit Asset Management Regional Performance Targets 2023-2028

|  | % At or Past Useful Life Benchmark (ULB) |                |                |                |                |                |  |
|--|--|----------------|----------------|----------------|----------------|----------------|--|
| Asset Class                              | 2023<br>Target                           | 2024<br>Target | 2025<br>Target | 2026<br>Target | 2027<br>Target | 2028<br>Target |  |
| Administrative/Maintenance<br>Facilities | 0%                                       | 0%             | 0%             | 0%             | 0%             | 0%             |  |
| Passenger Facilities                     | 0%                                       | 0%             | 0%             | 0%             | 0%             | 0%             |  |
| BU - Bus                                 | 6%                                       | 0%             | 21%            | 14%            | 0%             | 0%             |  |
| CU - Cutaway                             | 42%                                      | 50%            | 50%            | 25%            | 25%            | 25%            |  |

Table 8. Transit Asset Management Regional Condition Summary 2023

| Asset Category      | Count | Avg Age | Average Mileage | Avg Value    | % At or Past ULB |
|---------------------|-------|---------|-----------------|--------------|------------------|
| Revenue<br>Vehicles | 51    | 6.8     | 219,561         | \$612,764.71 | 29%              |
| Facilities          | 3     | 11.3    | N/A             | \$0.00       | N/A              |

BRT and the Federal Transit Administration (FTA) have adopted the principles and methods of System Safety and of Safety Management Systems (SMS) as the basis for enhancing the safety of public transportation. All rules, regulations, policies, guidance, best practices, and technical assistance administered will, to the extent practical and consistent with legal and other applicable requirements, follow the principles and methods of SMS.

The Butte Regional Transit - Public Transit Agency Safety Plan (PTASP) is an agencywide safety plan that meets and is responsive to FTA's Public Transportation Safety Program (PTSP). The Transit Agency Safety Plan reflects the specific safety objectives, standards, and priorities of BRT. BRT has incorporated its System Safety compliance into SMS principles and methods tailored to the size, complexity, and scope of its own public transportation system and the environment in which it operates.

Table 9. Includes those targets prepared by Butte Regional Transit (BRT), the transit operator for the Butte County region, for the 23/24 fiscal year.

Table 9. Public Transportation Agency Safety Plan Targets for FY 23/24

| Mode        | Fatalities | Fatalities<br>per 100,000<br>Vehicle<br>Revenue<br>Miles (VRM) | Injuries | Injuries<br>per<br>100,000<br>VRM | Safety<br>Events | Safety<br>Events<br>per<br>100,000<br>VRM | System<br>Reliability |
|-------------|------------|--|----------|-----------------------------------|------------------|---|-----------------------|
| Fixed Route | 0          | 0  | 0        | 0                                 | 0                | 0   | 24,000                |
| Paratransit | 0          | 0  | 0        | 0                                 | 0                | 0   | 30,000                |

# Criteria and Methodology Used to Prioritize Projects

Each fund source has its own criteria for project eligibility. Each federal performance measure has its own objectives. Performance Measure 1 – Safety aims to identify projects which reduce fatalities and injuries. The criteria are defined within each fund source requirements within the program. Funding is typically highly competitive between projects and jurisdictions at the state and federal level. Various programs may work towards the same performance measure, such as ATP, CMAQ, STIP, SHOPP may be addressing a safety concern and still be within the parameters of the program. Projects are typically not prioritized except for the regional STIP or the RTIP program. In this case, the priority is determined by the BCAG Board of Directors. BCAG works within its advisory committee process to identify competitive projects with the implementing agency to pursue grant funding as its method to prioritizing projects.

Performance Measure 2 (Pavement and Bridge Condition) are typically maintenance projects. BCAG relies on its local jurisdictions to utilize their own Pavement Management System to vet through the process and prioritize projects for funding.

Performance Measure 3 (Freight, Congestion and Reliability) are typically transit and CMAQ projects which aim to reduce congestion. BCAG relies on its annual Unmet Transit Needs Process, its Transit specific planning documents to prioritize projects. For CMAQ, BCAG issues a call for projects and evaluates each project application against specific criteria to prioritize projects if needed. For CMAQ, projects are reviewed by the BCAG Transportation Advisory Committee and selected by the BCAG Board of Directors.

In each of the three performance measures, projects are ultimately selected by the agency responsible for the management of the program. For funding controlled by BCAG, applicants are required to complete an application process which includes specific criteria which works towards meeting a performance measure.

### **Regional Transportation Plan Performance**

In 2013, the Strategic Growth Council funded an effort to develop a common set of measures which could be utilized by each of California's MPOs. In 2016, the California Transportation Commission released the 2016 State Transportation Improvement Program (STIP) Guidelines which included a complete revise of measures to better align with the state transportation goals and in 2020 the STIP Guidelines were once again updated. In consideration of these efforts, BCAG has updated measures for the 2020 RTP/SCS while continuing with the factors established in previous RTP's.

The updated performance measures have been categorized into the following seven (7) factors: safety and health, mobility/accessibility, reliability, productivity, system preservation, environmental stewardship, and social equity.

<u>Safety and Public Health</u> - The safety of the regional transportation system is a key measure used to evaluate fatalities, injury, and property loss of system users. Active transportation (walking and biking) has a direct health benefit, and can reduce the risk of heart disease, improve mental health, lower blood pressure, and reduce the risk of overweight and obesity-related chronic disease.

Table 10. Safety and Public Health Performance Measures

| Factor                      | Measure  | Current Performance<br>Base Year (2018) | Projected Impact of<br>Constrained Plan<br>Year 2040 | Data Source*     |
|-----------------------------|--|---|--|------------------|
|                             | Fatality Rate per 100M Annual<br>Vehicle Miles of Travel (VMT) | 1.96                                    | decrease   | SWITRS / HPMS    |
| Safety and<br>Public Health | Serious Injuries Rate per 100M<br>Annual VMT                   | 10.3                                    | decrease   | 3WIII.37 III W.3 |
| Public Health               | Percentage of Trips by Pedestrian                              | Bike 1.99%                              | Bike 2.03%   | TDE Mardal       |
|                             | and Bicycle Mode Share   | Ped 10.37%                              | Ped 9.99%  | TDF Model        |

<u>Mobility/Accessibility</u> - Mobility refers to the ease or difficulty of traveling from an origin to a destination. Accessibility is defined as the opportunity and ease of reaching desired locations. As mobility increases, accessibility tends to improve.

Table 11. Mobility/Accessibility Performance Measures

| Factor                        | Measure  | Current Performance<br>Base Year (2018) | Projected Impact of<br>Constrained Plan<br>Year 2040 | Data Source*   |
|-------------------------------|--|---|--|----------------|
|                               | Average Peak Period Travel Time (minutes)                                  | 16.7                                    | 16.48  | TDF Model      |
| Mobility and<br>Accessibility | Percentage of Housing and<br>Employment within 2 miles of State<br>Highway | 81% Housing<br>91% Employment           | 84% Housing and<br>92% Employment                    | LU Model / GIS |
|                               | Percentage of Population within 1/2 mile of frequent transit service       | 0%                                      | 24%  | LU Model / GIS |

<u>Reliability</u> – Reliability refers to the consistency or dependability of travel times and is a measure that compares expectations with experience.

Table 12. Reliability Performance Measure

| Factor      | Measure  | Current Performance<br>Base Year (2018) | Projected Impact of<br>Constrained Plan<br>Year 2040 | Data Source* |
|-------------|--|---|--|--------------|
| Reliability | Percentage of Congested Highway VMT (at or below 35 mph) | 0%                                      | 0%   | TDF Model    |

<u>Productivity</u> - Productivity is defined as the utilization of transportation system capacity. For roadways, capacity is defined as the maximum number of vehicles that a roadway can accommodate.

Table 13. Productivity Performance Measures

| Factor       | Measure   | Current Performance<br>Base Year (2018) | Projected Impact of<br>Constrained Plan<br>Year 2040 | Data Source* |
|--------------|---|---|--|--------------|
| Productivity | Average Peak Period Vehicle Trips                                 | AM 75,240                               | AM 82,369  | - TDF Model  |
|              |   | PM 100,768                              | PM 113,598   |              |
|              | Transit Passenger Trips per Vehicle<br>Revenue Hour (Fixed Route) | 15.1                                    | 21.8   | NTD / TNMP   |

<u>System Preservation</u> - System preservation refers to maintaining the roadway network and transit fleet at a desired or agreed upon level.

Table 14. System Preservation Performance Measures

| Factor                 | Measure   | Current Performance<br>Base Year (2018) | Projected Impact of<br>Constrained Plan<br>Year 2040 | Data Source* |
|------------------------|---|---|--|--------------|
| System<br>Preservation | Average Pavement Condition Index<br>1— Local Streets and Roads  | 60                                      | increase   | CA SR 2018   |
|                        | Percentage of Local Highway Bridge<br>Lane Miles in need of Replacement<br>or Rehabilitation <sup>2</sup> | 34%                                     | decrease   | CA SR 2018   |
|                        | Percentage of Transit Assets exceeding FTA "Useful Life"  | 8.62%                                   | decrease   | B-Line 2018  |

 $\underline{\text{Environmental Stewardship}} - \underline{\text{Environmental stewardship strives to protect and enhance the built and natural environments of the region.}$ 

Table 15. Environmental Stewardship Performance Measures

| Factor                       | Measure   | Current Performance<br>Base Year (2018) | Projected Impact of<br>Constrained Plan<br>Year 2040 | Data Source*   |
|------------------------------|---|---|--|----------------|
| Environmental<br>Stewardship | Per Capita Vehicle Miles of Travel <sup>3</sup>   | 21.4                                    | 20.8   | TDF Model      |
|                              | Per Capita Acres of Developed Land  | 0.31                                    | 0.31   | LU Model / GIS |
|                              | Acres of Important Farmland<br>Avoided <sup>4</sup>   | 237,438                                 | 233,729  | LU Model / GIS |
|                              | Percentage of Development<br>Occurring within Butte Regional<br>Conservation Plan - Urban Permit<br>Areas | 70% Residential<br>87% Non-Residential  | 73% Residential<br>88% Non-Residential               | LU Model / GIS |

<sup>&</sup>lt;sup>1</sup> Pavement Condition Index (PCI) rates roadway conditions on a scale from 1-100 with 1=worst and 100=best

<sup>&</sup>lt;sup>2</sup> Highway Bridge Lane Miles with a Sufficiency Rating (SR) of 80 or below.

<sup>&</sup>lt;sup>3</sup> VMT includes all trips within county from all vehicle types and includes the total population including group quarters.

<sup>&</sup>lt;sup>4</sup> Important Farmland includes farmlands classified as Prime, Unique, and of Statewide Importance by the California Department of Conservation (2016).

<u>Social Equity</u> – Equitable distribution of the benefits and burdens of the plan on the economically and socially disadvantaged.

Table 16. Social Equity Performance Measures

| Factor        | Measure   | Current Performance<br>Base Year (2018) | Projected Impact of<br>Constrained Plan<br>Year 2040 | Data Source*   |
|---------------|---|---|--|----------------|
| Social Equity | Percentage of Higher Density Low<br>Income Housing <sup>5</sup> within 1/4 mile of<br>Transit Route | 86%                                     | 79%  | LU Model / GIS |
|               | Percentage of Higher Density Low<br>Income Housing  | 26%                                     | 27%  | LU Model / GIS |
|               | Percentage of Minority Communities<br>Population <sup>6</sup> within 1/4 mile of<br>Transit Route   | 98%                                     | 98%  | LU Model / GIS |

#### \*Data Source

SWITRS - California Highway Patrol Statewide Integrated Traffic Records System

TDF Model - BCAG's Regional Transportation Model

LU Model - BCAG's Regional Land Use Allocation Model

B-Line - Butte Regional Transit

TNMP - BCAG's Transit & Non-Motorized Plan

GIS - BCAG's Regional Geographical Information System

NTD - National Transit Database (2018)

CA SR - California Statewide Local Streets and Roads Needs Assessment (2018)

Caltrans Pave - Caltrans 2018 State of the Pavement Report

#### **Agency Coordination and Public Participation**

In preparing and reviewing the various performance measures, BCAG coordinates with local jurisdictions, the county, and other local agencies (i.e., Butte County Local Agency Formation Commission, Butte County Air Quality Management District, Local Tribal Governments, and the University) via our established Transportation Advisory Committee and Planning Directors Group meetings. Caltrans and the Federal Highway Administration are also members of the Transportation Advisory Committee and are provided an opportunity to review and provide input all measures. Caltrans has also established working groups or technical advisory committees for PM1, PM2, and PM3. These committees meet as needed to review relevant data and establish targets at the state level.

Public participation at the regional level occurs through the BCAG Board of Director's meetings. Each federal performance measure is brought to the BCAG Board for review prior to establishing or updating a target. The public is provided an opportunity to review and provide comment. Information is also made available on the BCAG website.

<sup>&</sup>lt;sup>5</sup> Multi-family housing is used in determining percentage of higher density low income housing.

<sup>&</sup>lt;sup>6</sup> Minority Communities are defined as 2010 Census Block Groups were 40 percent or more of the population is Asian Pacific Islander, African American, Hispanic, Native American or other Non-White ethnic group, based on 2012-2017 5-year American Community Survey data.