



U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590  
<http://www.regulations.gov> (Docket No. FMCSA-2015-0001)  
<https://www.gpo.gov/fdsys/pkg/FR-2016-01-21/pdf/2015-33153.pdf>

Thank you for the opportunity to submit comments on the Proposed Notice of Rulemaking for the Safety Fitness Determination Rule (SFD).

Vigillo is a data analytics company who has spent the past seven years collecting and analyzing CSA related data and the CSA methodology on behalf of over 2,000 motor carriers, freight brokers, and shippers who subscribe to our CSA reporting service(s). The FMCSA will undoubtedly receive many comments from interested parties both opposing and supporting the SFD for a variety of reasons. The SFD proposes three methods of determining an Unfit Motor Carrier.

**Unfit Method 1:** Carrier with Two or More Failed BASICS from On-Road Safety Performance

**Unfit Method 2:** Carrier with Violations of the Revised Critical and Acute Regulations Identified Through an Investigation (*Page 58, Table 17*)

**Unfit Method 3:** Combination of Inspection Data and Investigation Results

I am limiting Vigillo's comments to Unfit Method 1, Data from Roadside Inspections, and I leave Unfit Methods 2 and 3 for others to comment on as they require human Investigations and only partially rely on data from law enforcement. Since the inception of CSA, a critical justification of CSA itself was that the data would be an effective method of focusing enforcement effort on those motor carriers deemed to be riskier, so Vigillo's analysis focuses on whether SFD in fact accomplishes that long stated goal.

**Q: Does the data driven component in this SFD (Unfit Method 1) give FMCSA and its enforcement partners insight into a meaningful number of high risk motor carriers beyond the roughly 15,000 compliance reviews conducted annually under the current Safety Rating System?**

**Methodology:** Focus is on Unfit Method 1, Data collected at roadside inspections for the most recent 24-month period (April 2014 – April 2016)

**STEP 1: WHO IS ELIGIBLE** - We need 24 prior months of Inspection activity to identify the eligible carriers (11 inspections with violations in the BASIC). I reviewed the inspection data of all 621,665 Interstate motor carriers in the MCMIS Census file as of April 2016.

There are exactly 50,585 Motor Carriers eligible to be labeled Unfit based on the 11 inspection threshold

**STEP 2: WHO IS UNFIT** - We looked at the CSA BASIC Percentile scores for the 5 relevant BASICS for SFD including Hazmat, Maintenance, Unsafe, Fitness, and HOS. If a carrier exceeds 96% in Hazmat, Unsafe or HOS, they fail the BASIC. If a carrier exceeds 99% in Maint or Fitness, they fail the BASIC. If a carrier fails two BASICS, they are labeled Unfit. Note: I am using the [SMS Methodology rather than the new SFD Methodology to determine Percentile scores. They have different Safety Event Groups, so there could be some difference though it is unlikely to be significant.](#)

There are exactly 178 Interstate Motor Carriers who fail two BASICS at those thresholds.

**STEP 3: REMOVE VIOLATION CODE 391.11 (b) (2)** – The SFD requires that 391.11(b)(2) be removed from the calculation of percentile scores for the Driver Fitness BASIC under SFD.

There remain a total of 67 Interstate Motor Carriers labeled as unfit after the three steps are completed and SFD is applied to the industry. Note: 100% of the carriers removed due to the Non-English violation are Mexican Domiciled Carriers.

### ***About the 67 Unfit Carriers***

|                                      |             | Total Industry<br>(Interstate) | Industry % |
|--------------------------------------|-------------|--------------------------------|------------|
| Total Unique DOT#'s                  | 67          | 621,665                        | .01%       |
| Total Driver Count                   | 1,868       | 6,119,257                      | .03%       |
| Total Power Units                    | 1,833       | 9,912,402                      | .02%       |
| Total VMT*                           | 349,572,435 | 306,525,676,172                | .1%        |
| DOT Recordable<br>Crashes            | 289         | 187,555                        | .15%       |
| Fatality Crashes<br>(Fatality Count) | 5           | 6,421                          | .07%       |
|                                      |             |                                |            |

\*VMT is a notoriously unreliable data point.

## **Conclusion: SFD Unfit Method 1 is ineffective in identifying a significant population of high risk motor carriers.**

Once we analyzed the data and applied the SFD methodology to the DOT regulated trucking industry over the most recent two-year period, it is clear that Unfit Method 1 of the SFD brings no value in identifying a meaningful number of motor carriers as Unfit.

The detailed analysis is presented in a series of charts below, but the numbers are summarized as follows:

1. 1,561,912 Unique DOT#'s (Trucking Companies) are listed in DOT's April 2016 database (MCMIS)
2. 621,665 operate in Interstate Commerce and fall under the regulatory purview of FMCSA
3. 50,585 Interstate motor Carriers are eligible to be evaluated by SFD by meeting the 11 inspection threshold as defined in the rule.

4. 178 Interstate Motor Carriers FAIL two BASICS at the thresholds defined in the SFD
5. 67 Interstate Motor Carriers FAIL two BASICS after removing 391.11 (b) (2) (non English Speaking Driver) as required in the SFD

SFD identifies exactly 67 Interstate Motor Carriers as Unfit if the SFD were applied to the industry as it existed one month ago. This is a .4% improvement above and beyond the 15,000 identified by the current rating system.

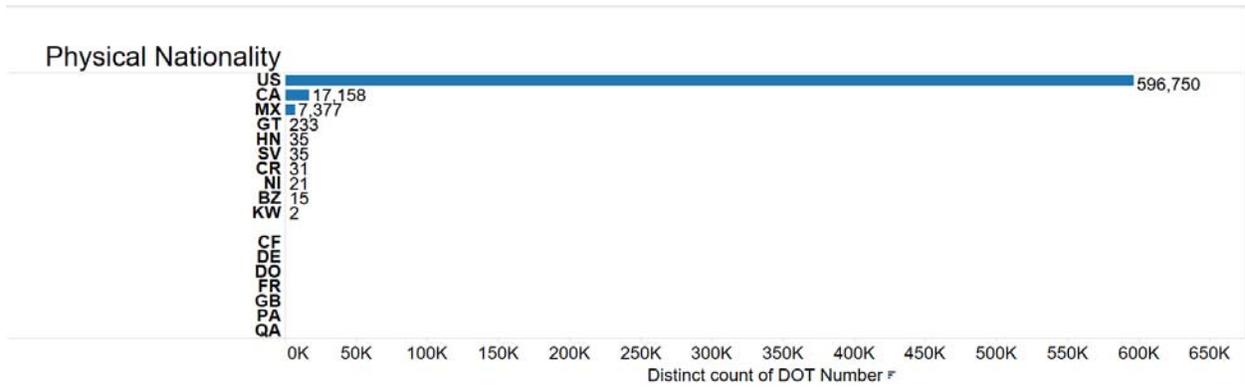
Comparisons:

1. If I weighed 250 pounds and lost .4% of my weight, I'd weigh 249 pounds
2. If I ran a marathon in 260 minutes (average time globally in 2014) and improved by .4%, I'd run it in 258.9 minutes
3. If I worked 40 hours a week, and was asked to put in an extra .4%, I'd work 40 hours and 9 minutes.
4. If we reduced the headcount of Federal Government employees of 2.7M by .4%, we'd still have 2.7M

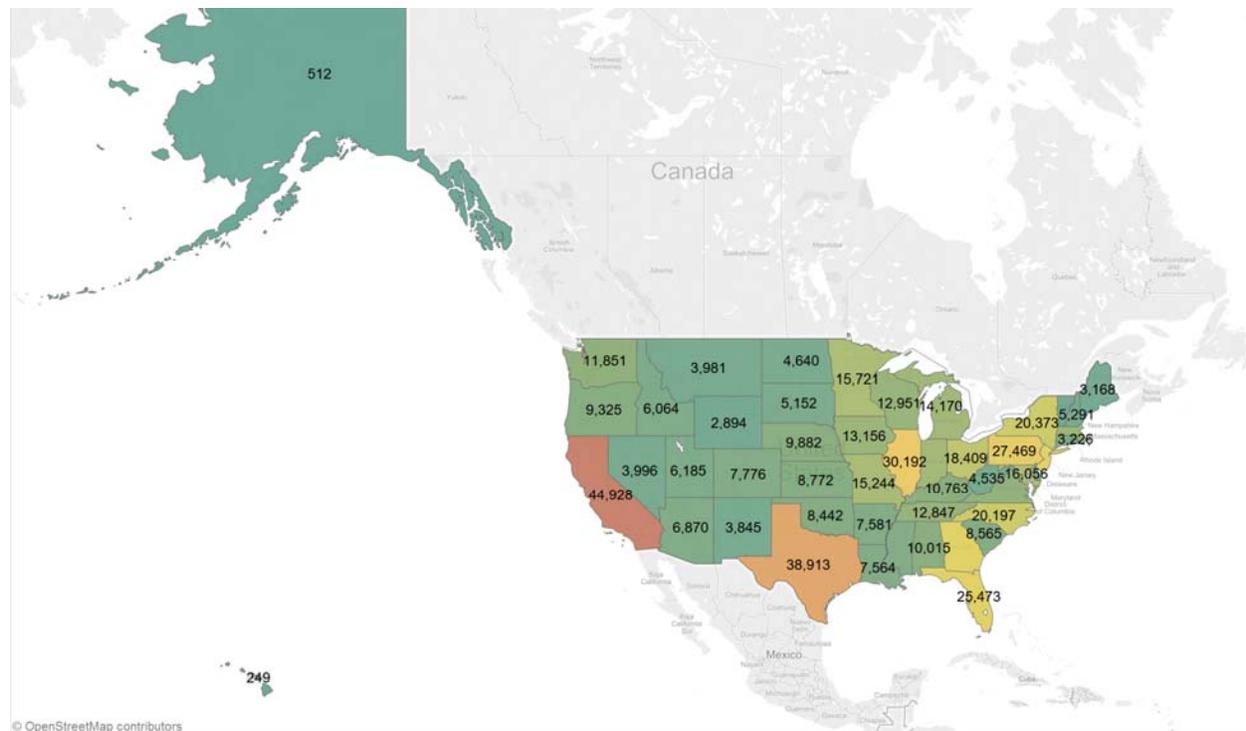
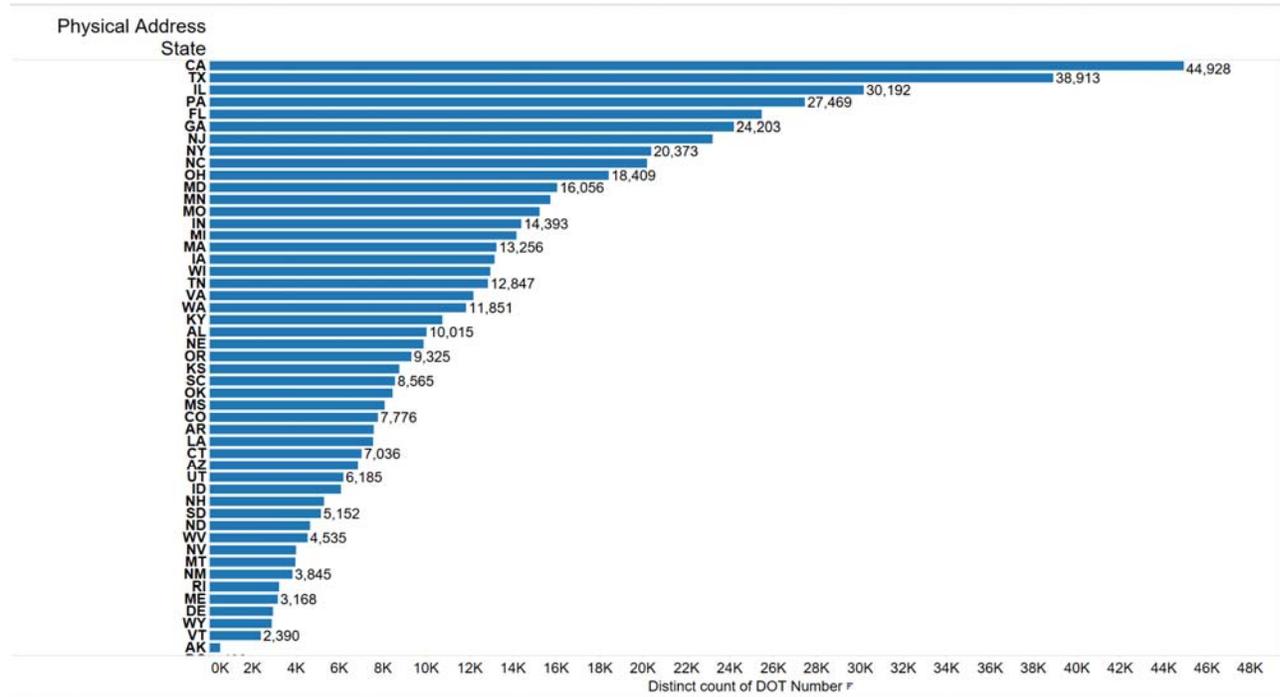
**A: The answer to the Question posed, is No, SFD as proposed is ineffective in identifying a significant number of riskier carriers based on the data alone.**

## CHARTS & MAPS

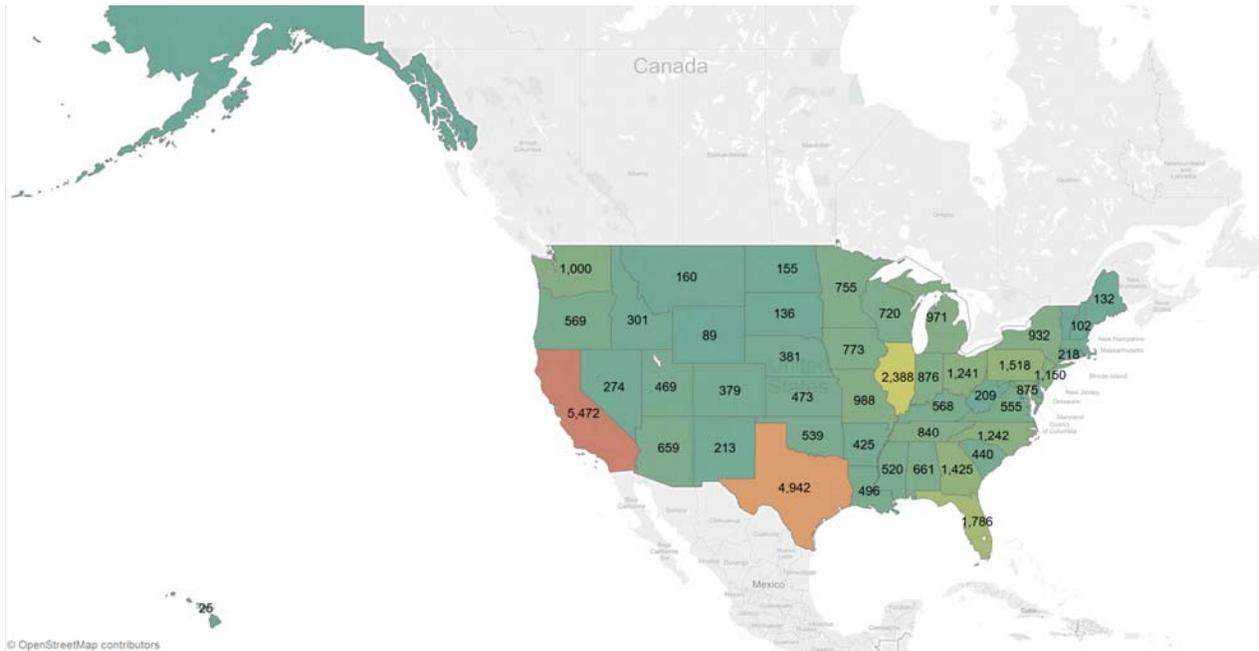
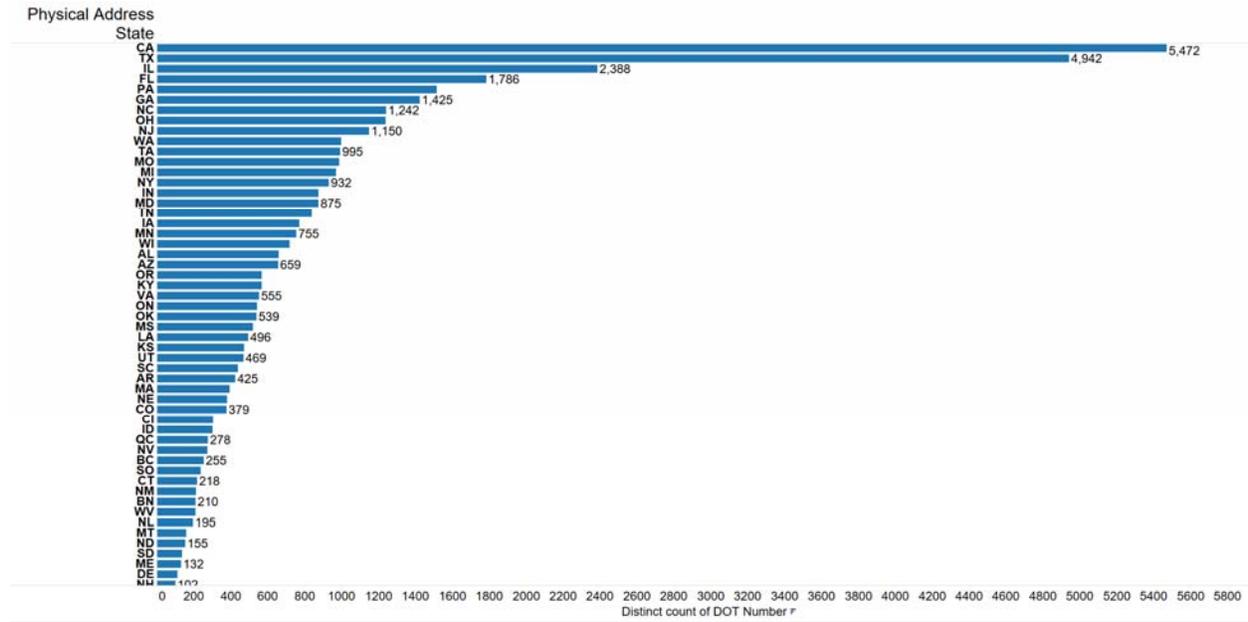
Barchart of 621,665 Interstate Domiciled Motor Carriers by Nationality



Barchart and Map of 621,665 Interstate Motor Carriers by State of Domicile (Chart and Map Excludes Non-US)

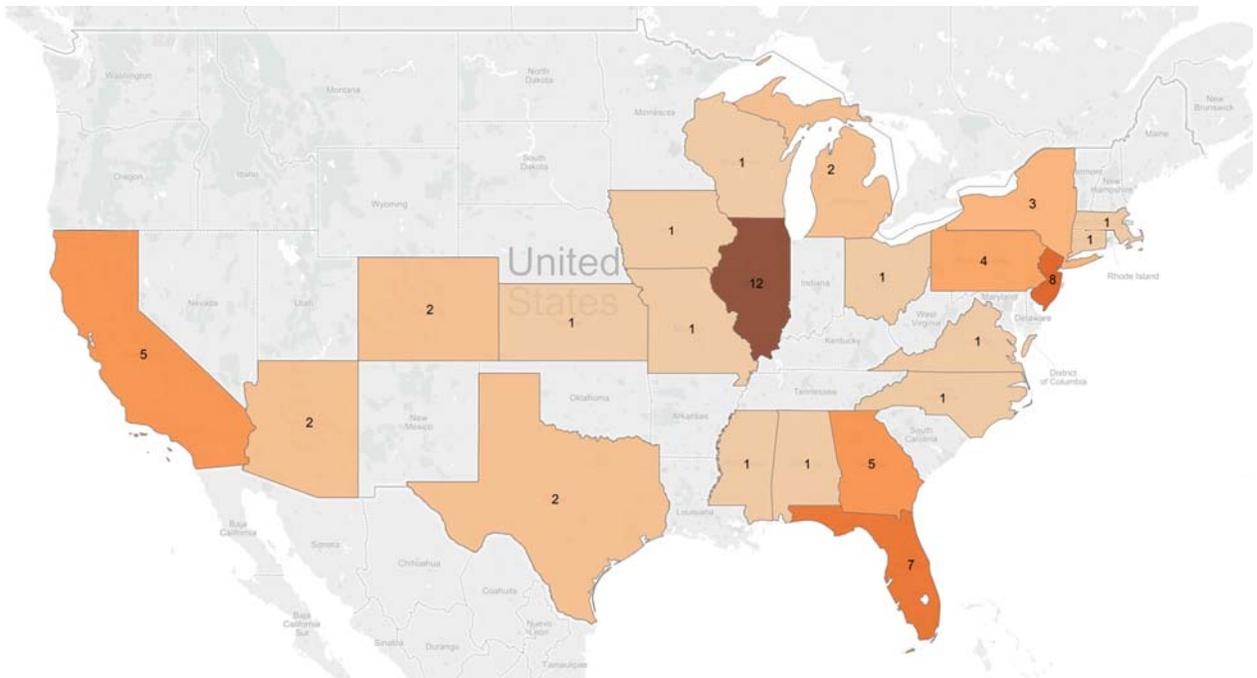
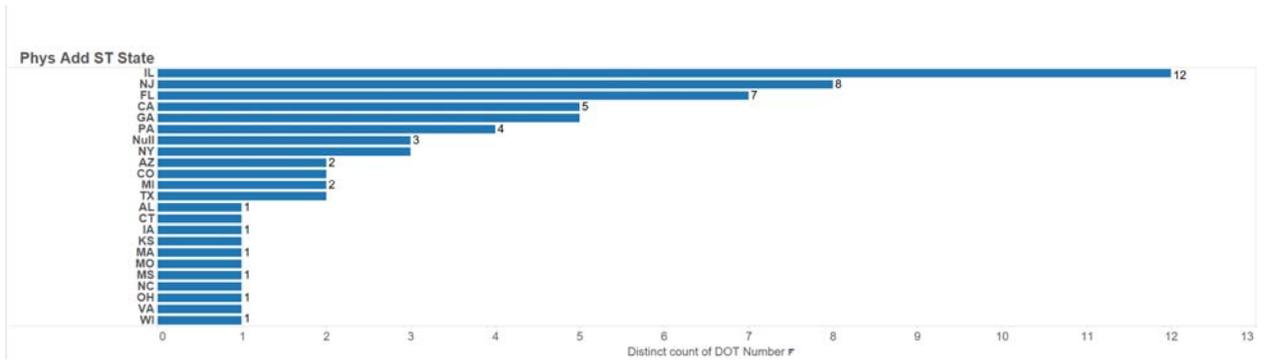


Barchart & Map of 50,585 Eligible (11 Inspections) Interstate Motor Carriers by State of Domicile (Map excludes non-US)



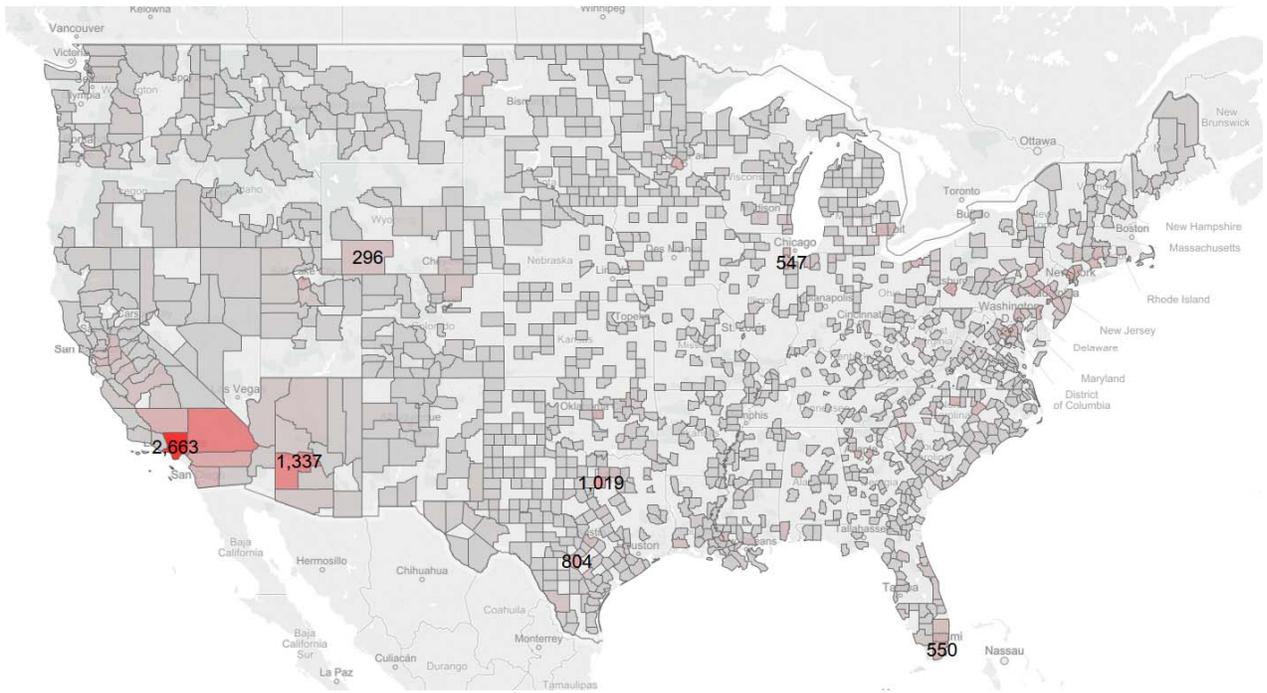


Barchart & Map of 67 Carriers who failed 2 BASICs after removal of 391.11(b)(2) violation from Driver Fitness (Chart & Map excludes non-US)



# Map by County of Industry DOT Recordable & Fatality Crashes

Recordable (187,555 total)



Fatality (6,421 Fatalities)

