2045 Metropolitan Transportation Plan

Technical Report #3
Transportation Performance Management Report

Hattiesburg-Petal-Forrest-Lamar
Metropolitan Planning Organization

DRAFT
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1.0 Performance Management

The 2045 Metropolitan Transportation Plan (MTP) follows the principles of performance-based planning and programming and related federal regulations laid out in MAP-21 and the FAST Act. These performance-based regulations require all Metropolitan Planning Organizations (MPOs) to track specific transportation performance measures related to national goals and to set targets for these measures.

The scorecard on the following pages displays the MPO's baseline performance, with comparisons to the state's baseline performance and targets. The Hattiesburg-Petal-Forrest-Lamar Metropolitan Planning Organization (HPFL/MPO) has chosen to support the state targets set by the Mississippi Department of Transportation (MDOT).

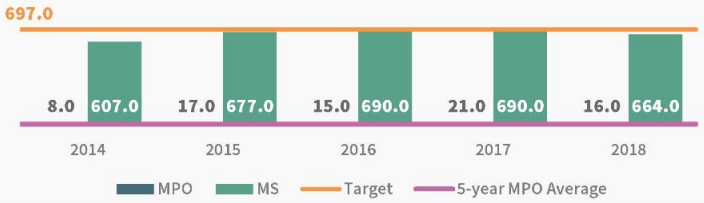
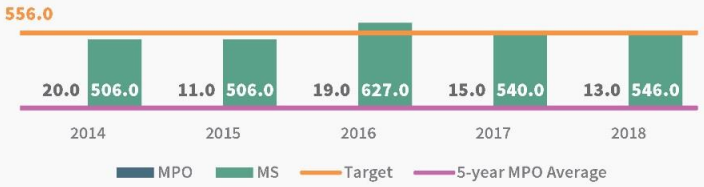
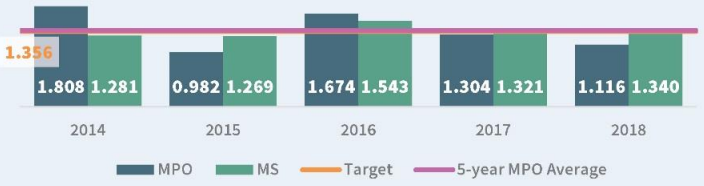
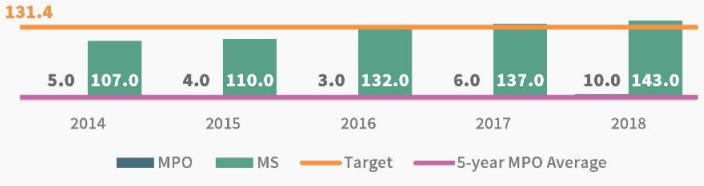
This report also discusses future actions that the MPO can take to improve regional performance and further support state targets.

This report only addresses specific performance measures required by federal transportation performance management regulations. A more complete assessment of current transportation conditions can be found in *Technical Report 2: Existing Conditions.*

Hattiesburg-Petal-Forrest-Lamar MPO
Transportation Performance Management Scorecard

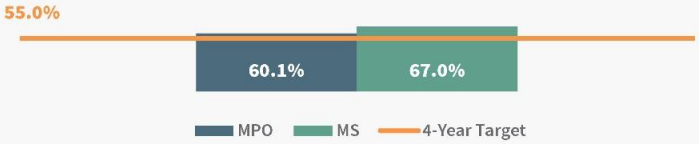
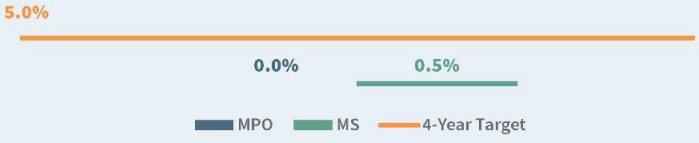
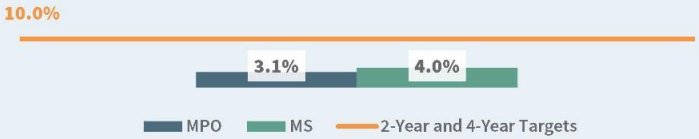
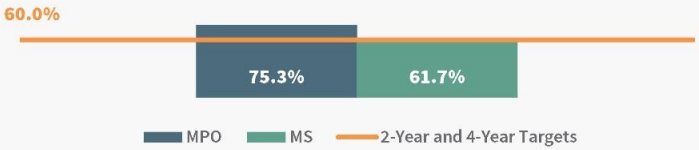
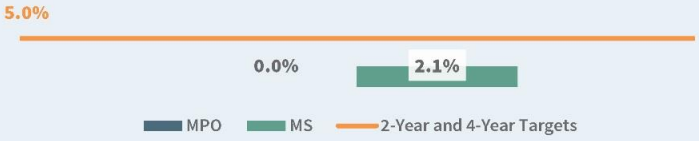
Legend ▶ Target | Good | Needs Improvement | Poor

Safety Performance Measures (PM1)

Measure	MDOT Calendar Year 2019 Target	5-Year MPO Average	2014-2018 Trends/Results	Score	Analysis
Number of Fatalities	697.0	15.4			The number of fatalities within the MPA have been steady between 2014 and 2018. The number of fatalities within the MPA represent a small percentage of the statewide number of fatalities.
Rate of Fatalities (per 100 million Vehicle Miles Traveled)	1.706	1.352			The rate of fatalities within the MPA exceeded the statewide target in 2017.
Number of Serious Injuries	556.0	15.6			The number of serious injury crashes within the MPA have been steady between 2014 and 2018. The number of serious injuries within the MPA represent a small percentage of the statewide number of serious injuries.
Rate of Serious Injuries (per 100 million Vehicle Miles Traveled)	1.356	1.377			The rate of serious injuries within the MPA exceeded the statewide target in 2014 and 2016. However, the rate has decreased between 2016 and 2018.
Number of Non-motorized fatalities and serious injuries	131.4	7.6			The number of non-motorized fatalities and serious injuries within the MPA have been steady between 2014 and 2018. However, the number has been increasing since 2016.

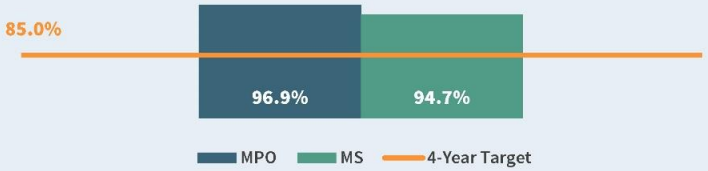
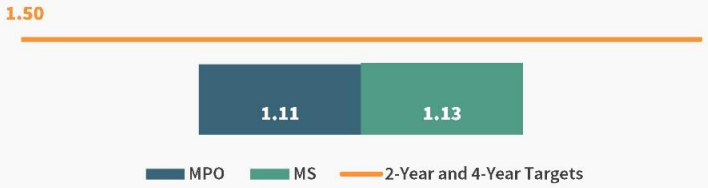
Source: Fatality Analysis Reporting System (FARS); Safety Analysis Management System (SAMS); Hattiesburg Petal Forest Lamar Metropolitan Planning Organization (HPFL MPO) Travel Demand Model (TDM)

Bridge/Pavement Performance Measures (PM2)

Measure	MDOT 2-Year Target 2020	MDOT 4-Year Target 2022	2018 Trends/Results	Score	Analysis
Percent of Pavements of the Interstate System in Good Condition	N/A	> 55%			The percent of pavements of the Interstate system in good condition within the MPA and statewide meets MDOT's target.
Percent of Pavements of the Interstate System in Poor Condition	N/A	< 5%			There were no pavements of the Interstate within the MPA that were in poor condition.
Percent of Pavements of the Non-Interstate NHS in Good Condition	> 25%	>25%			The percent of pavements of the Non-Interstate NHS in good condition within the MPA meets MDOT's target.
Percent of Pavements of the Non-Interstate NHS in Poor Condition	< 10%	< 10%			The percent of pavements of the Non-Interstate NHS in poor condition within the MPA meets MDOT's target.
Percent of NHS bridges in Good condition by deck area	> 60%	> 60%			NHS bridges in good condition within the MPA meet the state target and exceed state baseline performance.
Percent of NHS bridges in Poor condition by deck area	< 5%	< 5%			The percent of NHS bridges in poor condition by deck area within the MPA meets MDOT's target.

Source: MDOT; National Bridge Inventory (NBI)

System Performance Measures (PM3)

Measure	MDOT 2-Year Target 2020	MDOT 4-Year Target 2022	2018 Trends/Results	Score	Analysis
Percent of Person-Miles Traveled on the Interstate that are Reliable	**> 90%**	**> 90%**			The entire Interstate system within the MPA is considered reliable based on the percentage of person-miles traveled.
Percent of Person-Miles Traveled on the Non-Interstate NHS that are Reliable	**N/A**	**> 85%**			The reliability of the Non-Interstate NHS within the MPA meets MDOT's target based on the percentage of person-miles traveled.
Truck Travel Time Reliability (TTTR) Index on the Interstate	**< 1.50**	**< 1.50**			The truck travel time on the Interstate system within the MPA is considered reliable and meets MDOT's target.

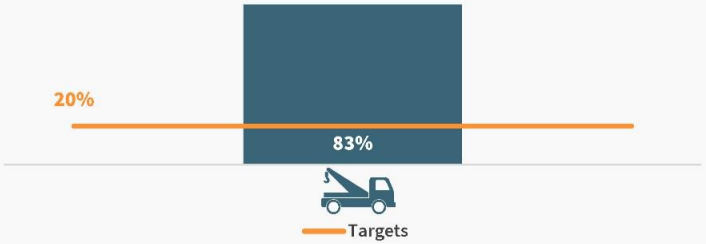
Source: National Performance Management Research Data Set (NPMRDS)

Transit Asset Management 2018 Performance and Target

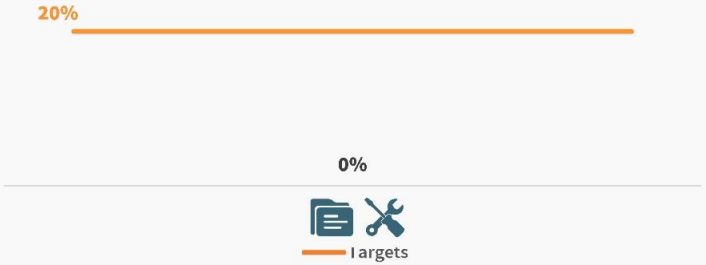
Rolling Stock

Measure	Asset Category	2019 Target	2018 Trends/Results	Score	Analysis
Percentage of revenue vehicles exceeding their Useful Life Benchmark (ULB)	Buses (29-55 passengers)	20%			The percentage of each vehicle exceeding the useful life benchmark is greater than the targets for each vehicle, indicating an aging transit fleet.
	Cutaway Buses (17-25 passengers)	20%			
	Vans (6-15 passengers)	20%			

Equipment

Measure	Asset Category	2019 Target	2018 Trends/Results	Score	Analysis
Percentage of non-revenue service vehicles exceeding their ULB	Service Trucks and Wrecker Recovery Vehicles	20%			The percentage of equipment exceeding the useful life benchmark is greater than the target.

Facilities

Measure	Asset Category	2019 Target	2018 Trends/Results	Score	Analysis
Percentage of facilities rated under 3.0 on the Transit Economic Requirements Model (TERM) scale	Administrative/ Maintenance Facility	20%			None of the facilities are rated under 3.0 on the TERM Scale.

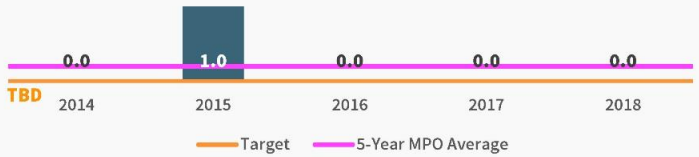
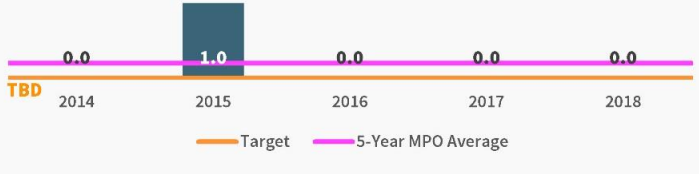
Infrastructure

Measure	Asset Category	2019 Target	2018 Trends/Results	Score	Analysis

Not Applicable in the Hattiesburg Metropolitan Planning Area

Source: MDOT

Transit Safety

Measure	Mode	Target	5-Year MPO Average	2014-2018 Trends/Results	Score	Analysis
Number of Fatalities by mode	Fixed Route Bus and Non-Fixed Route Bus	TBD	0.2		TBD	Safety plans and targets are still under development by transit providers and MPOs.
Rate of Fatalities per 100,000 Total Vehicle Revenue Miles by mode	Fixed Route Bus and Non-Fixed Route Bus	TBD	0.1		TBD	
Number of Injuries by mode	Fixed Route Bus and Non-Fixed Route Bus	TBD	0.0		TBD	
Rate of Injuries per 100,000 Total Vehicle Revenue Miles by mode	Fixed Route Bus and Non-Fixed Route Bus	TBD	0.0		TBD	
Number of Safety Events by mode	Fixed Route Bus and Non-Fixed Route Bus	TBD	0.2		TBD	
Rate of Safety Events per 100,000 Total Vehicle Revenue Miles by mode	Fixed Route Bus and Non-Fixed Route Bus	TBD	0.1		TBD	

Source: National Transit Database

Transit Safety

Measure	Mode	Target	5-Year MPO Average	2014-2018 Trends/Results	Score	Analysis
Mean Distance Between Major Mechanical Failures by mode	Not Applicable in the Hattiesburg Metropolitan Planning Area					Safety plans and targets are still under development by transit providers and MPOs.

Source: National Transit Database

2.0 Future MPO Actions

2.1 Safety Performance

The MPO meets all the established safety performance targets except for "Rate of Serious Injuries" measure. It is not uncommon for urban areas, which have higher traffic volumes and an increased rate of crashes, to experience this. However, to support the state targets, the MPO must reduce fatalities and serious injuries on its roadways. Efforts the MPO may undertake to reduce these crashes and reduce its fatality and serious injury rates include:

- Keep the roadways and bridges maintained and as congestion-free as possible.
- Work with state and local officials, as well as other safety stakeholders, to reduce the fatalities and serious injuries on the roadways.
- Coordinate with MDOT to develop the state's Highway Safety Improvement Program (HSIP).
- Ensure that transportation projects and safety improvements are coordinated with the state's Strategic Highway Safety Plan (SHSP).
- Identify safety programs that may be implemented.
- Consider how projects placed in the Transportation Improvement Program will impact safety.

2.2 Bridge/Pavement Performance

The MPO meets the state targets for pavement condition on the reported Interstate and non-Interstate National Highway System (NHS) segments. However, it should be noted that the percent of pavements on the Interstate in Good condition within the MPA barely meets the state target. The MPA also underperforms compared to the state's baseline for Interstate pavement in Good condition. To continue supporting the state target and improve its pavement performance on the roadways, the MPO should:

- Prioritize timely repairs and resurfacing of pavement on routes with deteriorating pavement conditions when they arise.
- Work with state and local stakeholders to identify and repair pavement cracking, rutting, potholes, etc.
- Reduce or eliminate heavy vehicle traffic on the affected roadways by establishing designated truck routes on roadways with better pavement conditions.
- Use the local Intelligent Transportation Systems (ITS) infrastructure to monitor roadway conditions and redirect drivers to less congested routes, reducing vehicle loads and deterioration of pavement conditions.
- Employ Travel Demand Management (TDM) strategies.

The MPO meets the state targets for bridge conditions. For the MPO to continue meeting the state targets and support the state's performance, which is just short of falling below the Good condition state target, it should place emphasis on repairing or replacing bridges that are no longer in Good condition. The bridges in Poor condition should be prioritized through the plan's operation and maintenance budget. This will also increase safety and system performance and avoid costlier repairs in the future.

Where possible, the MPO, in coordination with MDOT, should apply for applicable federal grants to aid with obtaining funds for bridge repairs and maintenance. While there is no guarantee of receiving these funds, they would allow the MPO to expedite repairs and allow as many bridges as possible to be repaired to Good condition.

2.3 System Performance

Roadway reliability on the Interstates and non-Interstate NHS routes within the MPA meets the state targets.

The actions the MPO may take to continue supporting the Interstate and non-Interstate NHS reliability are the same.

- Work with law enforcement to remove crashes from travel lanes, reducing congestion.
- Use ITS to advise motorists of roadway conditions and redirect drivers to less congested routes.
- Implement signal coordination projects to reduce congestion.
- Schedule roadway work at off-peak times.
- Employ Travel Demand Management strategies.

The MPA's only Interstate, I-59 has a Truck Travel Time Reliability (TTTR) of 1.11, which meets the state target. To continue to support the state's TTTR target, the MPO should maintain the current TTTR. This can be accomplished by:

- Implement congestion reduction measures.
- Using ITS to advise truck drivers of roadway conditions and redirect them to less congested routes.
- Provide alternative truck routes.

2.4 Transit Asset Management Performance

The overall age of transit vehicles operated by Hub City Transit (HCT), the public transit provider in the MPO area, exceeds the Useful Life Benchmark (ULB) targets established within the MPA. In addition to the rolling stock vehicles, the service trucks and wrecker recovery vehicles also exceed their ULB targets. To improve its rolling stock and equipment performance targets HCT will need to upgrade its fleet by incorporating newer vehicles and phasing out older vehicles.

2.5 Transit Safety

The Federal Transit Administration (FTA) has added new safety requirements for transit providers in order to satisfy the new Public Transportation Agency Safety Plans (PTASP) rule. The new PTASP rule requires that qualifying transit agencies develop:

- An Agency Safety Plan (ASP), including performance targets
- A Safety Management System (SMS)
- Documentation related to the ASP and SMS as well as the results of the SMS processes and activities

The FTA states that:

> "The PTASP rule requires transit providers to have their certified agency safety plans in place, which includes the first set of required safety performance targets, and share these targets with the MPO no later than July 20, 2020. The MPOs then have 180 days from receipt of the agency performance targets to prepare their initial public transportation safety performance targets."

The FTA also states:

> "Each transit provider is required to review its agency safety plan, annually and update the plan, including the safety performance targets, as necessary.
>
> The MPO is not required to set new transit safety targets each year, but can choose to revisit the MPO's safety targets based on the schedule for preparation of its system performance report that is part of the Metropolitan Transportation Plan (MTP). The first MPO MTP update or amendment to be approved on or after July 20, 2021, must include the adopted transit safety targets for the region."

The 2045 Metropolitan Transportation Plan is not required to contain established performance measure targets, but the performance metrics that will be tracked in the future are shown in the scorecards above so that Hub City Transit and the MPO may plan accordingly.