



Motor Carrier Safety Assistance Program (MCSAP) Formula Working Group Comprehensive Meeting Minutes

October 19-20, 2016

The Federal Motor Carrier Safety Administration's (FMCSA) Motor Carrier Safety Assistance Program (MCSAP) Formula Working Group held an in-person meeting on October 19-20, 2016 in San Antonio, Texas.

The following individuals attended the meeting:

MCSAP FORMULA WORKING GROUP MEMBERS

Nancy Anne Baugher, FMCSA
Lt. Donald Bridge, Jr., Connecticut Department of Motor Vehicles
Caitlin Cullitan, FMCSA
Lt. Thomas Fitzgerald, Massachusetts State Police
Adrienne Gildea, Commercial Vehicle Safety Alliance (CVSA)
Thomas Liberatore, Chief, State Programs Division and DFO, FMCSA
Michelle N. Lopez, Colorado State Patrol
Alan R. Martin, Ohio Public Utilities Commission
Dan Meyer, FMCSA*
Lt. Stephen Brent Moore, Georgia Department of Public Safety
Stephen C. Owings, Road Safe America
Capt. Brian Preston, Arizona Department of Public Safety
John E. Smoot, Kentucky State Police
Courtney Stevenson, FMCSA
Col. Leroy Taylor, South Carolina Department of Public Safety

* Dan Meyer, FMCSA attended the October 19 session only.

FMCSA AND OTHER GOVERNMENTAL REPRESENTATIVES

Rod Baumgartner, FMCSA
Michael Chang, U.S. DOT, Volpe Center
Dianne Gunther, U.S. DOT, Volpe Center
Tom Keane, Director, Office of Safety Programs, FMCSA
Jack Kostelnik, State Programs, FMCSA
Dana Larkin, U.S. DOT, Volpe Center
Brandon Poarch, FMCSA
Capt. Steven Rundell, Texas Department of Public Safety
Julianne Schwarzer, U.S. DOT, Volpe Center
Jacob York, FMCSA

OTHER ATTENDEES

Lauren Beaven, DIGITALiBiz



1. Day 1: Welcome and Objectives

Presentation

Tom Liberatore, FMCSA Chief, State Programs Division and Designated Federal Officer (DFO), called the meeting to order October 19, 2016 at 8:30 a.m.

Tom Keane, FMCSA Director, Office of Safety Programs, thanked working group members for their time, effort, and progress over the previous several months.

Liberatore noted the working group would address key topics at this meeting — including cost of living, Territories, border, and formula simulations — and outlined meeting objectives:

- Finalize which factors would be used in the formula.
- Agree on factor weights.
- Discuss and agree upon special features.
- Bring decisions on factors and weighting together to run hypothetical formula simulations. Determine whether these simulations meet the groups' expectations.
- Agree on tentative formula designs.

2. Roadmap and Tracking Matrix

Presentation

Liberatore noted key dates and objectives on the project roadmap:

- January – Next in-person meeting.
- February – Working group will conduct its final review of the recommendations.
- March – Working group will share recommendations with the FMCSA Administrator.
- April – Working group will submit recommendations to the Secretary of Transportation.

Liberatore presented and commented on the decision tracking matrix. He noted the working group must decide:

- Which factors should be used to determine border funding and how border funding should be incorporated in the formula structure.
- Which factors (if any) should be used to determine funding for the Territories, and what level of funding that should be.
- Whether a cost of living adjustment should be included, and if so, how.
- Which data sources should be used for Road Miles.
- Whether to incorporate Operations and Maintenance (O&M), and if so, how.
- Whether high risk should be incorporated into the formula, and if so, how.
- Whether to split the formula into Basic and Variable portions, and if so, what a Variable portion may include.
- How to use special features, such as minimums and maximums, a change limit, or an FMCSA discretionary adjustment.



3. Subgroup Meetings

Presentation

Julianne Schwarzer, of the U.S. DOT Volpe Center, communicated that the working group would be splitting into separate groups: the Formula Structure Subgroup and the Factor Research Subgroup. Subgroup meetings would begin with a presentation of new data from the Volpe analysis team. Subgroups would have an opportunity after meeting to discuss all topics as a full group.

FMCSA Attorney-Advisor Caitlin Cullitan shared information on legislation regarding the southern border. Cullitan noted that U.S. DOT appropriations bills have included reference to the southern border program since 2002. Federal funding has been specifically allocated to FMCSA for program operations along the southern border. Congress has not put the same emphasis on the northern border. While this may not be legally binding, it is an important trend to consider. Cullitan noted that it may be apt to calculate border funding in a flexible manner that allows for change should the Congressional focus be redirected to the northern border.

4. Border

Presentation

The Factor Research Subgroup and Formula Structure Subgroup reported out on their discussions regarding border funding.

The Formula Structure Subgroup recommended the following:

- Border funding should be represented in a percent set-aside rather than as a factor that some States would get zero for.
- The working group will determine whether the percent set-aside reflects the current funding level (approximately \$32 million or roughly 11% of the new, FY 18 funding) or the current percentage (14%, which would be \$41.8 million).
- The working group will determine what factors will best represent funding needs on a State-by-State or northern vs. southern border program basis.

The Factor Research Subgroup recommended the following:

- Crossings and facilities are the two factors that the FAST Act recommended to represent funding needs along the border. However, facilities should not be used as a factor because it does not accurately reflect the necessary funding, given that the northern border has more ports of entry and that carriers can choose which port of entry to use. The group determined that number of CMV crossings is a better reflection of the funding need.
- The subgroup chose to explore the possibility of using crossings as a factor to calculate border funding. They also noted that foreign domiciled carriers would be captured in the



carrier registrations factor, which would also help to skew more funding toward border states.

Discussion

The full working group discussed the representation of border funding in the formula. Working group members made the following comments:

- Group members questioned whether facilities should be considered, and noted that carriers can choose where they cross, which could influence crossings in certain States.
 - However, this may single out individual States as the number of crossings per facility can swing widely one way or the other from State to State.
- There is not a significant difference in the annual number of CMV crossings on the northern border vs. the southern border.
- Working group members noted that there is a desire to maintain the effectiveness of the southern border program.
 - Border presence has significantly reduced the out-of-service (OOS) rate along the southern border, and so historical funding for the southern border should be considered. A decrease in funding could create increased risk.
- The working group agreed to look into relevant factors (such as number of crossings) to calculate border funding, but must determine the percent weighting. The working group chose to explore funding levels at 11% and 14%.
 - **Action Item:** The Volpe analysis team will run formula simulations without border funding and then at multiple percentage points to see what best represents the funding need.

5. Cost of Living

The Formula Structure Subgroup noted that while including a cost of living adjustment in the formula is a good idea and merited discussion, it would be too complex. The Factor Research Subgroup concurred. The working group recommended against including a cost of living adjustment.

Working group members noted, however, that FMCSA should consider and evaluate the topic, and that a recommendation should be included in the written report for the Agency to research cost of living. The following comments were made regarding this recommendation:

- Cost of living in this case is defined as the cost to fund the MCSAP program in a State, which includes primarily labor and salaries.
- States should be surveyed to identify personnel and salaries.
- States are interested in maintaining their programs.
- A study on cost of living should be comprehensive and conclusive.

Action Item: Include recommendation to FMCSA in the final written report to evaluate Cost of Living.



6. Territories

The Factor Research Subgroup reported out on its discussion of border funding, and the full working group discussed funding for the Territories. Working group members made the following comments:

- Puerto Rico should continue to be treated as a State. Guam may be moving toward State-like functionality as the population continues to grow.
- Compared to the States, there is not as much data available for Territories.
 - One option may be to look at population as a factor for the Territories.
- There must be a minimum amount of funding allocated for the Territories so that funding is not drastically reduced.
- It may be difficult to determine what constitutes a minimally funded program based on past funding, as States and Territories generally submit to the level of funding and will use what is allocated.
- Working group members recommended including the Territories in a simulation of the current formula to look at preliminary numbers in order to move forward.
 - The purpose of this request is to demonstrate that including the Territories in the general formula would not provide sufficient funding to the Territories, and this would justify the concept of allocating a separate set-aside amount to them.
 - *Note: The Volpe analysis team ran a simulation including the Territories in the general formula. The results of the simulation and the relevant discussion are captured below in the notes from Day 2.*
- A percentage set-aside should be determined as much as possible by programmatic need.
- A 1% set-aside of total funding would be well above what the Territories currently receive.

7. Road Miles

The Factor Research Subgroup reported out on its discussion of data sources used to calculate the Road Miles factor, and made the following comments:

- The subgroup discussed the National Highway Freight Network (NHFN), Public Road Miles, and National Highway System (NHS) Miles as possible sources of data for the Road Miles factor.
- NHFN includes the following subsystems of roadways: Primary Highway Freight System (PHFS), other Interstate portions not on the PHFS, Critical Rural Freight Corridors, and Critical Urban Freight Corridors.
- The subgroup found that Public Road Miles did not correlate well with crashes and should not be used to calculate Road Miles in the formula.
- The subgroup found that NHS and NHFN miles correlated best to crashes.

The working group concurred that it may be best to run formula simulations using the average NHS and NHFN miles to calculate the Road Miles factor.



8. High Risk

The Factor Research Subgroup reported out on its discussion of High Risk. The subgroup noted that High Risk should not be used as a separate factor in the formula, as it is already addressed by other established factors.

The other five factors are already aimed to target states with the highest crash risk, and are better correlated with crash risk. High Risk is well correlated with carrier registrations, which indicates that the number of high-risk carriers in a State is proportional to the overall number of carriers in that State. This indicates no additional benefit to including High Risk in addition to carrier registrations.

The Formula Structure Subgroup concurred. The working group recommended against using High Risk as a separate factor in the formula.

9. Special Considerations Set-Aside

The full working group discussed the inclusion of a Variable/Incentive (V/I) special considerations set-aside within the formula, which could address items such as Operations and Maintenance (O&M), compliance with inspection timeliness, inspection quality, DataQs timeliness, and/or traffic enforcement.

Liberatore noted that FMCSA looked at O&M in States' Commercial Vehicle Safety Plans (CVSPs). About 10 States requested funding for O&M. In addition, the FAST Act allocated funding for Commercial Vehicle Information Systems and Networks (CVISN) and the Performance and Registration Information Systems Management (PRISM) program within the Basic portion of the formula.

Working group members discussed O&M and a percent set-aside and made the following comments:

- Specifying certain dollar amounts for specific program needs detracts from the flexibility of the formula.
- O&M costs may not be relevant in the long term.
- The Incentive funds as they are now provide value due to the clear correlation of gain or loss in funding.
- Splitting the funding using a set-aside may unnecessarily complicate the formula.

Working group members concurred in recommending against having a separate set-aside in the formula for special considerations. Group members cited the following reasons:

- This would introduce a level of complexity that should be avoided.
- It is too difficult to reach a consensus on what would be included.
- This negates the concept of having one comprehensive formula.



10. Day 2: Welcome and Objectives

Presentation

Tom Liberatore called the meeting to order October 20, 2016 at 8:00 a.m. and reviewed the following objectives for the day:

- Review formula simulations prepared by the Volpe analysis team.
 - The formula simulations would address questions posed on Day 1.
- Work through the formula simulations to reach additional conclusions.
- Discuss what the communications subgroup would be working to accomplish.

11. Formula Simulations

Presentation

Michael Chang, of the U.S. DOT Volpe Center, presented hypothetical formula simulations.

The first hypothetical formula simulation used the following equally weighted factors to calculate a risk index that would determine allocation of available funding:

- VMT (20%)
- Population (20%)
- Special Fuels (20%)
- Carrier Registrations by State (20%)
- Highway Miles (10%) and National Freight Network (10%) averaged

The calculated funding amounts were compared to the amounts allocated to each State under the interim formula. Chang noted the following regarding this particular formula simulation:

- This formula simulation did not include a factor or set-aside for border funding, and applied the same rules to Territories and States.
 - The Territories would lose a significant amount of funding using this iteration of the formula due to low population.
 - For factors other than population, there is not as much data available for Territories as there is for States.
- In the past, the predetermined maximum and minimum amounts that a State could receive according to the formula played a significant role in the allocated funding. Large States would get a disproportionate amount of MCSAP funding using this iteration of the formula, which did not have a maximum and minimum.

Discussion

Working group members considered the allocation of MCSAP funding based on this hypothetical formula simulation, and made the following comments:



- Larger States may be able to pull more resources from the State, and therefore may not need significantly larger proportions of funding as it is allocated using this hypothetical simulation.
- To give larger States the proportion of funding illustrated in this hypothetical simulation would be unfairly decrease funding in the majority of the States.
- The use of NHFN miles to calculate Road Miles may skew funding disproportionately away from States where there is more risk.
 - Road miles were correlated to MCMIS reportable crashes to calculate risk.
 - **Action Item:** Determine whether the five Basic factors correlate with severe crashes (injury or fatality), rather than all crashes. The Volpe analysis team will run alternate correlations to risk using only crashes that resulted in fatalities, and injuries or fatalities.
 - NHFN miles do not measure up to the same standards as data sources used to determine other factors.
- The working group agreed to overturn their decision from the previous day, and concurred that NHFN miles should not be included in the formula. The group agreed that NHS miles should be the only factor that represents highway miles.
- For future formula considerations, the working group recommends re-evaluating the National Highway Freight Network miles as a factor in 5 years, to see if the data is stable and high quality. As of 2016, the NHFN is too new to use in the formula.
 - **Action Item:** Include recommendation to FMCSA in the final written report to re-evaluate the National Highway Freight Network in five years for possible inclusion in the formula.
- Some States see significant increases or decreases in funding that are unexpected. This may be because the data sources used in the formula simulation are more current.
 - **Action Item:** Measure changes in funding based on methodology change vs. data change. The Volpe analysis team will run the old formula with new data, and vice versa.
- Working group members agree that it is acceptable for States to see large increases in funding, but want to be assured that the calculations are accurate and justifiable.
 - **Action Item:** The Volpe analysis team will provide reasoning for significant swings in funding for individual States (greater than 10%) in order to determine whether these are reasonable changes.

Presentation

Jack Kostelnik, FMCSA State Programs, outlined current funding for Puerto Rico and the Territories as distributed by the Federal Highway Administration (FHWA).¹ The FAST Act continues to allocate funds for a highway program in the Commonwealth of Puerto Rico, as well as assist the governments of the U.S. Territories — American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands. Kostelnik noted the

¹ FAST Act § 1115; 23 U.S.C 165; <https://www.fhwa.dot.gov/fastact/factsheets/territorialprhighwaysfs.cfm>



following in regards to Puerto Rico and the Territories:

- Puerto Rico and Territories are awarded a 1% set-aside from Congress, which amounts to \$158 million for Puerto Rico and \$42 million for the remaining Territories.
- Of the \$42 million, 40% is allocated to the U.S. Virgin Islands, 40% to Guam, 10% to the Commonwealth of the Northern Mariana Islands, and 10% to American Samoa.
- There is a provision that states any de-obligated funding is redistributed.

Chang outlined two potential options for distribution of MCSAP funds to the territories:

1. Allocate equal amounts to each of the Territories. The working group can test this option with \$360,000 and adjust the amount as needed.
2. Allocate a percent set-aside to the Territories, which would be distributed on a discretionary basis.

Discussion

Working group members commented on the allocation and distribution of funding to Territories:

- For some Territories, \$360,000 would remain adequate. However, for others this may be problematic.
 - Guam's cost of living is going up and salaries constitute the cost of the program, therefore their funding may need to increase.
- A set amount of \$360,000 does not accurately portray the differences in program needs across the Territories.
- There is not enough data from the Territories for any of the Basic factors aside from population, therefore it may be best to treat the Territories differently than the States.
- If funding were allocated to the Territories on a discretionary basis from a percent set-aside, there would need to be a set minimum that a Territory can receive.
- It is acceptable to treat Territories differently from States given their differences in data reporting and funding needs.
- There are no Territories represented on the MCSAP Formula Working Group. Working group members would appreciate input from the Territories.
 - **Action Item:** Reach out to the Territories for more information on funding needs.
- Working group members agree that more data should be collected from the Territories, and recommend that FMCSA should research how to work with the Territories and FHWA to improve their data collection and reporting.
- The working group will use a 1% set-aside for the territories as a tentative placeholder in the current formula simulations. This amounts to 2.8 million, or \$700,000 per territory.
 - **Action Item:** The Volpe analysis team will run additional calculations to present, in order for the working group to decide upon minimum/maximums and the amount of the percent set-aside for the Territories.



Presentation

Chang adjusted the formula simulation based on previous discussion. The simulation used the following factors and adjustments to calculate a risk index that would determine allocation of available funding:

- VMT (17%)
- Population (17%)
- Special Fuels (17%)
- Carrier Registrations by State (17%)
- Highway Miles (17%)
- Border (weighted 14%, using border crossings as a factor)
- Territories (1% set-aside)

Chang asked working group members to look at the changes in funding allocation by State, and noted the following regarding this particular formula simulation:

- There is are no minimum or maximum amounts of funding that a State can receive.
- New Hampshire would not receive border funding, as border funding is calculated using border crossings and the State does not have any crossings.
- The Basic portion of the formula is reduced to 85%, with border crossings accounting for 14% and 1% allocated for the Territories.

Discussion

Working group members considered the allocation of MCSAP funding based on this hypothetical formula simulation, and made the following comments:

- Working group members prefer that the calculation of border funding be flexible enough to account for any change that may occur in the future. Using crossings as a factor may help accomplish this.
- Working group members maintain that though the risk on the southern border does not appear significantly higher, that a historical level of funding must be maintained or risk will increase.
 - This particular formula simulation does not account for the focus on the southern border. Northern border States see significant increases in funding while southern border States do not.
- There are still large increases and decreases in funding on a State by State basis when projected funding is compared to current funding.
- The working group has determined the following regarding the calculation of border funding:
 - Border States must receive additional funding.
 - The southern border requires a larger proportion of border funding than the northern border.
 - The working group does not want to degrade the border program.



- The working group must determine the “floor” for border funding. Working group members agree this should be calculated as a percentage of overall funding, so that it increases and decreases with the overall MCSAP funding amount.

Presentation

Chang adjusted the formula simulation based on previous discussion. The simulation used the following factors and adjustments to calculate a risk index that would determine allocation of available funding:

- VMT (17%)
- Population (17%)
- Special Fuels (17%)
- Carrier Registrations by State (17%)
- Highway Miles (17%)
- Border (weighted 14%, using border crossings as a factor)
- Territories (1% set-aside)
- Minimum funding a State can receive (.44%)
- Maximum funding a State can receive (4.94%)

The calculated funding amounts were compared to the amounts allocated to each State under the interim formula. Chang asked working group members to look at the changes in funding allocation by State, and noted the following regarding this particular formula simulation:

- Out of the Basic 85% of funding, a State can receive no more than 4.94% and no less than .44%.

Discussion

Working group members considered the allocation of MCSAP funding based on this hypothetical formula simulation, and made the following comments:

- FMCSA has not been able to determine how FHWA calculated maximums and minimums in their funding allocation formula.
- Certain States see significant decreases (Arizona) or increases (Hawaii) in funding compared to the rest of the States that are unexpected.
- Chang adjusted the spreadsheet to compare the FY16 Federal share dollar amounts rather than the FY17 Federal share dollar amounts. Working group members noted that certain States still saw significant decreases or increases in funding. This particular simulation still did not account for the focus on the southern border.
- Chang adjusted the spreadsheet to weight border funding toward southern border States at a 5:1 ratio. Working group members noted that the southern border has fixed facilities while the northern border does not. One way to weight funding toward the southern border may be to weight the allocation based on the number of fixed facilities in each



State. However, this could potentially shift funding significantly toward individual States, rather than toward the southern border as a whole.

- The working group must decide whether to use a change limit in the formula. If a change limit will be applied:
 - Decide percent amount of change allowed — 3% has been suggested.
 - Decide whether it will start from the current interim formula or whether change limit will apply after the new formula is calculated on a blank slate.

12. Communications Subgroup

Working group members made the following suggestions for communications and outreach:

- The working group should effectively communicate its process.
- Stakeholders should be aware of and educated about the upcoming recommendation.
- Messaging should be tailored to different audiences.
- The following opportunities may be leveraged to educate stakeholders:
 - CVSA's Cooperative Hazardous Materials Enforcement Development (COHMED) Program (January 23-27, 2017)
 - MCSAP Quarterly Calls
 - Regional Conference Calls
 - CVSA Executive Committee Meeting
 - Meetings with Division Administrators
 - An article in the CVSA *Guardian*

13. Wrap Up and Next Steps

Liberatore outlined the upcoming process for the working group. The Volpe analysis team will work toward multiple formula simulations to present to the working group based on the discussions at this meeting. The working group will have two web-based conference calls prior to the in-person meeting, which would take place on January 18–19, 2017.

Tom Keane and Tom Liberatore thanked the working group for their participation and dedication in the two days of meetings and adjourned the meeting.



ACTION ITEMS

Topic	Action Item	Assignment
Border	Run formula simulations without border funding and then at multiple percentage points to see what best represents the funding need.	Volpe analysis team
Final Written Report	Include recommendation to FMCSA in the final written report to evaluate Cost of Living.	Volpe analysis team
Risk Analysis	Determine whether the five Basic factors correlate with severe crashes (injury or fatality), rather than all crashes. The Volpe analysis team will run alternate correlations to risk using only crashes that resulted in fatalities, and injuries or fatalities.	Volpe analysis team
Final Written Report	Include recommendation to FMCSA in the final written report to re-evaluate the National Highway Freight Network in five years for possible inclusion in the formula.	Volpe analysis team
Formula Simulations	Measure changes in funding based on methodology change vs. data change. The Volpe analysis team will run the old formula with new data, and vice versa.	Volpe analysis team
Formula Simulations	The Volpe analysis team will provide reasoning for significant swings in funding for individual States (greater than 10%) in order to determine whether these are reasonable changes.	Volpe analysis team
Territories	Reach out to the Territories for more information on funding needs.	FMCSA and Communications Subgroup
Territories, Maximum/Minimum	The Volpe analysis team will run additional calculations to present, in order for the working group to decide upon minimum/maximums and the amount of the percent set-aside for the Territories.	Volpe analysis team

PRESENTATIONS

	Presenter(s)	Presentation
1	Michael Chang, Dianne Gunther, Thomas Liberatore	MCSAP Formula Working Group In-Person Meeting, October 19–20, 2016



SUMMARY OF KEY DECISIONS MADE

1. Territories would not receive adequate funding if treated as States.
 - a. Territories will receive a percent set-aside that will be distributed on a discretionary basis.
 - b. There will be maximum and minimum amounts of the percent set-aside that a Territory can receive.
2. Border funding may be calculated using CMV crossings as a factor, with additional adjustments to ensure that the southern border program receives adequate funding.
3. National Highway System (NHS) miles will be used to calculate the Road Miles factor.
 - a. For future formula considerations, the Working group recommends re-evaluating the National Highway Freight Network miles as a factor in 5 years, to see if the data is stable and high quality.
4. The working group recommends against including a cost of living adjustment.
 - a. The working group will recommend a study on program costs by State and the impact that that has, and will recommend that there should be a cost of living adjustment in the future when more complete and accurate data is available.
5. The working group recommends against using High Risk Carriers as a separate factor, as it would not offer any additional improvement to the formula's estimation of a state's crash risk over the other already-established factors.
6. The working group recommends against having a separate pot of money for special consideration to avoid unnecessary complexity and to support the notion of one comprehensive formula.