



U.S. Department  
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National Highway  
Traffic Safety  
Administration

# TRAFFIC TECH

## Technology Transfer Series



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# Evaluation of Utah's .05 BAC Per Se Law

## Background

The National Highway Traffic Safety Administration (NHTSA) conducts research on the effectiveness of countermeasures to improve safety on the nation's roads. State legislation regarding per se limits for driver blood alcohol concentration (BAC) is one area of interest. Past NHTSA studies examined changes in traffic safety after California and Illinois lowered their BAC per se limits from .10 to .08 grams per deciliter (g/dL). Those studies were instrumental in providing States and advocates information on the benefits of a .08 limit. Since then, all States have adopted .08 BAC per se limits. However, impaired driving continues to be an important issue, with 10,142 alcohol-impaired fatalities on U.S. roadways in 2019. The National Transportation Safety Board in 2013 published *Reaching Zero: Actions to Eliminate Alcohol-Impaired Driving* recommending States lower their BAC per se limits from .08 to .05 g/dL.

On March 23, 2017, the Governor of Utah signed into law House Bill 155, modifying Utah Code §41-6a-502 to prohibit people 21 and over from operating a noncommercial vehicle with a BAC of .05 g/dL or greater, rather than .08 g/dL. The law established this as a per se offense and carried an effective date of December 30, 2018. With the passing of this legislation, Utah became the first State to adopt an impaired driving per se BAC limit lower than .08.

## Research Objectives

The goal of this study was to conduct a comprehensive evaluation of the impacts of the change in Utah's per se law from .08 to .05. The specific objectives were to—

- Document the legislative process that resulted in the per se law change; and
- Examine whether any changes occurred within Utah after the law revision in terms of:
  - ◆ Crashes and fatalities,
  - ◆ Impaired driving arrests,
  - ◆ Driver knowledge, perceptions, and attitudes toward drinking and driving,
  - ◆ State education or prevention strategies, and
  - ◆ Alcohol sales and other economic indicators.

## Methods

NHTSA coordinated with the Utah State Highway Safety Office and other State agencies to obtain data on crashes; impaired driving arrests; and driver knowledge, perceptions, and attitudes toward drinking and driving. NHTSA's Fatality Analysis Reporting System (FARS) data were also examined. Statistical analyses focused on changes in the State crash data measures for the 21 months after the law was passed (but not yet in effect), and for the first 12 months after it was in effect. The study also examined publicly available information on alcohol sales, sales tax revenues, and tourism to see how these economic factors were impacted by the change in BAC limit.

## Results

**Legislative Review.** This indicated the motivation for lowering the BAC law from .08 to .05 was a desire to improve traffic safety. The majority of objections were based on hypothesized negative effects on the economy (e.g., alcohol sales, tax revenues, and tourism), the belief arrests for driving under the influence (DUI) would increase drastically for people who had "one or two drinks," and the assumption there would be no safety benefits.

**State Education/Media Strategies.** Utah did not undertake any large-scale media activities related to the passage of the .05 BAC law. The Utah Department of Public Safety posted a fact sheet in March 2017 describing types of physical and mental function losses related to a .05 BAC level, and explained the new law would not involve significant changes to the State's DUI enforcement approach. A Frequently Asked Questions document was developed, along with a short video entitled *Business As Usual*.

**Crashes and Fatalities.** Time series analyses of the monthly State crash data showed reductions for almost all of the crash- and driver-level measures (i.e., there were fewer crashes and lower alcohol involvement) for the 21 months after the law passed, and the 12 months after it went into effect, compared to what would be expected based on statistical projections from the baseline period (Table 1). A negative value in the table represents a reduction in the average monthly crash rate or driver alcohol involvement measure.

**Table 1. Estimated Average Monthly Changes for Selected Crash and Driver Measures**

Measure	After .05 Law in Effect (12 months)
	Δ%
<b>Crashes</b>	
Total per VMT <sup>†</sup>	-9.6*
Injury (including fatalities) per VMT	-10.8*
Single Vehicle Nighttime per VMT	-7.8
Single Vehicle Nighttime Injury per VMT	-13.7*
Alcohol Positive per VMT	-8.9*
BAC ≥ .05 per VMT	-14.7
BAC ≥ .08 per VMT	-13.7
BAC ≥ .15 per VMT	-9.1
<b>Drivers</b>	
% Suspected Alcohol	-12.5*
% Alcohol Positive	-14.6*
% BAC ≥ .05	-22.5*
% BAC ≥ .08	-22.9*
% BAC ≥ .15	-22.5*

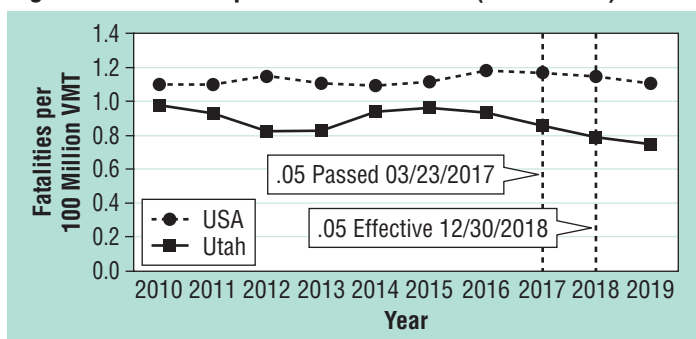
Δ% = estimated percentage change.

\*p < .05, two-tailed ARIMA model.

<sup>†</sup>VMT is per 100 million vehicle miles traveled.

An examination of FARS data for Utah revealed reductions in fatal crashes and overall numbers of people killed in 2019 (the first year the .05 law was in effect) compared to 2016 (the last full year before the law was passed). In 2019, despite increased vehicle miles traveled (VMT), Utah recorded 225 fatal crashes and 248 fatalities, which is lower than the 259 fatal crashes and 281 fatalities for 2016. When VMT is considered (See Figure 1 for a plot of fatality rates for Utah versus the rest of the United States), the fatal crash rate reduction from 2016 to 2019 in Utah was 19.8%, and the fatality rate reduction was 18.3%. In comparison, the rest of the United States showed a 5.6% fatal crash rate reduction and 5.9% fatality rate reduction during the same time. The neighboring States of Arizona, Colorado, and Nevada did not show the same levels of improvement in fatal crash and fatality rates as Utah. Monthly fatal crash counts in Utah were too small to support time series analyses.

**Figure 1. Fatalities per 100 Million VMT (FARS Data)**



  
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**DUI Arrests.** DUI arrest data showed no large spikes in overall arrests or arrests per population relative to passage of the law. In 2019, there was a slight increase in number and proportion of arrests of drivers with BACs between .05 and .079 relative to the prior few years, which was expected given that law enforcement could now cite drivers for a per se offense in this BAC range.

**Public Awareness.** A survey conducted by the State found in 2018, 26.6% of drinkers and 12.6% of the non-drinkers thought the limit was .05 even though the law had not yet taken effect. In 2019, 22.1% of drinkers indicated they had, in fact, changed their behaviors once the law went into effect. The most common change was ensuring transportation was available when drinking away from home.

**Alcohol Sales, Tax Revenues, and Tourism.** Alcohol sales in Utah from 2012 through 2018 increased and continued the trend through Fiscal Year 2020 after the law was effective. Similar patterns were observed for sales tax revenues from restaurant, rental car, hotel, and resort sales, as well as air travel to Utah and visitors to State and National parks.

## Summary

Overall, the study’s findings indicate that passage of the .05 per se law had demonstrably positive impacts on highway safety in Utah. The crash analyses highlighted reliable reductions in crash rates and alcohol involvement in crashes associated with the new law that were consistent with, or greater than, those observed or predicted by prior research. While the concerns about the impact of the law change on the State’s economy were certainly understandable, the data reviewed for this study indicate none of the potential negative effects of concern came to fruition. In fact, alcohol sales and per capita consumption appeared to continue their increasing trends under the new law as did tourism and tax revenues. Similarly, DUI arrests for alcohol did not climb sharply after the law went into effect as some had feared.

## Full Report:

Thomas, F. D., Blomberg, R., Darrah, J., Graham, L., Southcott, T., Dennert, R., Taylor, E., Treffers, R., Tippetts, S., McKnight, S., & Berning, A. (2022, February). *Evaluation of Utah’s .05 BAC per se law* (Report No. DOT HS 813 233). National Highway Traffic Safety Administration.

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