KEEP ROADS AND BRIDGES IN GOOD CONDITION

Scott Marion, Motor Carrier Services Director

Tracker

MEASURES OF DEPARTMENTAL PERFORMANCE

Missourians have said they want MoDOT to keep roads and bridges in good condition. Customers are looking for smooth pavements and bridges that can safely handle growing traffic demands. With 33,873 miles of highway and 10,394 bridges on the state system, the challenges are great; however, we are focused on using our limited resources to keep Missouri's roads and bridges in good condition.

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Percent of major highways in good condition – 2a

RESULT DRIVER:
Scott Marion
Motor Carrier Services Director

MEASUREMENT DRIVER:
Brian Reagan
Transportation System Analysis Engineer

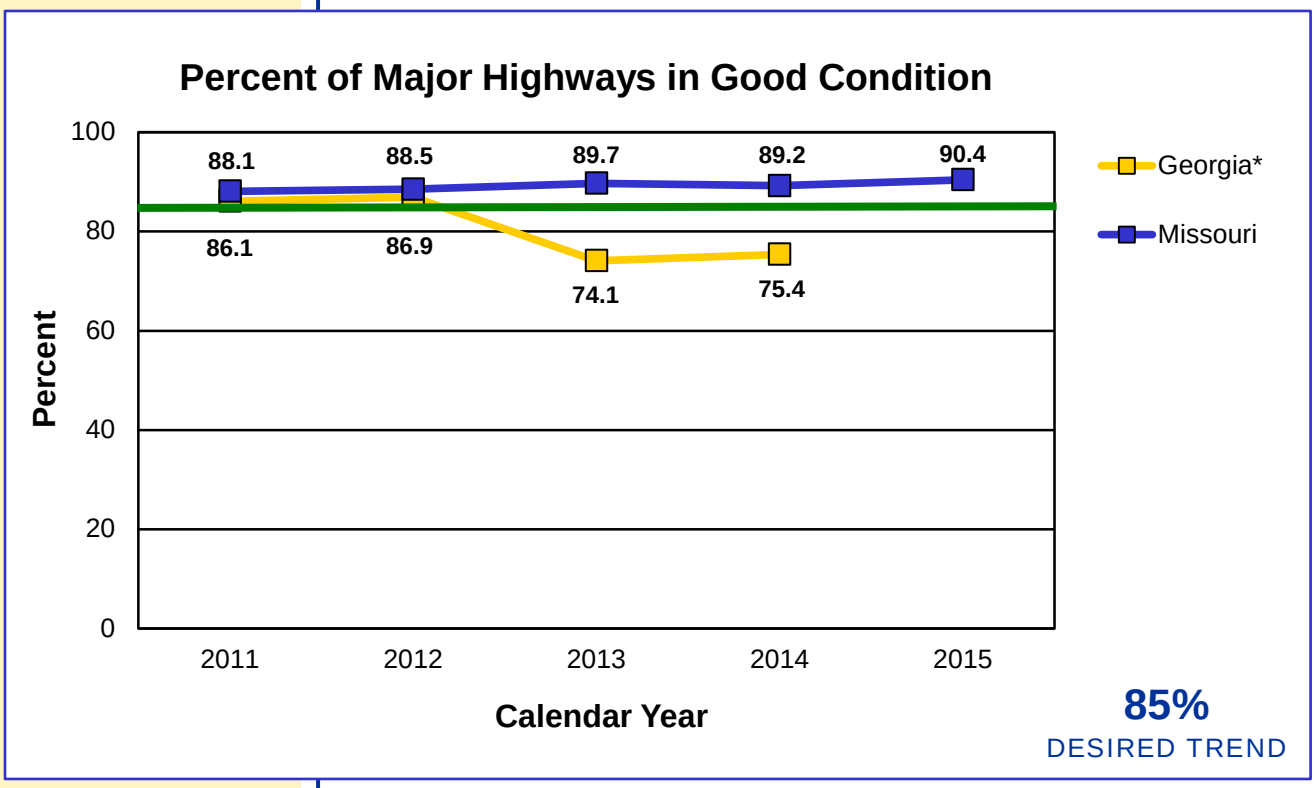
PURPOSE OF THE MEASURE:
This measure tracks the condition of Missouri's major highways.

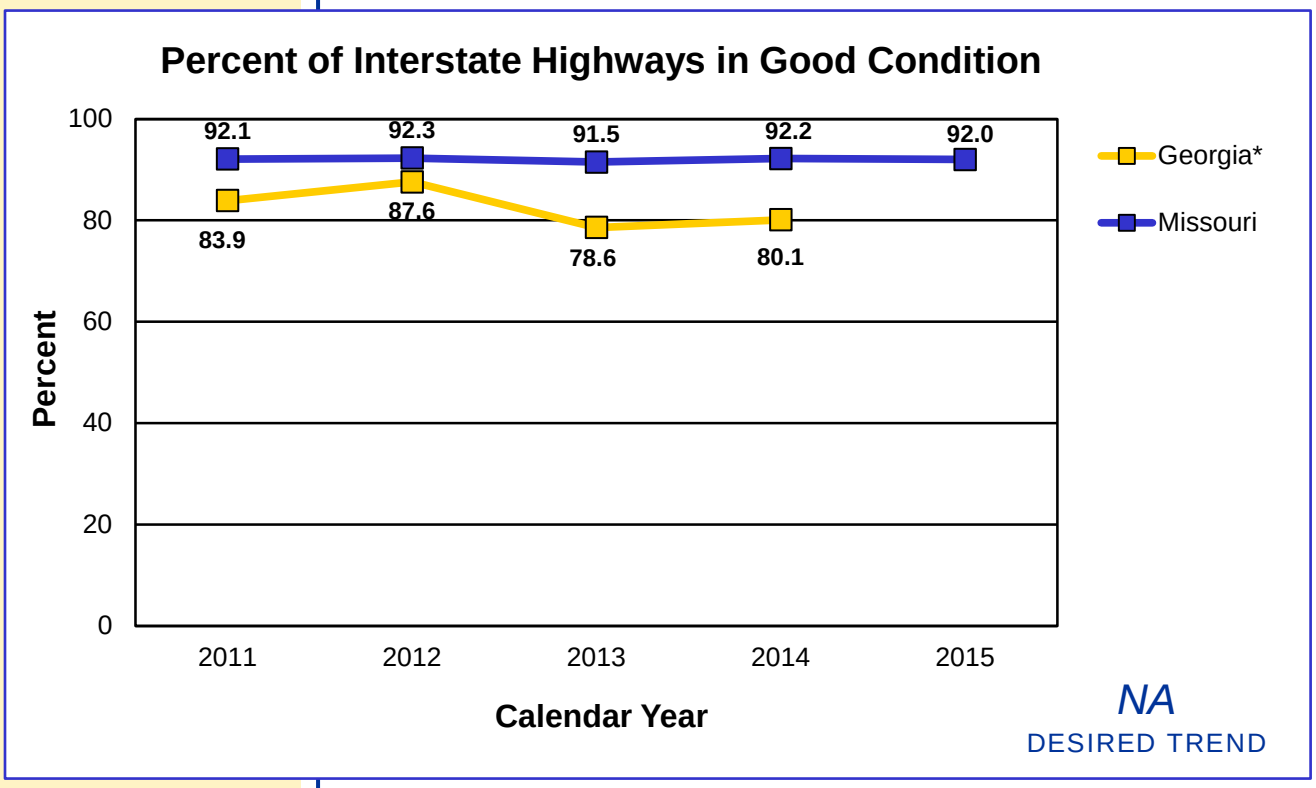
MEASUREMENT AND DATA COLLECTION:
Missouri's major highway system contains the state's busiest highways, including interstates and most U.S. routes. It also includes busy routes in urban areas, particularly where vehicles travel between business districts and residential areas. There are 5,494 total miles on the major highway system, and the condition of these roadways is determined using a variety of measures.

While it can be difficult to compare one state's roadways to another's, MoDOT uses Georgia as a comparable system because it has a similar amount of major highways and also bases its evaluation on the smoothness of the roadways. Missouri measures the condition of its roadways using smoothness as one factor, but also considers physical distresses such as cracking.

Missourians have repeatedly told MoDOT keeping roads smooth is a top priority. Over the years, MoDOT has been able to fund pavement improvement programs greatly improving pavement conditions on the thousands of miles of state highways. Currently, more than 90 percent of major highways are rated in good condition.

KEEP ROADS AND BRIDGES IN GOOD CONDITION





***Source data for Georgia comes from FHWA highway statistics. Full data sets are collected every two years. The data set for 2014 is not a full data set. Georgia data is based only on pavement smoothness (IRI) submitted as part of the Highway Performance Monitoring System.**

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Percent of minor highways in good condition – 2b

RESULT DRIVER:
Scott Marion
Motor Carrier Services Director

MEASUREMENT DRIVER:
Brian Reagan
Transportation System Analysis Engineer

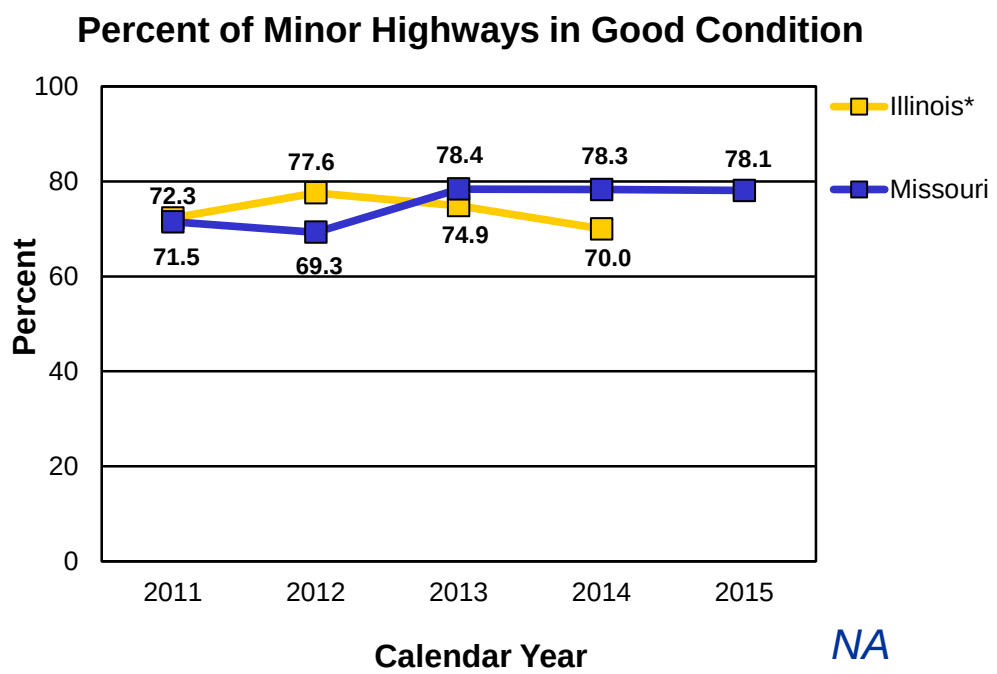
PURPOSE OF THE MEASURE:
This measure tracks the condition of Missouri's minor highways.

MEASUREMENT AND DATA COLLECTION:
Missouri's minor highway system consists of its less-traveled state highways, including those routes that mainly serve local transportation needs. The minor highway system includes most lettered routes. There are 28,379 miles of minor highways in Missouri. The condition of these routes is determined using a variety of measures.

While it can be difficult to compare one state's roadways to another's, MoDOT uses Illinois as a comparable system because it has a similar number of minor highways. Missouri measures the condition of its roadways using smoothness as one factor, but also considers physical distresses such as cracking.

Although minor roads are less traveled, Missourians still say keeping them in good condition is a priority. During the early 2000s, MoDOT's focus was on improving major highways. This resulted in less work being done on minor roads and declining condition ratings. Over the past few years, success on major highways has allowed the department to focus more time and funding on improving minor highways.

Currently, 78 percent of Missouri's minor highways are in good condition, which is slightly below 2014.



NA
DESIRED TREND

***Source data for Illinois comes from FHWA highway statistics. Data for 2015 is not available at the time of publication. Data is based on a combination of pavement condition and smoothness as submitted as part of the Highway Performance Monitoring System.**

KEEP ROADS AND BRIDGES IN GOOD CONDITION

Condition of state bridges – 2c

RESULT DRIVER:
Scott Marion
Motor Carrier Services Director

MEASUREMENT DRIVER:
David Koenig
Bridge Management Engineer

PURPOSE OF THE MEASURE:
This measure tracks progress toward improving the condition of Missouri's bridges.

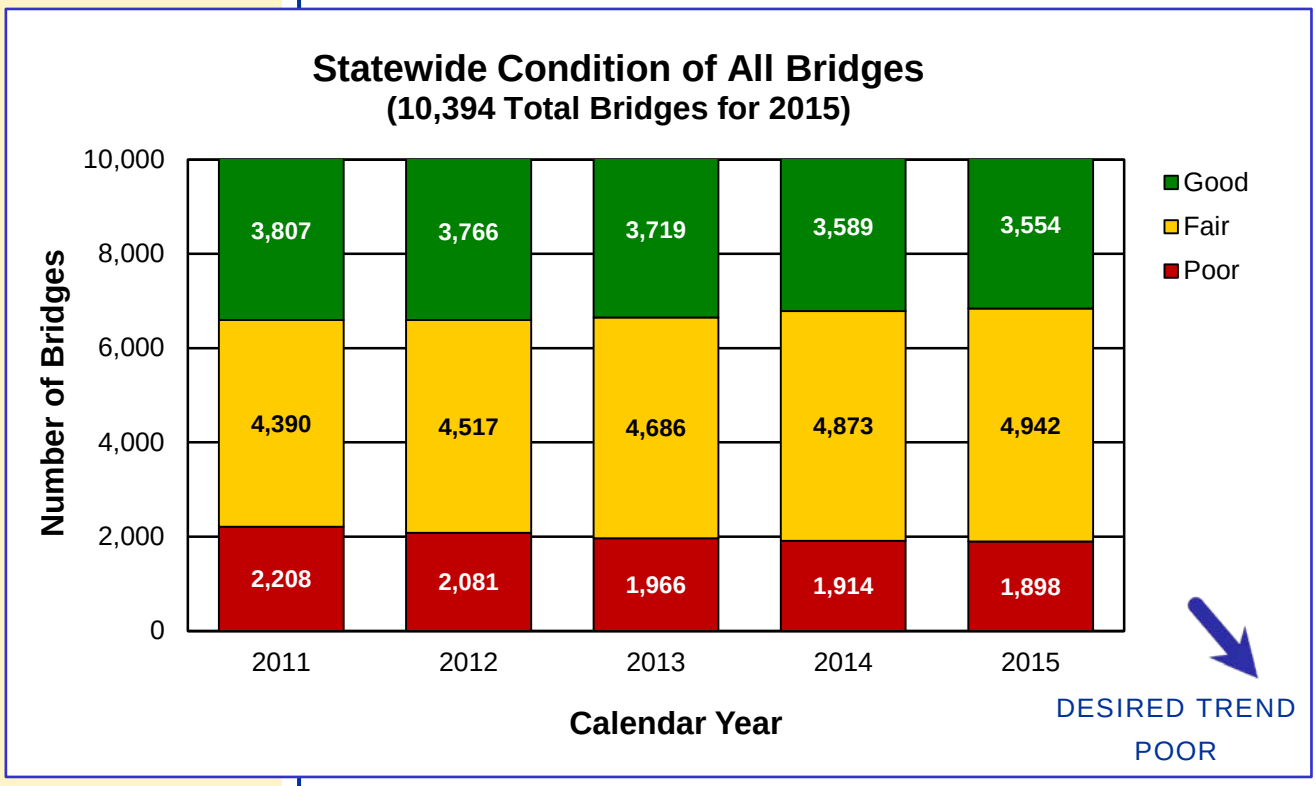
MEASUREMENT AND DATA COLLECTION:
This measure is updated in April based on MoDOT inspections conducted the prior year. Data is presented for all state bridges and major bridges. Major bridges are typically those that cross large rivers and lakes and are longer than 1,000 feet. Of the 10,394 bridges on state highways, 206 are major. Bridges are categorized as being in good, fair or poor condition. Good means no significant condition-related problems exist. Fair indicates moderate problems that may require minor rehabilitation or maintenance to return the structure to good condition. Poor indicates a structure that is deficient, requiring either replacement or a major rehabilitation.

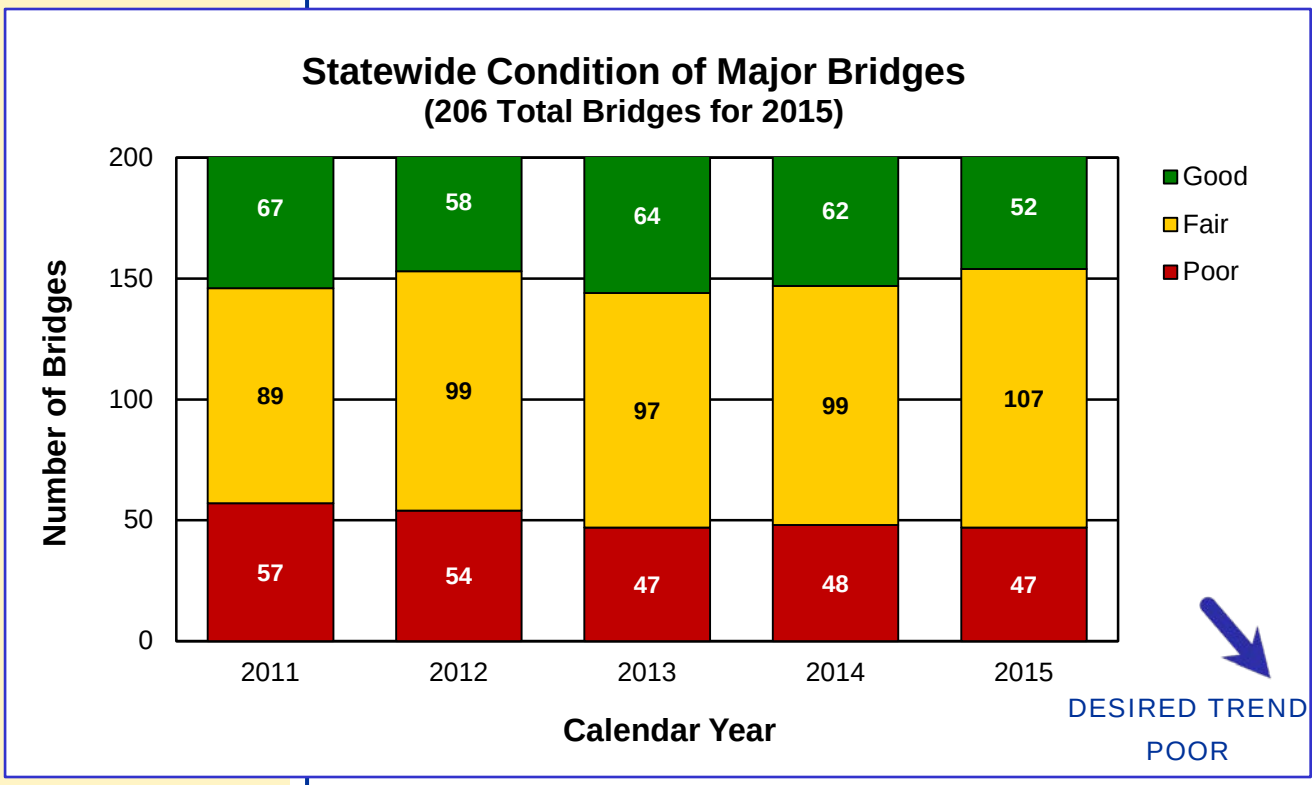
The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. Currently, 1,898 (47 major) structures are in poor condition, 4,942 (107 major) structures are in fair condition and 3,554 (52 major) structures are in good condition.

Statewide, the number of structures in poor condition has steadily decreased over the last five years, but the rate of decline is slowing down. The number of structures in good condition peaked in 2011 and has been declining since. The gradual decrease in the number of poor condition structures is attributable to a significant focus in the STIP on taking care of the worst bridges with the limited funds available. The decline in good bridges demonstrates the fact that the construction program has slowed down with the number of bridges being taken care of within a year being fairly close to the number that are becoming poor condition. This is shown by comparing the drop in poor condition bridges of 310 to the drop in good condition bridges of 253 over the five-year period. The number in fair condition continues to significantly increase which is reflective of MoDOT's aging bridge population with many structures at the point where they need minor maintenance or rehabilitation.

For major bridges, the number of structures in the poor category has generally been dropping over the last five years because of an aggressive focus on these structures in the STIP. However, despite a significant investment in major bridges, the number of structures in good condition generally dropped over the five-year period while the number in fair condition significantly increased. Work on major bridges is expensive with rehabilitations costing $10 - $20 million and replacements ranging from $20 - $200 million.

KEEP ROADS AND BRIDGES IN GOOD CONDITION





KEEP ROADS AND BRIDGES IN GOOD CONDITION

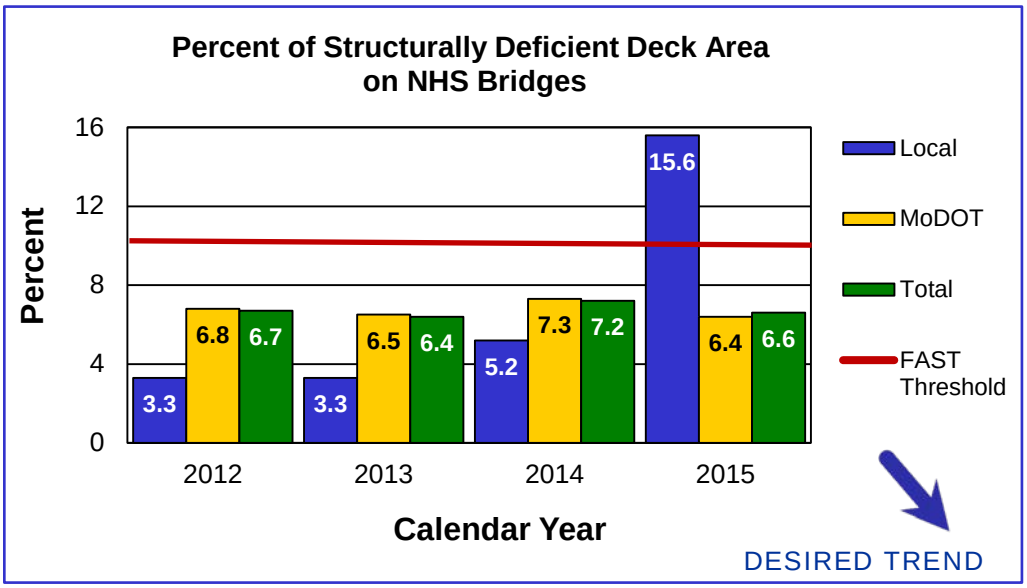
Percent of structurally deficient deck area on National Highway System – 2d

RESULT DRIVER:
Scott Marion
Motor Carrier Services Director

MEASUREMENT DRIVER:
David Koenig
Bridge Management Engineer

PURPOSE OF THE MEASURE:
This measure tracks the percent of structurally deficient deck area for bridges on the National Highway System.

MEASUREMENT AND DATA COLLECTION:
The NHS is defined by federal law and consists of all roadways functionally classified as principal arterials as well as some routes that serve as major connections to multimodal freight-type facilities and some locally owned roadways. Historically, structurally deficient consists of bridges that are in bad condition or have insufficient load capacity when compared to modern design standards. The Fixing America's Surface Transportation Act, requires states to track the structurally deficient deck area. FAST has a penalty clause that kicks in if the percentage of structurally deficient deck area within a state exceeds 10 percent.

The public has indicated keeping Missouri's existing roads and bridges in good condition should be one of the state's highest priorities. The FAST Act established a 10 percent penalty threshold for states. When the threshold is exceeded, the state is required to focus money on bridges until they were back under 10 percent. The local system has 82 NHS structures (three SD) and the MoDOT system has 3,562 NHS structures (138 SD). Missouri currently falls below the penalty threshold with the total at 6.6 percent. This is attributable to the continued efforts at focusing on major bridges when funding is available as well as the increase focus on dealing with the critical condition bridges within the STIP.

Statewide, this measure also is heavily influenced by major bridges because one structure has the ability to impact this measure +/-0.5 percent. When looking at the local system, a large bridge can have a very dramatic impact because of the small number of local structures that are part of the NHS. This is evident in the dramatic change on the local system from 2014 to 2015, which was the result of one newly deficient large structure. The changes on the state system resulted from 48 structures with a large percentage of this change coming from nine structures. The roadways that are included on the NHS are still seeing some minor adjustments, but these changes should have insignificant impacts on the overall numbers.