



BCAG BOARD OF DIRECTORS

Item #5 Consent

September 27, 2018

ACCEPT MAP-21 PERFORMANCE MEASURES – PM2 AND PM3 TARGETS

PREPARED BY: Brian Lasagna, Regional Analyst

ISSUE: As the federally designated Metropolitan Planning Organization (MPO) for the Butte County region, BCAG is required to establish targets, track, and report the areas performance measures mandated under MAP-21, in coordination with Caltrans and the local jurisdictions.

DISCUSSION: Federal transportation legislation (MAP-21) placed new and stronger emphasis on measuring and monitoring the performance of the transportation system and requires states and MPOs to implement a performance-based approach to planning and programming. Performance-based planning and programming includes using transportation performance measures, setting targets, reporting performance, and programming transportation investments directed toward the achievement of transportation system performance outcomes. The performance targets ensure states and MPOs invest resources in transportation projects that achieve national goals in safety, infrastructure condition, congestion, reliability, freight movement, environmental sustainability, and reduced project delivery delays.

On May 20, 2018, Caltrans approved the 2018 California Performance Management 2 (PM2) and Performance Management 3 (PM3) targets – see Tables 1 & 2. PM2 targets are specific to infrastructure conditions (pavement and bridge) and PM3 reflects measures related to system performance (reliability, congestion, and air quality) on the National Highway System (NHS). The statewide targets take into consideration the availability of Senate Bill 1 and local measure funds, which Caltrans anticipates will improve conditions over the four-year performance period.

Table 1. Infrastructure Condition (PM2)

Pavement and Bridge Performance Measures*	Baseline 2016/2017		2-Year Target (1/1/18 – 12/31/19)		4-Year Target (1/1/20 – 12/31/21)	
			Good	Poor	Good	Poor
	Good	Poor	Good	Poor	Good	Poor
Pavement on the NHS (Non-Interstate)	25.5%	7.2%	28.2%	7.3%	29.9%	7.2%
Bridges on the NHS	66.5%	4.8%	69.1%	4.6%	70.5%	4.4%

*Applicable to the BCAG Region

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Table 2. System Performance (PM3)

System Performance Measure*	Baseline 2017	2-Year Target	4-Year Target
Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS	64.6%	65.1% (+0.5%)	65.6% (+1%)
Total Emissions Reductions by Applicable Pollutants under the CMAQ Program			
VOC (kg/day)	951.83	961.35 (+1%)	970.87 (+2%)
CO (kg/day)	6,863.26	6,931.9 (+1%)	7,000.54 (+2%)
NOx (kg/day)	1,753.36	1,770.89 (+1%)	1,788.43 (+2%)
PM10 (kg/day)	2,431.21	2,445.52 (+1%)	2,479.83 (+2%)
PM2.5 (kg/day)	904.25	913.29 (+1%)	922.34 (+2%)

*Applicable to BCAG Region

MPOs have 6 months (November 16, 2018) following the states target setting date to: A) establish their own targets; or B) agree to plan and program projects so that they contribute toward the accomplishment of the state target. Performance and targets are to be reported and revised annually.

BCAG staff has prepared a discussion for each performance management measure and included as Attachment A (PM2) and Attachment B (PM3).

BCAG staff reviewed the data and targets with the BCAG Transportation Advisory Committee (TAC) at the September 2018 meeting. Given the region's existing performance for each measure and available resources, BCAG staff is recommending that BCAG agree to plan and program projects so that they contribute toward the accomplishment of the state target for the 2018 performance year. This recommendation is supported by the TAC. Targets will be reviewed with the TAC and BCAG Board annually and reported to Caltrans.

STAFF RECOMMENDATION: BCAG staff is recommending that the BCAG Board of Director's accepts the state targets and the region agree to plan and program projects so that they contribute toward the accomplishment of the state performance targets for the 2018 performance year.

Key staff: Brian Lasagna, Regional Analyst
Ivan Garcia, Transportation Programming Specialist

ATTACHMENT - A

PM2 - Infrastructure Condition

The Infrastructure Performance Measure Final Rule established performance measures for pavement and bridge conditions on the National Highway System (NHS). Caltrans set 2- and 4-year statewide targets on May 20, 2018. BCAG is required to establish pavement and bridge condition performance measure targets within 180 days after the State establishes each target (November 16, 2018). Federal regulation allows BCAG to accept the statewide targets or establish its own regional 4-year target. Federal regulation requires that the State develop an improvement plan if California is unable to achieve the 2- and 4- year targets.

The statewide targets are based on Caltrans' long-range (10 year) Transportation Asset Management Plan and the 2017 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. In developing the statewide targets, Caltrans coordinated with the MPO's by providing county level data and hosting two webinars. MPO's were also provided the opportunity to submit their own county level estimates for the local NHS.

Local National Highway System

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 A-1 & A-2 include the inventory of local NHS roadways and bridges.

Table A-1. Local National Highway System – Roadways

Jurisdiction	Street Name	From Location	To Location	Jurisdiction	Street Name	From Location	To Location
CHICO	BROADWAY ST	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	E PARK 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 A-2. 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)

Data Review

Pavement: Baseline - Year 2016 pavement data for Butte County shows an estimated pavement condition of 7.3% Good and 12.6% Poor for the local component (non-state) portion of the NHS. In all, the Butte County region has 69 lane miles of locally maintained NHS pavement. The state average for local NHS pavement condition is 4.6% Good and 12.6% Poor. Table A-3 includes county level data for Butte County, including data and targets for the Interstate and Non-Interstate pavement NHS.

Table A-3. California NHS Pavement Conditions

Jurisdiction	2016 Lane Miles (LM)	2016 Pavement Condition (%)		2 Year Pavement Condition Targets			4 Year Pavement Condition Targets			% Impact to Statewide Lane Miles
		Good(G)	Poor(P)	2019 Lane Miles	% Target (G)	% Target (P)	2021 Lane Miles	% Target (G)	% Target (P)	
State Interstate NHS	14,159	47.9%	3.1%	14,159	45.1%	3.5%	14,159	44.5%	3.8%	25.2%
Non-Interstate NHS	22,490	43.5%	2.5%	22,490	47.1%	3.0%	22,490	49.4%	3.5%	40.1%
Other Non-Interstate NHS	54	16.7%	1.9%	54	16.7%	1.9%	54	16.7%	1.9%	0.1%
Local	19,373	4.6%	12.5%	19,447	6.4%	12.3%	19,614	7.5%	11.5%	34.5%
Butte (BCAG)	69	7.3%	12.6%	69	7.3%	12.6%	69	7.3%	12.6%	0.1%
Grand Total NHS	56,075	30.4%	6.1%	56,150	32.4%	6.3%	56,317	33.5%	6.4%	100.0%
2018 TAMP Total NHS	56,075	30.4%	6.1%							
Grand Total Non-Interstate NHS	41,917			41,991	28.2%	7.3%	42,158	29.8%	7.2%	
2018 TAMP Total Non-I NHS	41,917	25.5%	7.1%							
Grand Total Interstate NHS	14,159	47.9%	3.1%		45.1%	3.5%	14,159	44.5%	3.8%	

Note: 1) Highlighted yellow indicates the NHS Interstate and Non-Interstate NHS 2 and 4-Year Pavement Targets
 2) Distributed missing Lane Miles from HPMS based on proportion of inventory owned. Excludes bridge lane miles and State Highway System lane miles.

Source: Caltrans Division of Transportation Asset Management – revised 08/23/2018

Bridge: Baseline - Year 2017 bridge data for Butte County shows an estimated bridge condition of 23.3% Good and 0% Poor for the local component (non-state) portion of the NHS. In all, the Butte County region has 7 bridges and 40,085 square feet of deck area of locally maintained NHS bridges. Table A-4 includes county level data for Butte County, including data and targets for the Interstate and Non-Interstate bridges NHS.

Table A-4. California NHS Bridge Conditions

Jurisdiction	Number of Bridges	Deck Area (SF)	2017 Bridge Health (%)		2 Year Bridge Condition Targets			4 Year Bridge Condition Targets			% Impact to Statewide Deck Area
			Good(G)	Poor(P)	2019 Deck Area	% Target (G)	% Target (P)	2021 Deck Area	% Target (G)	% Target (P)	
State	9,196	210,774,774	69.4%	3.7%	210,774,774	72.1%	3.5%	210,774,774	73.4%	3.4%	90.0%
Local	1,629	23,511,109			23,503,769	42.1%	14.3%	23,506,522	44.3%	13.2%	10.0%
Butte (BCAG)	7	40,085	23.3%	0.0%	40,085	23.3%	0.0%	40,085	23.3%	0.0%	0.0%
Grand Total NHS Bridges	10,825	234,285,883	66.5%	4.8%	234,278,543	69.1%	4.6%	234,281,296	70.5%	4.4%	100.0%

Note: Highlighted yellow are the 2 and 4-Year NHS Bridge Targets
 Source: Caltrans Division of Transportation Asset Management

Future Considerations

In order to effectively provide input into future reporting and target setting processes, local roadway and bridge improvements should be captured along the NHS. This would include capturing all local, state, and federally funded improvement projects – particularly those funded under SB 1. Presently, BCAG maintains a listing of regionally significant and federally funded projects for the short-range (5 year) Federal Transportation Improvement Program (FTIP), however, no comprehensive listing of projects exists.

PM2 Target Recommendation

BCAG agrees to plan and program projects so that they contribute toward the accomplishment of the state target for the 2018 performance year.

ATTACHMENT - B

PM3 – System Performance

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 Metropolitan Planning Organizations (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 set 2- and 4-year statewide targets on May 20, 2018. MPOs shall establish a target six months after State DOTs establish targets (November 16th) by either: 1) Agreeing to plan and program projects so that they contribute toward the accomplishment of the State DOT system performance target for that performance measure; or 2) Committing to a quantifiable target for that performance measure for their metropolitan planning area.

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 B-1 below.

Table B-1. PM3 Performance Measures

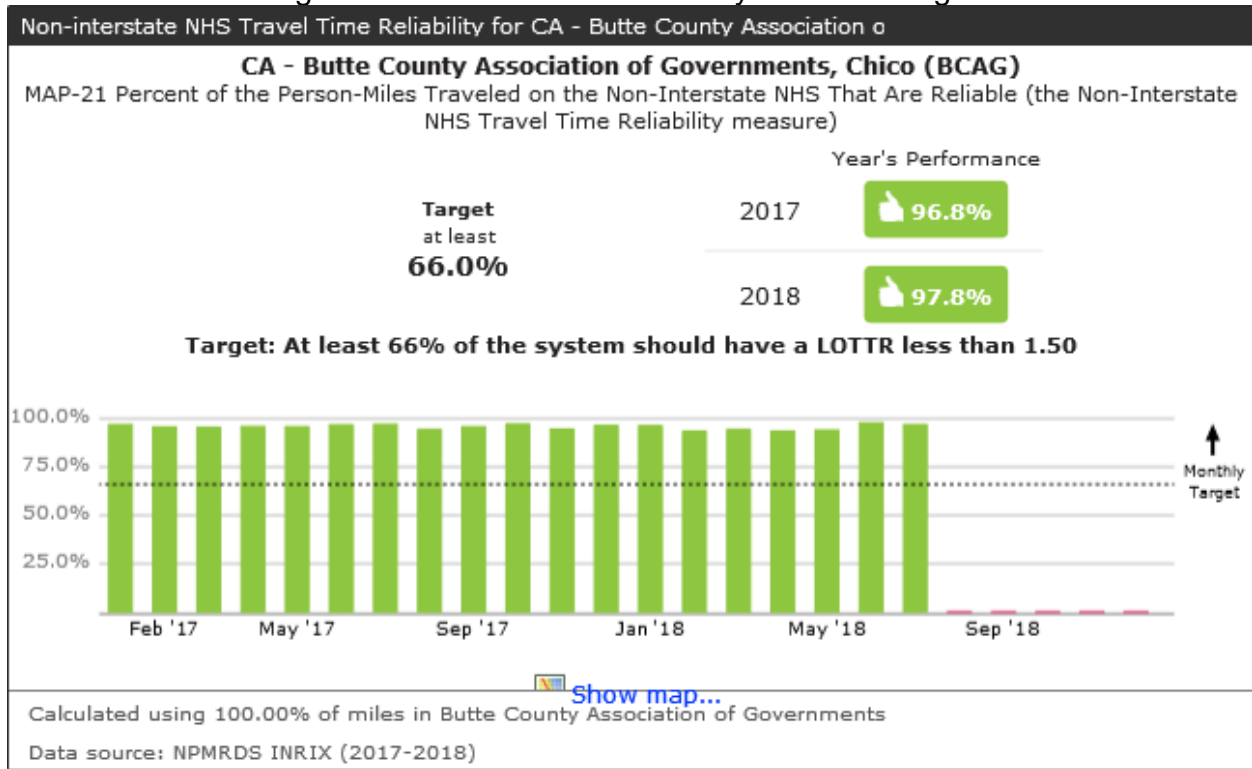
System Performance Measure	Applicable to BCAG?	Reason
Percent of Reliable Person-Miles Traveled on the Interstate	NO	No Interstates traverse BCAG region.
Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS	YES	BCAG region contains several roadways on the Non-Interstate NHS.
Percentage of Interstate System Mileage Providing Reliable Truck Travel Time (Truck Travel Time Reliability Index)	NO	No Interstates traverse BCAG region.
Total Emissions Reductions by Applicable Pollutants under the CMAQ Program	YES	BCAG region is designated as "non-attainment" for Ozone under federal air quality standards.
Annual Hours of Peak-Hour Excessive Delay Per Capita	NO	Measures only apply to regions with urbanized areas containing a population greater than one million.
Percent of Non-Single Occupancy Vehicle (Non-SOV) Travel	NO	

Data Review

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 2017/18 is shown in Figure B-1.

Figure B-1. Travel Time Reliability in BCAG Region



The data for each regions' non-interstate NHS was aggregated to the statewide level and used to establish the 2- and 4-year targets (shown in Table B-2 below).

Table B-2. Travel Time Reliability Measure for Non-Interstate NHS

System Performance Measure	Baseline 2017	2-Year Target	4-Year Target
Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS	64.6%	65.1% (+0.5%)	65.6% (+1%)

Source: Caltrans Division of Transportation Planning

Total Emissions Reductions by Applicable Pollutants under the CMAQ Program:

Caltrans utilized the CMAQ Public Access System (https://fhwaapps.fhwa.dot.gov/cmaq_pub/) in establishing the Baseline 2017 pollutant numbers for target setting purposes. As of August 2018, no data is currently available for the BCAG region within the system. Caltrans aggregated all data available in the system to the statewide level and used in establishing 2- and 4-year targets (shown in Table B-3 below).

Table B-3. CMAQ Emission Reduction Measure

System Performance Measure	Baseline 2017	2-Year Target	4-Year Target
Total Emissions Reductions by Applicable Pollutants under the CMAQ Program			
VOC (kg/day)	951.83	961.35 (+1%)	970.87 (+2%)
CO (kg/day)	6,863.26	6,931.9 (+1%)	7,000.54 (+2%)
NOx (kg/day)	1,753.36	1,770.89 (+1%)	1,788.43 (+2%)
PM10 (kg/day)	2,431.21	2,445.52 (+1%)	2,479.83 (+2%)
PM2.5 (kg/day)	904.25	913.29 (+1%)	922.34 (+2%)

Future Considerations

In order to effectively provide input into future reporting and target setting processes, local CMAQ projects should be tracked for emissions reductions benefits at the time of project approval. This would include entering all emissions reductions data into the federal reporting system once the call-for-projects is completed and local approval has been determined.

PM3 Target Recommendation

BCAG agrees to plan and program projects so that they contribute toward the accomplishment of the state target for the 2018 performance year.