



Chicago Metropolitan Agency for Planning

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MEMORANDUM

To: Subregional Planning Liaisons and CDOT staff

Cc: Council of Mayors Executive Committee, STP Project Selection Committee

From: CMAP Staff

Date: October 18, 2019

Re: FFY 2021 – 2025 Local STP programming marks

In accordance with the terms of the Surface Transportation Program (STP) agreement between the Council of Mayors and City of Chicago, CMAP staff has prepared programming marks for the subregional councils and City of Chicago for federal fiscal years (FFYs) 2021 through 2025 (Table 1). The allotment each year is conservatively assumed to be the same as the FFY 2020 allotment to the CMAP region (\$144,709,745), adjusted each year to account for the STP-Shared Fund set-aside, and is subject to adjustment prior to the beginning of each FFY based on the actual amount of federal funds allotted to the CMAP region.

Table 1. FFY 2021-2025 STP-L Programming Marks

Council	FFY 21	FFY 22	FFY 23	FFY 24	FFY 25
Central	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Chicago	\$57,483,991	\$53,874,994	\$52,251,747	\$52,251,747	\$52,251,747
DuPage	\$12,178,598	\$12,681,337	\$12,235,052	\$12,235,052	\$12,235,052
Kane/Kendall	\$9,008,966	\$8,656,711	\$8,325,415	\$8,325,415	\$8,325,415
Lake	\$8,148,133	\$7,819,790	\$7,512,406	\$7,512,406	\$7,512,406
McHenry	\$3,879,276	\$3,669,512	\$3,480,707	\$3,480,707	\$3,480,707
North Central	\$3,890,830	\$3,680,745	\$3,491,619	\$3,491,619	\$3,491,619
North Shore	\$4,145,394	\$4,355,692	\$4,147,282	\$4,147,282	\$4,147,282
Northwest	\$9,269,713	\$8,910,214	\$8,571,675	\$8,571,675	\$8,571,675
South	\$6,740,451	\$7,141,126	\$6,853,132	\$6,853,132	\$6,853,132
Southwest	\$4,831,670	\$5,440,765	\$6,039,214	\$6,039,214	\$6,039,214
Will	\$7,661,747	\$7,390,142	\$7,095,034	\$7,095,034	\$7,095,034
Total	\$130,238,771	\$126,621,027	\$123,003,283	\$123,003,283	\$123,003,283

The programming marks were developed by applying the performance-based formula included in the STP agreement:

$$\text{Council Mark } (\$) = \text{Regional Mark}(\$) \times \text{Performance } (\%)$$

where:

$$\text{Performance } (\%) = \left(\frac{\text{Council } M_1}{\text{Region } M_1} + \frac{\text{Council } M_2}{\text{Region } M_2} + \frac{\text{Council } M_3}{\text{Region } M_3} + \frac{\text{Council } M_4}{\text{Region } M_4} + \frac{\text{Council } M_5}{\text{Region } M_5} \right) / 5$$

“Council” in this formula means each of the eleven individual subregional councils and the City of Chicago. M_1 , M_2 , etc. represent the individual performance measures, which are weighted equally, and the 5 in the formula is the number of measures. Each measure is described in detail below. Table 2 contains a summary of each council’s performance data.

Pavement Condition

Measured as lane-miles in poor condition as defined in 23 CFR 490. CMAP hired a consultant to collect pavement condition data on all non-National Highway System (NHS) federal aid eligible roads under local jurisdiction in the region in 2018. For the NHS and Highway Performance Monitoring System (HPMS) roads under local jurisdiction, CMAP used IDOT’s pavement condition data of similar vintage. To calculate pavement condition according to 23 CFR 490, the data collected included International Roughness Index (IRI), cracking percent, rutting, and faulting. For asphalt pavement or jointed concrete pavement, at least two of the condition values (IRI, cracking percent, and rutting for asphalt pavement and IRI, cracking percent, and faulting for jointed concrete pavement) need to be defined as “poor” for the segment condition to be defined as “poor.” For continuous reinforced concrete pavement two of the condition values (IRI and percent cracking) need to be defined as “poor” for the segment condition to be defined as “poor.” The total lane-miles of pavement in poor condition was totaled within each council.

Congestion

Measured as the peak hour excessive delay (PHED) as defined in 23 CFR 490 and tabulated as annual person-hours of delay. Excessive delay is incurred when travel times are longer than the travel time at 20 mph or 60% of the posted speed limit travel time, whichever is greater. Peak travel hours are defined as 6:00 – 10:00 am and 4:00 – 8:00 pm. Total excessive delay is weighted by vehicle volumes and occupancy. CMAP obtained 2018 traffic speed data from IDOT collected by the firm HERE. If a local-jurisdiction federal aid road link did not have any speed data available for the analysis, CMAP used the council average to fill in the missing data for that link. Speed limit and volume data for 2018 were obtained from the Illinois Roadway Information System (IRIS) produced annually by IDOT. The total PHED by council was calculated by summing the annual hours of excessive delay on all local jurisdiction federal aid eligible roadways within each council.

Safety

Measured as the number of annual serious injuries and fatalities for the most recent year from IDOT's annual crash data extract. The data includes fatal and serious injury crashes occurring within the council boundary on local jurisdiction federal aid roads. The analysis was based on 2016 crash data because changes in IDOT's processing of the 2017 data incorrectly assigned crashes on the local jurisdiction federal aid eligible system.

Bridge Condition

Measured as square feet of deck area on bridges in poor condition as defined in 23 CFR 490. CMAP obtained 2018 bridge condition data from the National Bridge Inventory (NBI). 23 CFR 490 defines a bridge as in poor condition when the deck, substructure, or superstructure is rated as 4 or below. The square footage of deck area for all local jurisdiction bridges in poor condition within each council was totaled.

SOV Travel

Measured as the total number of single occupant vehicle (SOV) commuters based on the most recent US Census Bureau American Community Survey (ACS). CMAP tabulated 2017 ACS five-year data for workers that drove alone by council area.

Table 2. Council Performance Data

Council	Lane-miles in poor condition	Peak hour excessive delay (annual hours)	Number of annual serious & fatal crashes	Sq. ft. of deck on bridges in poor condition	Number of SOV commuters
Central	18.10	217,745.84	62	7,888	81,204
Chicago	264.04	6,994,241.60	1188	1,864,474	634,326
DuPage	192.62	1,515,929.58	229	64,440	365,003
Kane/Kendall	78.26	570,734.36	223	142,282	288,501
Lake	85.45	571,900.20	132	143,412	273,266
McHenry	34.85	158,262.97	84	72,409	135,260
North Central	37.82	363,194.90	95	37,400	110,924
North Shore	65.32	454,275.36	110	33,906	96,248
Northwest	196.39	663,250.22	122	14,877	291,745
South	156.01	262,594.12	187	37,355	175,883
Southwest	134.09	312,678.44	117	84,505	138,765
Will	82.85	563,514.24	163	98,126	249,422
Total	1,346	12,648,322	2,712	2,601,075	2,840,547

Applying equal weights to each of the five measures, each council's total performance was calculated and is shown in Table 3.

Table 3. Total performance by Council

Council	Pavement Condition	Congestion	Safety	Bridge Condition	SOV Travel	Total performance
Central	1.35%	1.72%	2.29%	0.30%	2.86%	1.70%
Chicago	19.62%	55.30%	43.81%	71.68%	22.33%	42.55%
DuPage	14.31%	11.99%	8.44%	2.48%	12.85%	10.01%
Kane/Kendall	5.82%	4.51%	8.22%	5.47%	10.16%	6.84%
Lake	6.35%	4.52%	4.87%	5.51%	9.62%	6.17%
McHenry	2.59%	1.25%	3.10%	2.78%	4.76%	2.90%
North Central	2.81%	2.87%	3.50%	1.44%	3.91%	2.91%
North Shore	4.85%	3.59%	4.06%	1.30%	3.39%	3.44%
Northwest	14.59%	5.24%	4.50%	0.57%	10.27%	7.04%
South	11.59%	2.08%	6.90%	1.44%	6.19%	5.64%
Southwest	9.96%	2.47%	4.31%	3.25%	4.89%	4.98%
Will	6.16%	4.46%	6.01%	3.77%	8.78%	5.84%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

The total performance for each council from Table 3 was multiplied by the regional mark for the local programs, then, per the agreement, the results of the formula were “smoothed” to prevent any council from receiving less than \$3 million in any year, and to prevent any council from receiving 10% more or less than their FFY 2017 mark in the first FFY and 20% more or less than their FFY 2017 mark in the second year. The smoothing process is iterative, requiring the addition or subtraction of funds to be applied proportionally across councils until the required thresholds are satisfied. The smoothed application of the performance-based formula results in the programming marks provided in Table 1.

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