

TARGET SETTING
TRAVEL TIME RELIABILITY
PERFORMANCE MEASURES



In accordance with 23 CFR 490, the Federal Highway Administration (FHWA) established performance measures for State Departments of Transportation (DOTs) to use in assessing system performance on the Interstate and non-Interstate National Highway System (NHS). The following is a list of the required performance measures for travel time reliability.

Performance Measures
Percent of Person-Miles Traveled on the Interstate that are Reliable
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable

CONDITION BASED PERFORMANCE MEASURES

- Measures are based on the Level of Travel Time Reliability (LOTTR) which is defined as the ratio of the longer travel time (80th percentile) to a “normal” travel time (50th percentile) using data from FHWA’s National Performance Management Research Data Set (NPMRDS) or equivalent.
- A LOTTR will be calculated for each of the following time periods for each segment of highway, known as a Traffic Message Channel (TMC):
 - 6:00 AM-10:00 AM Weekday
 - 10:00 AM-4:00 PM Weekday
 - 4:00 PM-8:00 PM Weekday
 - 6:00 AM-8:00 PM Weekends
- If any one of the four time periods has a LOTTR above 1.5, then the TMC will be considered unreliable.
- All TMCs will have their length multiplied by the average daily traffic and a vehicle occupancy factor of 1.7 (released by FHWA on 4/27/2018) to determine the person-miles traveled on that TMC. Then the reliable TMCs will be summed and divided by the total person-miles traveled.

TARGET SETTING REQUIREMENTS

State DOTs:

- Must establish targets for the Interstate and non-Interstate NHS.
- Must establish statewide 2- and 4-year targets by May 20, 2018 and report targets by October 1, 2018 in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).
- State DOTs shall coordinate with relevant MPOs on the selection of targets to ensure consistency, to the maximum extent practicable.

Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT 4-year target or establish their own targets within 180 days after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

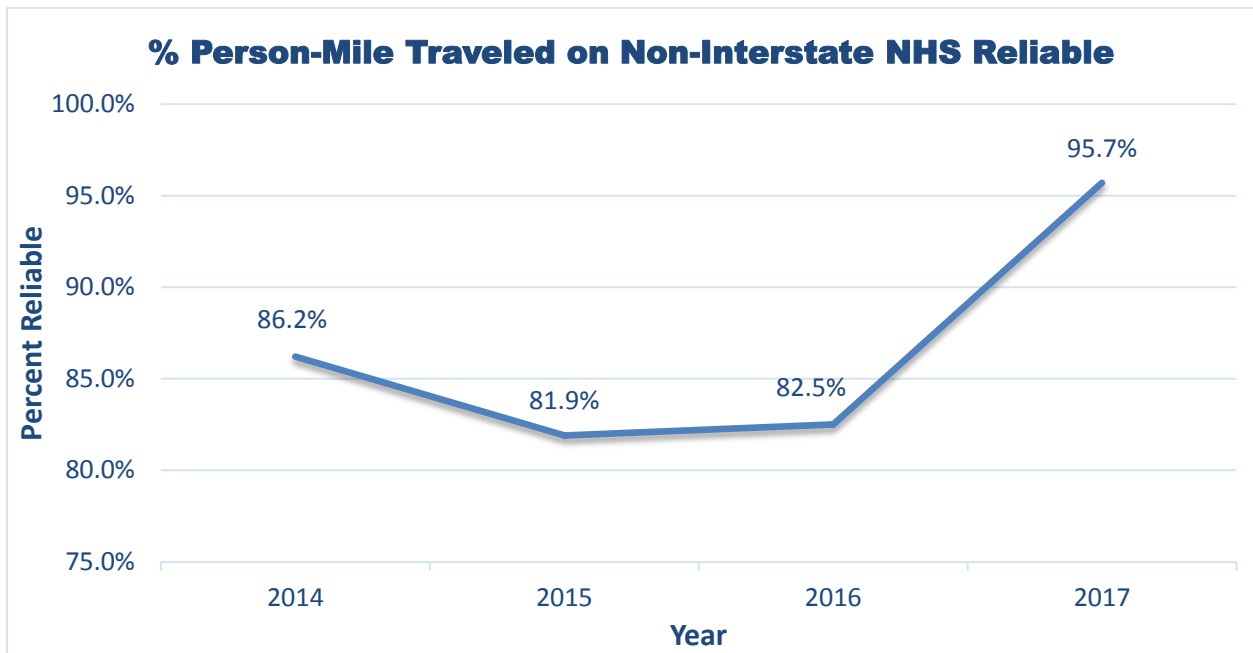
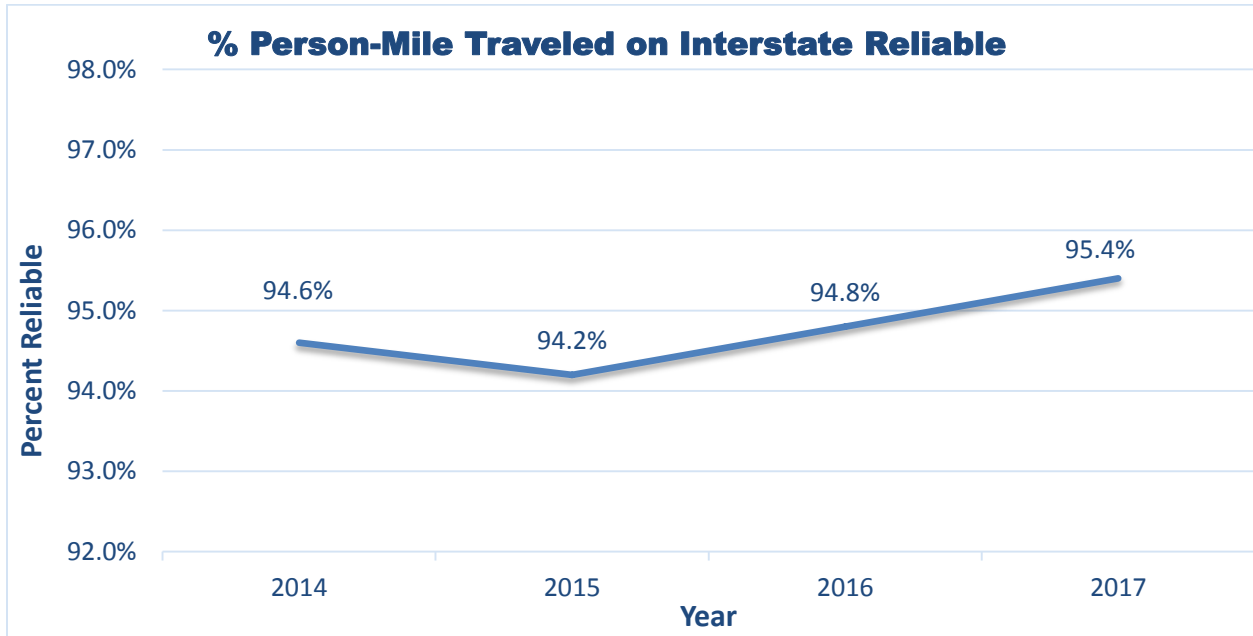
Other information

- FHWA began introducing the NPMRDS provided by HERE in August 2013. The data was considered largely as raw probe data.
- In February 2017, FHWA switched the NPMRDS vendor from HERE to INRIX. Due to different data processing approaches by the vendors, there are inconsistencies in the NPMRDS.
- State DOT targets will be set based on four years of data (2014-2017) and only one year of data (2017) from the current vendor.
- As of March 2018, nationally there is 93 percent data coverage for Interstates and 53 percent for non-Interstate NHS.
- Population growth and increasing travels will affect travel time reliability, particularly in fast growing urban areas.
- A large construction program on the Interstate system could result in multiple major workzones. This scenario would have an effect on the reliability on the Interstates and non-Interstate routes.
- Arkansas is part a pooled fund project organized by AASHTO and led by the Rhode Island DOT to provide technical assistance for transportation performance management. As a member, Arkansas has direct access to the NPMRDS Analytics portal through the Regional Integrated Transportation Information System (RITIS) hosted by the University of Maryland.
- If FHWA determines that a state DOT has not made significant progress toward achieving the target, the State DOT shall document the actions it will take to achieve the NHS travel time targets. There is no financial penalty for not meeting the proposed targets.

METHODOLOGY

In order to develop the performance targets, the current and past travel time reliability conditions were reviewed for Interstates and non-Interstate NHS. As shown on the figures on the next page, travel times on Arkansas' Interstates and non-Interstate NHS are largely considered reliable. However, without additional historical data, setting 2- and 4-year targets is difficult. Due to the data variation between vendors, historical trend was not considered appropriate for target setting.

After the review of the travel time reliability condition for 2014-2017, targets were developed by first identifying significant construction projects located on the Interstate and non-Interstate NHS systems. These project limits were identified and all TMCs within the project limits were considered unreliable to account for the workzones. For large construction projects, additional TMCs located near the project or on logical diversion routes were also considered unreliable. To account for the growth of traffic, TMCs located in urban areas that are currently reliable but have a LOTTR of 1.4 or greater (and no improvements planned) were considered unreliable as well.



TARGETS

The proposed targets are not intended to be “aspirational”, but rather reflect a “realistic” approach to understanding system reliability in an environment where available resources are less than optimal and various additional factors could affect travel such as the economy, trade policies, population growth, and land development patterns.

The proposed targets reflect a best estimate to account for major construction projects, anticipated traffic growth, data quality and availability, and other uncertainties.

Performance Targets		
	2-year	4-year
Percent of Person-Miles Traveled on the Interstate that are Reliable	91%	89%
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable	-	90%