

Final
STAFF SUMMARY OF MEETING

TRANSPORTATION LEGISLATION REVIEW COMMITTEE

Date: 07/08/2015

ATTENDANCE

Time: **09:05 AM to 04:20 PM**

Place: RM 271

This Meeting was called to order by
Representative Tyler

This Report was prepared by
Matt Kiszka

Becker J.	E
Buck	X
Carver	X
Cooke	X
Coram	X
Esgar	X
Jones	X
Kraft-Tharp	X
Melton	X
Mitsch Bush	X
Moreno	X
Neville P.	E
Nordberg	E
Scott	X
Todd	X
Winter	X
Baumgardner	X
Tyler	X

X = Present, E = Excused, A = Absent, * = Present after roll call

Bills Addressed:	Action Taken:
Call to Order	Witness Testimony and/or Committee Discussion Only
Discussion of Chain Laws and I-70 Mountain Corridor Congestion (HB 15-1173)	Witness Testimony and/or Committee Discussion Only
Discussion of Impeding Traffic Laws	Witness Testimony and/or Committee Discussion Only
Discussion of Traffic Safety Data Gathering	Witness Testimony and/or Committee Discussion Only
Discussion of Definition of a Motor Vehicle	Witness Testimony and/or Committee Discussion Only
Update from the Public Utilities Commission	Witness Testimony and/or Committee Discussion Only
Common Carrier Regulation (pursuant to HB15-1316)	Witness Testimony and/or Committee Discussion Only

09:06 AM -- Call to Order

Representative Tyler, Chair, called the committee to order. A quorum was present.

09:07 AM -- Discussion of Chain Laws and I-70 Mountain Corridor Congestion (HB 15-1173)

Representative Mitsch Bush opened up the discussion of chain laws and I-70 mountain corridor congestion, per the statutory requirements for the Transportation Legislation Review Committee of House Bill 15-1173. She stated that congestion on I-70 is a major issue for the state, and provided a history of chain laws in the state going back to 2009. She spoke to the increasing number of I-70 closures in recent years due to inadequate traction equipment on motor vehicles, issues surrounding existing chain laws, and how quickly the Colorado Department of Transportation (CDOT) can call these laws into effect.

Representative Mitsch Bush discussed the stakeholder meetings that had been held in the past year that led to the introduction of House Bill 15-1173. She said that the bill sought to do three things: identify mile markers for chain laws; set dates certain for when chain laws would be in effect; and a clarification of existing statute to make it more clear. She detailed the Senate Transportation Committee's amendment that changed the bill to make chain laws in effect whenever icy and snow packed conditions exist.

09:14 AM

Kyle Lester, Highway Maintenance Division Director, CDOT, came to the table to present to the committee. Mr. Lester said that chain laws are a critical element of CDOT's winter highway management operations. A copy of CDOT's presentation was distributed to the committee (Attachment A). Ryan Rice, Director, Division of Transportation Systems Management & Operations, CDOT, presented to the committee. He discussed the worst travel day for the mountain corridor in the past five years, which occurred on Sunday, February 9, 2014, causing up to five-hour delays and numerous spun-out passenger vehicles and semi trucks. Mr. Rice spoke to how CDOT changed its best practices following that day, whereby it began using snow-plow escorts and other congestion mitigation techniques in the I-70 mountain corridor.

Mr. Rice discussed key performance indicators for travel and congestion in the I-70 mountain corridor. He said that CDOT activated the passenger vehicle chain law four times and the commercial chain law 200 times in the winter of 2014/15. He discussed media campaigns implemented by CDOT surrounding Colorado's chain laws and the success of the campaign in changing driver behavior, and responded to committee questions on CDOT public surveys.

09:25 AM

Mr. Lester discussed the different codes that CDOT can call into action to activate the state's chain laws and the different road conditions that lead to each code being used. He responded to a question on how effective automatic braking systems are in winter driving conditions. He said that clarification of Colorado's chain laws and statutory requirements for media campaigns and public awareness would be useful for CDOT. He responded to questions on the enforcement of chain laws in the past few years, and how much CDOT and Colorado State Patrol (CSP) depends on drivers to make informed decisions in regards to current state requirements for adequate traction control.

Major Matt Packard, CSP, responded to questions on the issuance of citations when the chain law has been called into effect. Committee and panel discussion ensued on the timing of calling chain laws into effect and how there can be a lag between this action and driver awareness. Mr. Rice and Mr. Lester responded to questions on the congestion and closure data provided by CDOT in its presentation in light of the lack of severity of the 2014/15 winter, the success of media campaigns surrounding traction requirements conducted by CDOT, plans for future public awareness campaigns, and the cost of CDOT's most recent chain laws media campaign.

Major Packard responded to a question on whether CSP would target drivers if chain laws are changed per HB15-1173. Committee discussion ensued on how the tourism industry can get involved in messaging campaigns to encourage the use of adequate traction equipment while driving on I-70 in the winter.

09:44 AM

Major Packard said that anything that can be done towards increasing the ability of CSP to enforce chain laws and equipment requirements would be of huge assistance to CSP.

09:47 AM

Margaret Bowes, Program Manager, and Tim Mauck, Co-Chair, I-70 Coalition, came to the table. Ms. Bowes provided statistics on the revenue generated by mountain resorts in the state and highlighted how costly I-70 closures can be. She gave an overview of the I-70 Coalition, which has 29 members and represents towns, counties, cities, and large business in the mountain corridor. Ms. Bowes said that the I-70 Coalition advocates for improved traffic mobility in the mountain corridor and heavily focuses on transportation demand management through the promotion of van and bus services and the use of carpooling. She discussed other congestion mitigation strategies, such as travelling at non-peak times and the provision of travel forecasts for the general public. Ms. Bowes spoke to how the coalition partners with local businesses to provide discounted services that encourage people to stay longer in the mountains to avoid peak travel times. She said that the coalition was a very strong proponent of HB15-1173. She highlighted how inadequate traction is a large contributor to lane closures in the mountain corridor, and said she currently sees a lot of confusion over existing chain laws. Ms. Bowes responded to a question on the feedback she receives from lodging associations on what they hear from the public in regards to car tire or traction equipment requirements.

09:58 AM

Mr. Mauck discussed the public's concerns surrounding winter driving preparedness and the improvement in CDOT campaigns and communication in past years. He responded to questions on the challenges faced in the movement of commerce throughout the mountain corridor, strategies being employed to handle traffic volume in the area, and what the I-70 Coalition is doing to increase public awareness of its strategies and campaigns. Committee discussion ensued on the importance of the I-70 Coalition's participation in awareness campaigns targeted towards tourists and residents who are not aware of current chain law requirements, and the charge of the committee per HB15-1173. Mr. Mauck responded to questions on the affordability of new tires or adequate traction control equipment for traveling in the mountain corridor. Greg Fulton, President, Colorado Motor Carriers Association (CMCA), came to the table to discuss the cost of complying with state chain laws. Committee discussion ensued on this topic and what current chain laws require.

10:21 AM

Mr. Fulton discussed the efforts of the CMCA to mitigate the impact of the trucking industry on traffic and congestion in the I-70 mountain corridor, the cost of freight delays to consumers, and the stringency of chain laws for commercial vehicles in Colorado. He stated that his organization supported HB15-1173, and clarified that they are not looking for "tire police," but rather that adequate tire depth be required and that additional penalties be applied to individuals who caused accidents in winter conditions. Mr. Fulton responded to questions from the committee about commercial vehicle fines. Mr. Fulton and CSP received a request from the committee for data on the issuance of citations relative to fine increases.

10:35 AM

Jonathan Whitley, Risk Manager, American Car Rental Association (ACRA) came to the table. He said that ACRA represents 98 percent of the car rental industry, the industry is highly concerned with the safety of the equipment it provides its customers with, ACRA was neutral on HB15-1173, and likely would be on future legislation addressing chain laws in Colorado. He discussed how the rental car industry could struggle with enhanced traction control equipment requirements if the chain laws are changed. He responded to questions on the tread depth standards for tires that rental car companies equip their vehicles with, the additional traction control equipment that rental car companies currently provide to their customers, how many rental cars end up in accidents in the winter in Colorado, and how many miles on average are put onto a rental car before it is sold off.

10:44 AM -- Discussion of Impeding Traffic Laws

Dave Hall, Legislative Liaison, CSP, came to the table to present to the committee on state laws surrounding impeding traffic. Mr. Hall said that current law adequately addresses vehicles impeding traffic, and that CSP would be concerned with drivers counting cars behind them if the law was changed to increase fines for impeding traffic. He responded to questions on the discretion that state patrol currently has for pulling over or issuing citations to drivers who impede traffic, whether strategies could be employed without the need for legislation or increasing fines, what statute currently dictates in regards to impeding traffic, how many times CSP pulled drivers over for impeding traffic in 2014, and how many citations were issued. The committee requested for CSP to provide data on CSP contacts with drivers who impede traffic.

Greg Fulton, President, CMCA, came to the table and discussed current impeding traffic laws in the state. He addressed the danger of drivers pulling off to the side of the road on some highways in the state and the need for more pull off points on Colorado's roads so that motorists can safely let traffic pass.

10:55 AM -- Discussion of Traffic Safety Data Gathering

Sergeant Ian Whittington, Strategic Analysis and Business Research Unit, CSP, and Rob Barnes, Applications Support Manager for Public Safety, Office of Information Technology (OIT), came to the table to discuss the collection of data in the state and how traffic safety can be increased through this data. A copy of the DOR's and CDOT's presentations were distributed to the committee (Attachment B and Attachment C). Sergeant Whittington discussed the instances in which data is collected by CSP when making contact with drivers, such as during proactive traffic stops, motorist assists, enforcement actions, citations, arrests, and accident investigations. He described the different data points that are often collected during a contact event, including basic driver identification information, name, date of birth, race, basic vehicle information, reason for the contact, information on violations, and enforcement action taken. He said that data recently includes marijuana impairment information, which is of interest to CSP. He responded to questions on whether CSP differentiates between driving under the influence of alcohol and driving under the influence of drugs, and if the information collected by CSP is ever available via other agencies. Sergeant Whittington discussed the information that goes into a crash report form that is collected by CSP, data reporting standards in the state, and the software used by CSP to collect data. He said that data is often shared with county and municipal governments, is used for criminal investigations in the state and nationally, and is also shared with the legislative branch of the Colorado General Assembly. He said that individual traffic accident reports are available to the general public, and are aggregated for both federal government and CDOT use.

Mr. Barnes responded to questions on the manual collection of data and querying capabilities of the software used by CSP and OIT to pull aggregated data points, if aggregated data is available in a data warehouse format and if the public can access this repository. Sergeant Whittington responded to a question on what the fastest growing accident issue is in the state. Alisa Babler, Project Manager, CDOT, came to the table to speak to this question. The committee discussed the need for data analytics in the state.

Ted Trujillo, Operations Director, Driver Control, DMV, DOR, came to the table and discussed the DOR traffic accident report form that is used to collect information on accidents in the state. He spoke to the various ways in which the DOR receives the form, and said that it contains 84 different data points. He discussed the numerous ways in which information from the form can be requested by different entities in the state. He said that in FY 2014-15 there were 4,310 such requests by individuals and 45 requests by government agencies in the state. Mr. Trujillo spoke to how data is used once it has been collected and by which agencies, such as the Judicial Department during criminal investigations. Ms. Babler and Mr. Trujillo responded to questions on the classification of tuk tuks in the state as motorcycles, whether data systems are being developed to incorporate vehicle subcategories into accident reports, and the efforts that are being made towards uniform data gathering throughout the state.

11:26 AM

Mr. Trujillo responded to questions on the purposes for which accident report data is made available to state agencies and the circumstances under which personal information is masked.

11:31 AM

Ms. Babler discussed how CDOT processes and uses accident crash data collected in the state. She spoke to the importance of data accuracy and how critical it is for CDOT to have detailed information when analyzing crashes. Ms. Babler discussed the entities that CDOT shares their data analysis with, including CSP, local law enforcement, DOR, various other state agencies, and the general public. She stated that CDOT has a three month process of data analysis before it is ready to be shared. Ms. Babler discussed the database used by CDOT, the department's future plans for increasing availability of data for interested parties, and how data can be better used to improve road safety in the state. She spoke to CDOT's "Moving Towards Zero Deaths" program and showed the committee a complete list of the programs and people using CDOT data. She responded to questions on whether CDOT is the ultimate repository for accident crash data and can provide the best data analytics to interested parties, and if the department can make its data available for programming purposes. Mr. Trujillo received a request from the committee to provide a copy of the rulemaking docket regarding the provision of data and encryption standards for cyber security for accident reports.

11:42 AM

Stephen Vasconcellos, Senior Manager, Court Services Division, State Court Administrator's Office, came to the table to discuss the data requests made by the Judicial Department to assist in cases heard within the state court system. He outlined the various data points collected by the courts and the requests received by the Judiciary for data from the General Assembly and other entities. He responded to a question on the Judicial Department's connection to the CDOT database, stating that there is not currently a direct connection between the two departments. He discussed the challenges of finding the most effective flow of information between departments and agencies. Committee and panel discussion ensued on the availability of aggregated data surrounding crashes, fatalities, and other aspects of the accident report, whether the legislature could work towards making data more connected and available to interested parties, and what CDOT and DOR are currently doing to increase data analytics and accessibility. Ms. Babler responded to a question on CDOT expectations for the level of data it could potentially share with parties and whether personal identifying information would be included in this data.

11:51 AM

Sergeant Whittington spoke to "intelligence-led policing," how CSP can use aggregated data to improve its activities and efficiency, and how it can reduce accidents and fatalities on Colorado's roads.

11:53 AM -- Ed Wood, representing DUID Victim Voices, testified before the committee. He distributed a handout (Attachment D) detailing his testimony and request for the legislature to create separate offenses surrounding driving under the influence of alcohol, driving under the influence of drugs, and driving under the influence of a combination of alcohol and drugs. He also requested that the legislature create an agency to collect, analyze, and publish statewide DUID statistics.

11:59 AM

The committee went into a recess.

01:12 PM -- Discussion of Definition of a Motor Vehicle

The committee was called back to order. Representative Tyler explained how the House and Senate Transportation Committees and the TLRC frequently receive requests to regulate new types of vehicles or reclassify existing vehicles in Colorado, prompting the need for the discussion of what defines a motor vehicle.

01:13 PM

Dave Hall, Legislative Liaison, CSP, came to the table to present to the committee about how CSP classifies different types of vehicles. He discussed how tuk-tuks are classified as a motorcycle, and said that this classification is problematic when CSP needs to analyze accident data on motorcycles alone without including tuk-tuks.

01:15 PM

Tony Anderson, Title & Registration Operations Director, DMV, came to the table to present on how the DMV collects data on motor vehicles. He distributed two handouts (Attachments E and Attachment F) and provided an overview of vehicle tax classes, the types of vehicles in each class, and how the taxable value of each class is calculated. He explained that golf carts, implements of husbandry, and low-power scooters do not have a tax class. Representative Tyler asked about the requirements imposed on vehicles without a tax class. Mr. Anderson discussed the requirements for certain types of construction vehicles that are operated on the road and gave an overview of different definitions of a motor vehicle depending on where it is defined: either in statutes for titling and registration, federal codes, or by recommendation of the American Association of Motor Vehicle Administrators. He explained that the Colorado Revised Statutes have 85 separate definitions for motor vehicles. Mr. Anderson responded to questions from the committee regarding unconventional vehicles that can ride on the roads and the types of vehicles that may be coming before the legislature in the future.

01:28 PM

Tim Jackson, President, Colorado Automobile Dealers Association (CADA), came to the table to answer questions from the committee. He said that CADA is concerned about kei vehicles because they do not need to meet the same safety and emissions standards as those for traditional manufacturers. He discussed how new motor vehicles have drastically reduced their emissions in recent years, problems with ozone in Colorado, how kei vehicles try to bypass these emission standards, and how keis have worse emissions than traditional vehicles. He discussed the vehicle safety requirements that have existed since 1972 that have reduced vehicle homicides and improved safety. He said CADA suggests that rather than reducing standards, federal and state governments should require everyone, including kei vehicles, to meet current standards. He explained how the federal government usually sets the national standard.

01:36 PM

Dennis Haberstumpf, representing ABATE of Colorado, came to the table during public comment and distributed a handout (Attachment G). He said that he would like the legislature to classify three-wheeled vehicles as their own type of vehicle rather than as a motorcycle. He described a new vehicle called the "slingshot" that has two seats side-by-side but is currently classified as a motorcycle. He explained that in statute, safety guidelines require that your legs be on each side of the seat, and spoke to how this is not possible in many of the new vehicles classified as a motorcycle. Committee discussion ensued.

01:41 PM -- Update from the Public Utilities Commission

Doug Dean, Director, Public Utilities Commission (PUC), introduced himself to the committee. He explained that the PUC has primary oversight responsibility over the Regional Transportation District's (RTD) light rail system but that the federal Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012 eliminated the PUC's ability to collect money from RTD to cover the costs of the oversight of this system.

Dr. Pamela Fischhaber, Chief of the Rail and Transit Safety Section, PUC, introduced herself to the committee and further explained MAP-21 and funding challenges for the PUC's oversight of RTD's light rail system. She said that the state needs to stay in compliance with federal regulations or could risk losing \$250 million in federal funding. Mr. Dean and Dr. Fischhaber proposed that its oversight of RTD could be funded from the fees that the PUC collects from utilities companies that goes directly to the general fund. Mr. Dean discussed the PUC's responsibility for at-grade railroad crossings, how the legislature used to provide funding for local governments to improve these crossings, how the funding formula was changed in 2003, and how the PUC could be a resource for local governments again for improving these at-grade crossings.

01:48 PM

Joe Neguse, Executive Director, Department of Regulatory Agencies (DORA), introduced himself as the new head of DORA and explained his professional background. He said that DORA would like to work with the legislature in reducing regulatory burdens and thanked the legislature for passing HB 15-1382. He discussed the PUC's new approach to working with transportation network companies (TNCs). The panel responded to questions from the committee regarding how the PUC makes its records available to public.

01:58 PM

Mr. Dean described how taxicab companies have grown over time, why the \$5 vehicle registration fee for taxicabs does not cover the PUC's expenses in providing regulatory oversight of taxicab companies, and the problems with permits that do not expire.

Ron Jack, Chief Operating Officer and Chief of Transportation, PUC, described problems with permits that do not expire and the benefits of changing to a permit that would have to be renewed annually. He discussed how a taxicab company's name can change over time. The panel responded to questions from the committee regarding at-grade railroad crossings, how these improvements used to be funded, how crossing improvements are prioritized, and federal regulations for railroad crossings.

02:10 PM -- Common Carrier Regulation (pursuant to HB15-1316)

Doug Dean, Director, PUC, provided an overview of three tiers of taxicab service regulation depending on the service area: regulated competition in counties outside the Denver metro area, modified regulated competition in the Denver metro area and El Paso county, and regulated monopoly for all other areas. He discussed how regulated monopoly allows existing common carriers to limit new companies if they can prove that new competition would be detrimental to the public interest. He discussed House Bill 15-1316 and the PUC's role in limiting the size of regulated competition.

02:16 PM

Representative Tyler asked why the state should be regulating taxicab companies. Mr. Dean explained that state law requires the PUC to regulate common carriers and described the commission's existing authority to set rates. He said that there have been no new rate cases for the last ten years and that the fare pricing has remained relatively constant during this time. He discussed the complexities of taxicab pricing, how taxicab companies make their money, how lowering rates could hurt drivers, surge pricing, and the need for market fairness. He responded to questions from the committee regarding the need for future taxicab regulation, equity between TNCs and taxicab companies, and how the PUC is working with taxicab companies.

02:23 PM

Ron Jack, Chief Operating Officer, PUC, discussed the process of drafting consensus rules for TNCs. He said that the PUC has been very successful in working with TNCs and plans to take the same approach when the PUC revises rules for common carriers. Representative Tyler asked if the PUC saw a need for changes in legislation. The panel reviewed areas of negotiations between TNCs and taxicabs where the different parties lacked consensus. Discussion ensued regarding the rulemaking process, how federal rules impact state regulations, how HB15-1316 applies differently to TNC drivers and the parent companies, how the PUC cross-checks the hours of service for taxi drivers, and challenges with collecting data from TNCs.

02:32 PM

Mr. Dean and Mr. Jack responded to questions from the committee regarding how other states are handling issues with TNCs and taxicabs. The panel explained that Colorado was the first to legislate TNCs and other states are looking to Colorado as an example. Discussion ensued regarding implementing a study of TNCs, background checks or fingerprint checks for drivers, and separate laws requiring DORA to fingerprint individuals.

02:38 PM

The panel responded to questions from the committee regarding nonconsensual tows.

02:42 PM -- Max Sarr, General Manager, Freedom Cab, came to the table and introduced himself. He discussed how TNCs have more advantages than taxicab companies, how taxicabs have been charged with large fines for violating safety and hours of service requirements, and how taxicabs are losing business to TNCs. He suggested that if TNCs and taxicabs could not have similar regulations then the legislature should deregulate taxicabs. Mr. Sarr responded to questions from the committee regarding whether the hours of service limitation for taxicab companies should be eliminated.

02:49 PM -- Diane Burtolin, representing Metro Taxi, gave a history of taxicab regulations and the government's role in ensuring safe transportation and serving the public without discrimination. She said that the taxicab market is a social structure that is regulated to serve the consumer. She discussed the benefits of regulation including how it reduces the public's safety concerns and increases predictability. She provided an example of deregulation in the Netherlands and discussed the many factors to consider if the government plans to reduce regulation. She responded to questions from the committee regarding other laws in the Netherlands that may have taken the place of regulation and what the country's regulations look like today.

03:05 PM -- Julie Reiskin, Executive Director of the Colorado Cross-Disability Coalition, distributed a handout (Attachment H). She said that Metro Taxi and Yellow Cab have voluntarily integrated accessible vehicles into their fleets. She said that by not requiring taxicab companies to provide accessible vehicles, the state is effectively punishing the companies that do provide them. She discussed data showing the high number of wheelchair users in the Denver metro area, how Winter Park is a top tourist destination for wheelchair users, the need for accessible taxis during snowstorms or for getting to the airport, the challenges with transporting electric wheelchairs, and who can qualify for the "Access-a-Ride" service. Ms. Reiskin responded to questions from the committee regarding whether an accessible vehicle can be used as a regular taxicab and whether Uber offers accessible vehicles.

03:22 PM -- Kyle Brown, General Manager, Metro Taxi, testified before the committee. He distributed a copy of a study (Attachment I) of taxicab regulation and deregulation to the committee. He discussed how deregulation can put the public at risk, the importance of bringing TNC safety standard to the same level as taxicabs standards, accessibility for low income individuals, and the price of accessible vehicles. He said that without service standards, prices will skyrocket because drivers are going to work for the company where they can make the most money, and as a consequence, all companies will have to raise their rates to attract drivers. He provided a history of taxicab service at Denver International Airport (DIA).

03:38 PM -- Mr. Dean came to the table to answer questions from the committee regarding whether TNC drivers pay a fee to pick-up or drop-off at the airport and when TNCs were first allowed to serve DIA.

03:46 PM -- Carl Allen, Regional Vice President, Transdev on Demand, introduced himself. He said that Transdev North America is the largest private sector provider of multiple modes of transportation in North America and explained that they operate the Yellow Cab company, Supershuttle, and Execucar in the Denver metro area. He explained that taxicabs and TNCs are in the exact same business of bringing customers from point A to point B for a fee, and discussed how Yellow Cab now has an app called zTrip that allows users to access a taxicab much like a TNC. He also discussed who assumes risk, hours of service regulations, the ability to audit, vehicle markings, and fares. He responded to questions from the committee regarding Transdev's views on open market entry.

04:01 PM

Mr. Jack returned to the table to answer questions from the committee on the insurance requirements for taxicabs and TNCs in Colorado.

04:03 PM -- Abdi Buni, President, Green Taxi, testified before the committee. Mr. Buni discussed the changing nature of the taxicab market and the importance of market competition, and responded to questions from the committee regarding how to improve equitability between TNCs and taxicabs.

04:16 PM -- Elias Chajari, Vice President, Green Taxi, testified before the committee. He discussed the challenges of running a taxi company in Colorado and how he appreciated the passage of HB15-1316. He said the current taxicab company application fee is too expensive.

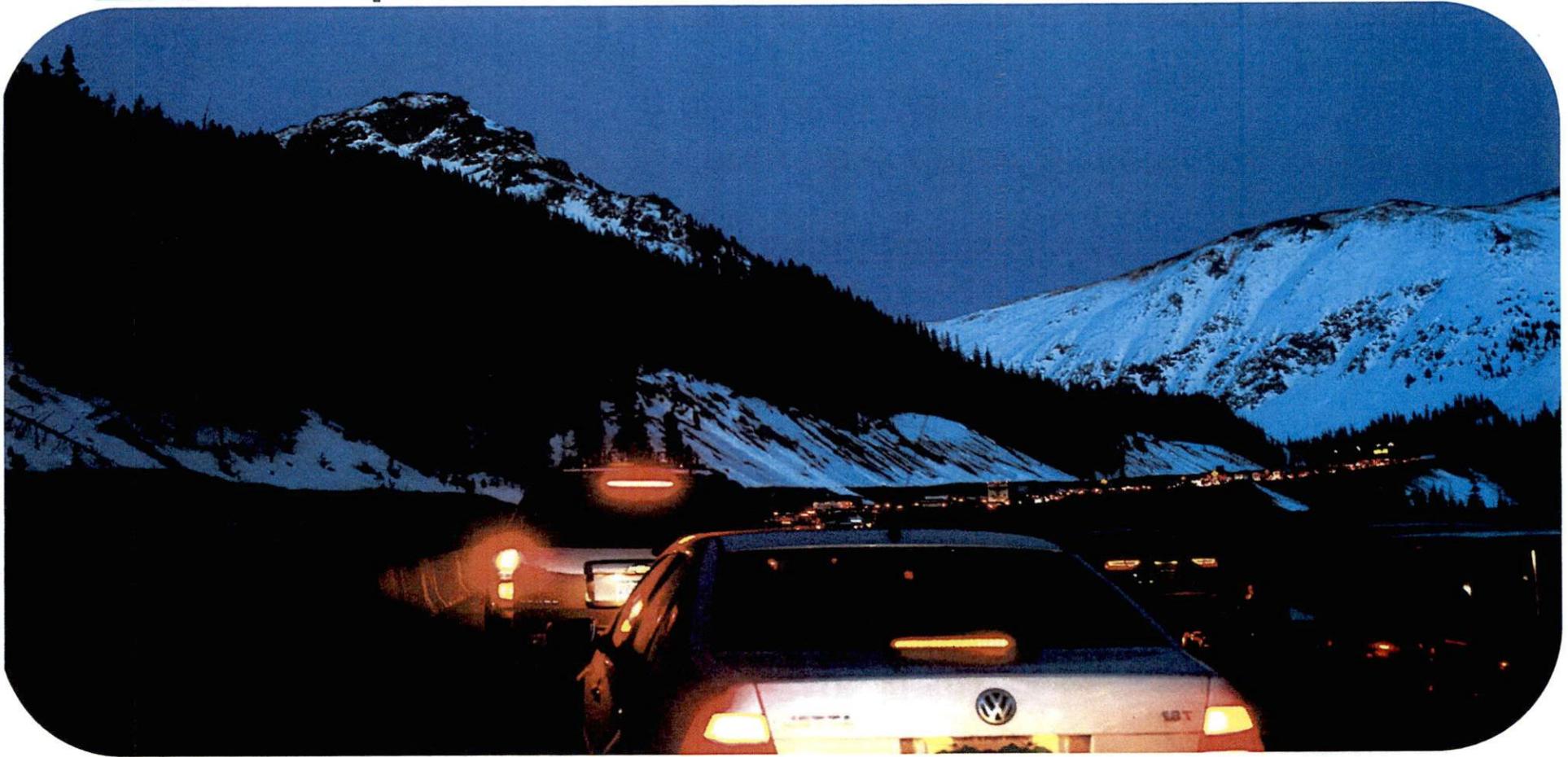
04:19 PM

The committee adjourned.



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Colorado Department of Transportation

Chain Law Overview

July 8, 2015



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Winter Operations Plan

Sunday, February 9th, 2014



- Slow EB traffic east of EJMT caused metering at tunnel for 5 hours
- Stopped vehicles on EB approach to EJMT lost traction as snow increased
- 56 spun-out passenger vehicles
- 11 spun-out semis
- 2+ hour peak delay: Silverthorne to EJMT; 5 hour delay Vail to C-470
- 3 hour hard closure at Silverthorne; 8 hour hard closure of EB I-70 at Vail



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I-70 Winter Operations

2014/2015 Performance

	Performance Measures	Winter 2013/2014	Winter 2014/2015	% Change from last winter
1.	Reduce injury and fatal crashes between Vail and C-470 (as of March 31, 2015)	263	166	-36%*
2.	Reduce weather related crashes between Vail and C-470 (as of March 31, 2015)	805	461	-42%*
3.	Reduce I-70 Unplanned Closure Time between Vail and C-470 (as of May 25, 2015)	226 hours	189 hours	-16%
4.	Reduce hours of Sunday eastbound delay in excess of 90 min Vail to C-470 (as of May 25, 2015)	14 hours	8 hours	-43%
5.	Snow Events	264	243	-8%

• Winter is the period of October 1st to May 31st

* Subject to change-crash data is only available through the end of March 2015 due to the natural lag time in agencies reporting data to CDOT.



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I-70 Winter Operations

2014/2015 Performance

	Key Performance Indicator (October through April)	Winter 2014/2015
1.	CDOT Courtesy Patrol Spinout Assists that blocked a lane	267
2.	Passenger Vehicle Chain Law Activations	4
3.	CDOT Heavy Tow Spinout Assists that blocked a lane	115
4.	Commercial Vehicle Chain Law Activations	200
5.	Commercial Vehicle Chain Law Citations (\$581.50 or less)	96
6.	Commercial Vehicle Chain Law Citations (\$1159.5 Citations)	19



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Successes

Media Campaign Results:

- After one year, 42% of I-70 travelers were aware of the Change Your Peak Drive campaign
- 50% of I-70 travelers were aware of **Operation TireSafe**
- 70% of I-70 travelers checked their tires for adequate tread, 46% purchased new tires
- 44% of I-70 travelers were aware of Bow to the Plow. 62% of those said campaign helped them better understand how to drive safely around plows, and 41% of them changed how they drove
- Over 50% of the public felt like CDOT's efforts either improved or kept conditions the same
- In first year, I-70 Mountain Radio reached up to 40% of corridor in one weekend, average of 15%
- Impressions: More than 117 million (including TV, Online, Print and In Car)



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Chain Law Summary

Code 15

- Separate from Code 17 and 18 which only apply to Commercial Vehicles
- One of two codes for Passenger Vehicle Chain Law
- 1.05 "Code 15" shall mean an implementation of the chain law which restricts all motor vehicles from travel on the state highway unless the vehicle has snow tires or is equipped with tire chains or **Alternative Traction Device (ATD's)** or is a four wheel drive vehicle with adequate tires and all four wheels engaged.
- 1.01 "Adequate Tires" shall mean tires with conventional tread with a minimum tread depth of 1/8 inch.



or



or



or





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Chain Law Summary

Code 16

- One of two codes for Passenger Vehicle Chain Law
- 1.06 "Code 16" shall mean an implementation of the chain law which requires the use of chains or ATD's by all vehicles. Under this code, autotransports shall be restricted from travel unless able to use chains or ATD's.



or





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Chain Law Summary

When are Code 15 and 16 used?

- Implemented rarely in the past
- Implemented 4 times in winter 2014/2015
- Better real-time data on road condition will help us make better decisions on chain law implementation/deactivation
 - Friction Sensors
 - Connected Vehicle applications





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Chain Law Summary

Clarifications that would be useful in a future piece of legislation:

- Codes are reactive - having the proper equipment is proactive
 - *Similar to Commercial Vehicle Chain Law*
- Statewide implementation can be phased in when we have quantifiable triggers based on real time road conditions
 - *Additional friction sensors and other devices & systems*
- Clarification of 42-4-106 could be helpful in ensuring that CDOT has the ability to develop effective and enforceable chain laws





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Questions?



COLORADO
Department of Revenue

DIVISION OF MOTOR VEHICLES
DRIVER CONTROL SECTION

2015 Transportation Legislative Review Committee

Department of Revenue
Division of Motor Vehicles
CRASH DATA
July 8, 2015



State of Colorado Traffic Accident Report (DR 2447)

- The Accident Report (DR 2447) process is the administrative documentation submitted to the Division of Motor Vehicle (DMV) for motor vehicle accidents statewide.
- The DR 2447 must be completed by either of the parties involved in the crash and/or law enforcement.
- The document is then submitted to the DMV where it is verified for completeness and entered into the Department's Electronic Document Warehouse (EDW).



Accident Record Request

- Complete a “Requestor Release and Affidavit of Intended Use” form (DR 2489)
- Report provided with approved permissible use:
 - By a government agency, including any court or law enforcement agency performing its functions for an approved purpose under DPPA.
 - By an agency charged with driver/motor vehicle safety or theft including: MV product alterations, recalls, advisories, MV performance monitoring, MV parts/dealers, MV market research or surveys, removal of non-owner records from original owner records of MV manufacturers.
 - By a business that will use the information to verify the accuracy of information submitted by individuals for the purposes of preventing fraud, pursuing legal remedies against or recovering a debt or security interest.
 - In connection with a civil, criminal, administrative or arbitral proceeding in any court or before a self-regulatory body, including process service, investigation, execution of judgment, or pursuant to a court order.
 - In research activities (the information may not be published, redisclosed, or used to contact the parties).
 - By an insurer or insurance support agency in connection with claims, investigations, anti-fraud activities, rating or underwriting.
 - To provide notice to owners of towed or impounded vehicles.
 - By an employer/agent or insurer of a Commercial Driver's License holder.
 - In the operation of private toll facilities.
 - Attached is a written consent of the person whose record is being requested.



Crash Data Usage

- Provided to Colorado Department of Transportation (CDOT) and Colorado Department of Public Health and Environment (CDPHE) for analysis and report compilation to improve road safety.
- Process Fatal Accident Reports and ensure driver records are marked accurately.
- Provide accident reports to address insurance matters.
- Administer related actions as appropriate to individual driver records.
- Ensure the Financial Responsibility Act (FRA) is administered to drivers without appropriate insurance.



COLORADO
Department of Revenue

DIVISION OF MOTOR VEHICLES
DRIVER CONTROL SECTION



QUESTIONS

Contact: Ms. Saskia Young
Saskia.Young@state.co.us



COLORADO

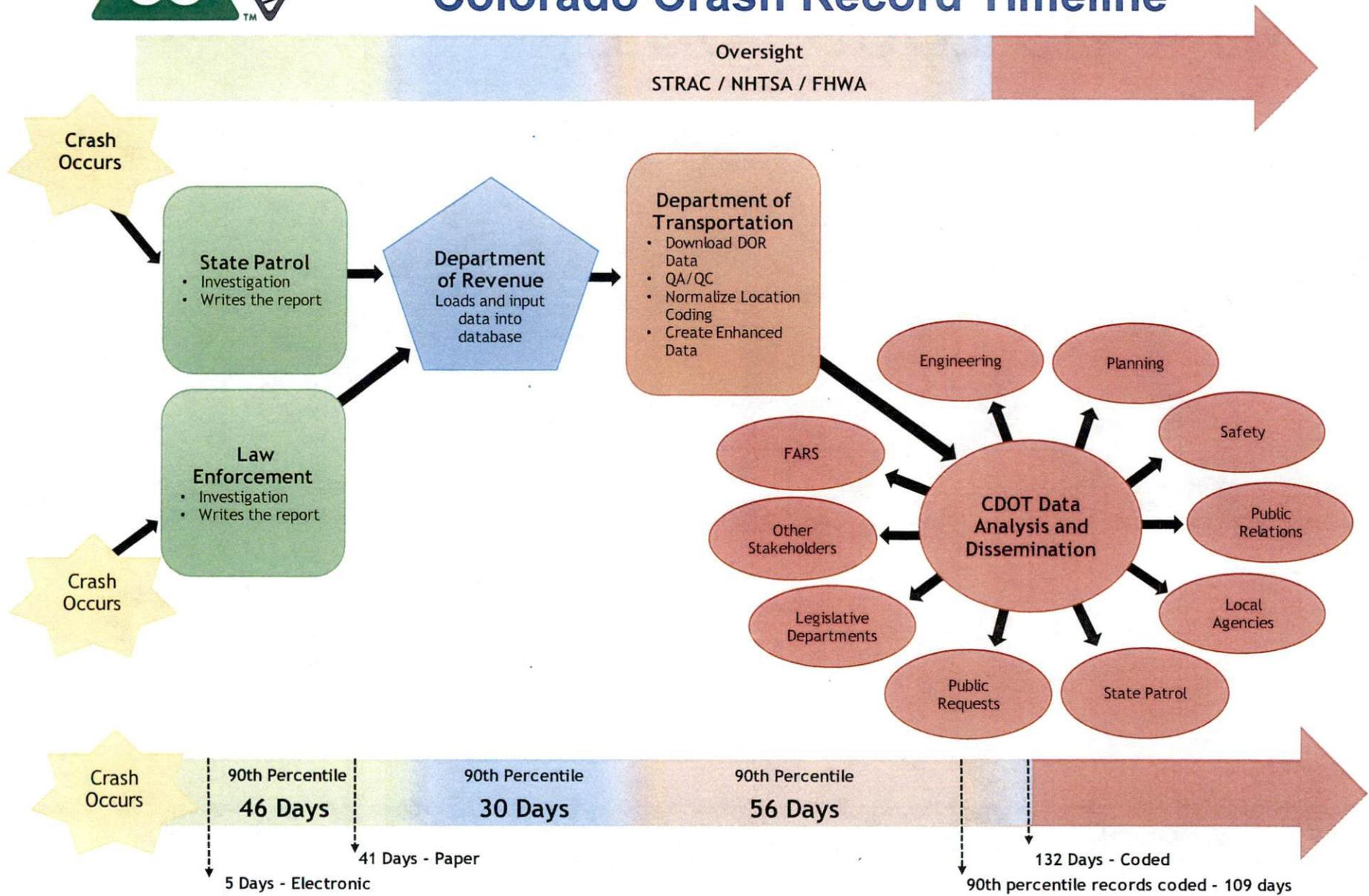
Department of
Transportation



TLRC - CDOT Crash Data July 8, 2015

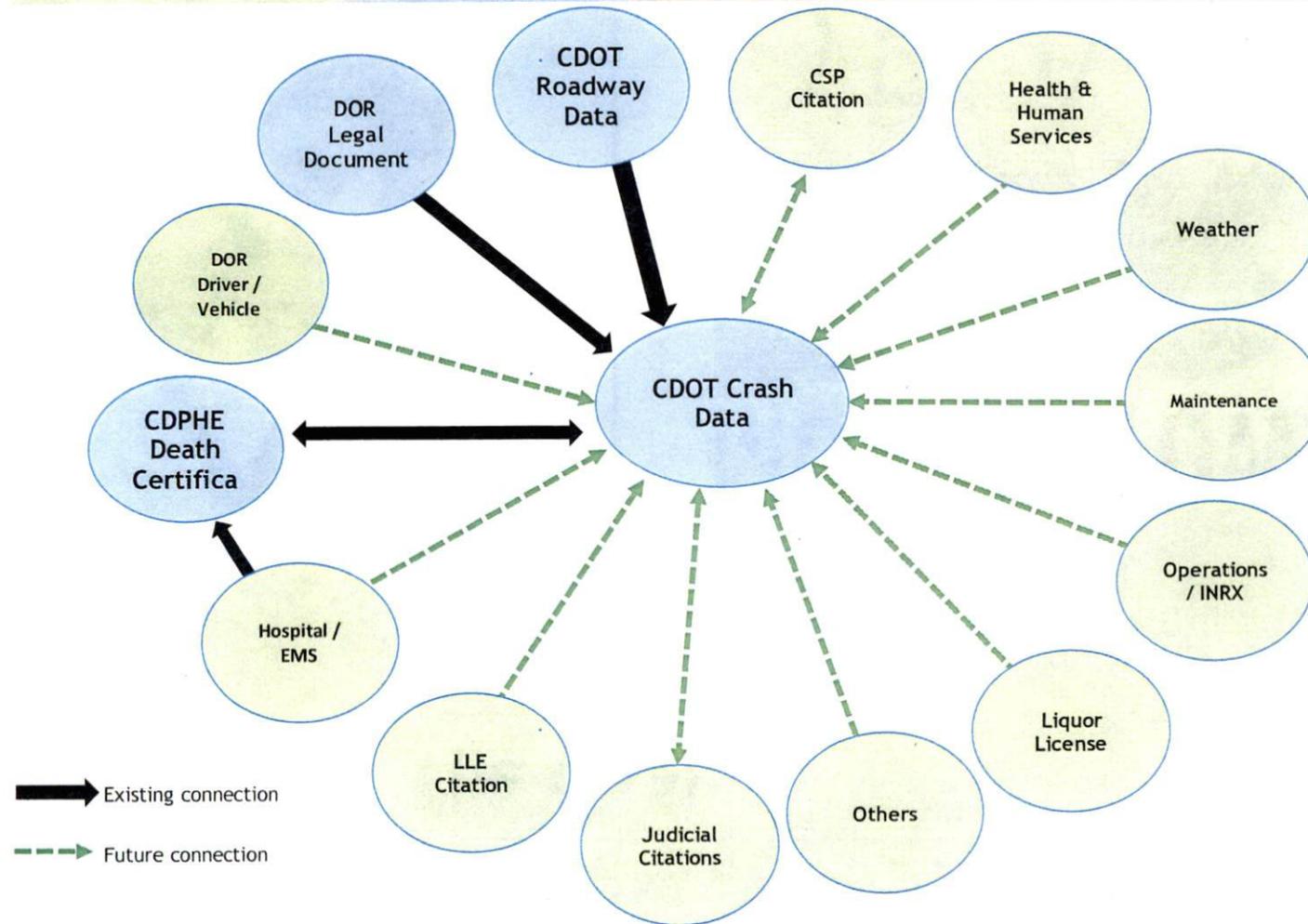


Colorado Crash Record Timeline





Future Database Connections





The Goal:



MOVING TOWARDS
ZERO
DEATHS



Programs and People Using Data

- Federal Highway Administration
- National Highway Traffic Safety Administration
- Fatality Analysis Reporting System (FARS)
- Highway Safety Improvement Program
- FASTER Safety Mitigation Program
- Statewide Plan
- Strategic Highway Safety Plan
- Office of Transportation Safety
 - Behavioral Programs
- Fatality Analysis Reporting System
- Legislative Requests
- Colorado State Patrol
- Colorado Department of Health and Environment
- CDOT Regions
- MPO/TPR's
- Public Relations
- Media
- Researchers
- Cities
- Counties
- Engineers
- Planners
- Law Enforcement
- Public
- Attorneys
- Marijuana Data Advisory Committee



Data Requests

aggressive alcohol alive ave bike boulder cell code
construction core count county courtesy **crash**
crashes csp **data** deer denver distraction
driver driving drug drugged eb el electronic fars
fatal fatalities fatals federal hampton highway
hit nov **hwy** impaired injury light marijuana mocs
measures mfcs mm month motorcycle night non-fatal on-
system operator **outcome** paso pass ped pedestrian
performance phone plan pueblo related rifle safety serious
sheridan super teller texting **traffic** truck unbelted
unrestrained violence **year zone**



Ed Wood
(303) 478-7636
ed.wood2@comcast.net

I seek legislators willing to sponsor legislation to accomplish the following:

1. Amend 42-4-1301 to create separate offenses for DUI alcohol, DUI-Drugs, and DUI-combination alcohol and drugs, and;
2. Charge and fund a state agency to collect, analyze and publish statewide DUID statistics.

Attached is a one-page summary of the problem, a remedy, supporting data, and FAQs.

Please let me know if you would like to discuss this further, or if you are ready to work with me to create a bill.

Understanding the Facts about Drugged Driving – DUID data analysis

The Problem

CDOT reports that typically 25,000 DUI citations are issued annually¹. C.R.S. ¶42-4-1301 combines the causes of DUI (alcohol, drugs, or a combination) into a single statute offense, making it virtually impossible to analyze DUID prevalence, trends and causes in our state. This is a major contributor to the data deficit acknowledged at the January 2015 Marijuana Impact on Public Health and Safety conference². Lacking real data, policy makers rely upon surrogate measures such as NHTSA's FARS reports, even though NHTSA cautions against use of those reports to understand DUID.³

Legislative Remedy

- Amend C.R.S. ¶42-4-1301 to provide separate statute offense numbers for DUI alcohol, DUI caused by drugs, and DUI caused by combinations of alcohol and drugs.
- Fund an agency to collect, analyze, and publish DUID data annually for use by policy makers.

Supporting DATA

1. At the 2/26/2013 Judiciary Committee hearing on HB 13-114, Rep. Joe Salazar asked Tom Raynes of CDAC what the conviction rate was for DUID. Mr. Raynes testified that the DUID conviction rate cannot be known.
2. A pilot study performed by DUID Victim Voices⁴ on 2012 vehicular homicide and vehicular assault cases begins to answer the above question. The study found that only 40% of the DUID cases were found guilty of DUI, and none of the DUI-marijuana cases were found guilty of DUI. As a pilot study, the sample numbers were too small to be significant or representative (10 DUID cases and 2 DUI-marijuana cases). No other data are available on DUID conviction rates in Colorado.
3. The Governors Highway Safety Association has published the following policy recommendation⁵:
"amend statutes to provide separate and distinct sanctions for alcohol- and drug-impaired driving that could be applied individually or in combination to a single case"
4. At least 25 other states have separate statute numbers for DUI alcohol and DUID⁶: AL, AZ, CA, DE, GA, HI, IN, KS, KY, LA, MD, MN, MS, MT, NV, NM, NY, ND, OK, PA, SC, VT, VA, WV, WY.
5. California was the state to most recently adopt GHSA's recommendation. Chris Murphy, Region 9 NHTSA administrator in Sacramento reported that the idea to have separate statute numbers came from a DRE in California. There were no objections raised when the bill authorizing the change was passed by the legislature. The change went into effect January, 2014.

FAQs

1. How can simply revising the statute make DUID data available?
Statute revision alone will not solve the problem, hence the need for a funded agency to perform data analysis and publication. The funded agency cannot cost-effectively collect data to analyze unless the statute is revised, so they can narrow the focus of their data quest.
2. Can law enforcement agencies identify DUID suspects to be able to use a revised structure?
Law enforcement agencies are developing their drugged driving identification capability now. In 2013 The Colorado State Patrol began identifying DUI-marijuana and DUID drivers separately from DUI-alcohol drivers. The Larimer County Sheriff's office, Denver Police Department and the Lakewood Police Department have done the same. However, none of these *ad hoc* programs enable those agencies to understand judicial outcomes of their DUID cases, since their codes are not linked into state judicial databases.
3. How should we deal with DUI caused by alcohol and drugs combined?
Different states do this differently. Some charge a defendant with DUI-alcohol and with DUID. Others charge a defendant with DUI-alcohol and drugs combined.

¹ CDOT 2013 Problem Identification Report

² Wood, Ed. The Data Dearth and Heads in the Sand. <http://duidvictimvoices.org/the-data-dearth-and-heads-in-the-sand/>

³ *Limitations of Drug Test Information, Reporting, and Testing Practices in Fatal Crashes*, NHTSA, November 2014 DOT HS 812 072

⁴ Presented at the November 2014 Colorado Task Force on Drunk and Impaired Driving

⁵ *2014-2015 Policies and Priorities*, GHSA, ghsa.org/html/publications/pdf/14-15PP.pdf

⁶ See individual state statutes. Refer to *A State-by-State Analysis of Laws Dealing With Driving Under the Influence of Drugs*, by Michael Walsh, DOT Report HS 811 236 for a handy reference to each state's DUI statute.

What is a Motor Vehicle?

Division of Motor Vehicles
Department of Revenue

What is a Motor Vehicle?

- The purpose of this presentation is to provide a high level overview of
 - Vehicle tax class and vehicle taxable value
 - The different definitions of a motor vehicle
 - The application of these definitions for titling and registering a motor vehicle
- What you will find is that there are different definitions for various functions

Vehicle Tax Classes

Tax Class A 42-3-106(2)(a), C.R.S. (see Page 5)	Tax Class B 42-3-106(2)(b), C.R.S. (see Page 6)	Tax Class C 42-3-106(2)(c), C.R.S. (see Page 7)	Tax Class D 42-3-106(2)(d), C.R.S. (see Page 8)	Tax Class F 42-3-106(2)(e), C.R.S. (see Page 9)	No Tax Class (see Page 10)
Every motor vehicle, truck, laden or unladen truck tractor, trailer, and semi trailer used in the business of transporting persons or property over any public highway in this state as an interstate commercial carrier for which an application is made for apportioned registration, regardless of base jurisdiction Example: Commercial Trucks, Truck Tractors, Semi Trailers Over 2,000 Pounds	Every truck, laden or unladen truck tractor, trailer, and semi trailer used for the purpose of transporting property over any public highway in this state and not included in Class A Example: Ford F150, Dodge Ram	Every motor vehicle not included in Class A or Class B Example: Chevy Volt, Toyota Camry, Harley Davidson, Fleetwood RV	Every utility trailer, camper trailer, multipurpose trailer, and trailer coach Example: Coachman, Jayco, Camper Trailer, Utility Trailer 2,000 Pounds and Under	Every item of special mobile machinery, except power takeoff equipment, that is required to be registered Example: Road graders, Skid Steer, Sign boards	Vehicles that are specified in Colorado Revised Statute as being exempt from one of the tax classes Example: Low Power Scooter, Golf Car, Implements of Husbandry

Vehicle Tax Classes

Tax Class A 42-3-106(2)(a), C.R.S. (see Page 5)	Tax Class B 42-3-106(2)(b), C.R.S. (see Page 6)	Tax Class C 42-3-106(2)(c), C.R.S. (see Page 7)	Tax Class D 42-3-106(2)(d), C.R.S. (see Page 8)	Tax Class F 42-3-106(2)(e), C.R.S. (see Page 9)	No Tax Class (see Page 10)
<p>Taxable Value: -Equal to or greater than 16,000 lbs - Actual Purchase Price -Less than 16,000 lbs - 75% MSRP</p> <p>Specific Ownership Tax: -Year 1 - 2.1% of taxable value -Year 2 - 1.5% of taxable value -Year 3 - 1.2% of taxable value -Year 4 - 0.9% of taxable value -Years 5 to 9 - .45% of taxable value or \$10.00 whichever is greater -Year 10 and greater - \$3 / \$4</p>	<p>Taxable Value: -Equal to or greater than 16,000 lbs - Actual Purchase Price -Less than 16,000 lbs - 75% MSRP</p> <p>Specific Ownership Tax: -Year 1 - 2.1% of taxable value -Year 2 - 1.5% of taxable value -Year 3 - 1.2% of taxable value -Year 4 - 0.9% of taxable value -Years 5 to 9 - .45% of taxable value or \$10.00 whichever is greater -Year 10 and greater - \$2 / \$3</p>	<p>Taxable Value: -85% MSRP</p> <p>Specific Ownership Tax: -Year 1 - 2.1% of taxable value -Year 2 - 1.5% of taxable value -Year 3 - 1.2% of taxable value -Year 4 - 0.9% of taxable value -Years 5 to 9 - .45% of taxable value -Year 10 and greater - \$3</p>	<p>Taxable Value: -85% MSRP</p> <p>Specific Ownership Tax: -Year 1 - 2.1% of taxable value -Year 2 - 1.5% of taxable value -Year 3 - 1.2% of taxable value -Year 4 - 0.9% of taxable value -Years 5 to 9 - .45% of taxable value -Year 10 and greater - .45% of taxable value or \$10 whichever is greater</p>	<p>Taxable Value: -Various - Acquired prior to 1-1-97 Factory list price. If equipment mounted - Factory list price - 75% of original price of equipment. If factory list not available, 75% or original retail delivered price + 75% or original retail delivered price of mounted equipment. Acquired on or after 01-01-97, 85% of MSRP. If equipment mounted - 85% of MSRP + 85% of MSRP of mounted equipment. If MSRP not available, 100% of original retail delivered price. If equipment mounted - 100% of original retail delivered price + 100% of original retail delivered price of mounted equipment.</p>	<p>Taxable Value: -Not defined and/or no statutory authority to title and register</p>

Tax Class A

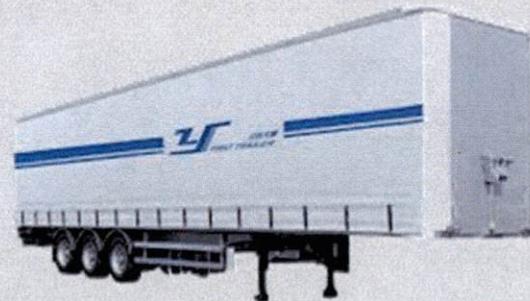
Includes both Vehicles¹ and Motor Vehicles²

Every motor vehicle, truck, laden or unladen truck tractor, trailer, and semi trailer used in the business of transporting persons or property over any public highway in this state as an interstate commercial carrier for which an application is made for apportioned registration, regardless of base jurisdiction

Example:
Commercial Trucks,
Truck Tractors, Semi
Trailers Over 2,000
Pounds

Taxable Value:
-Equal to or greater than 16,000 lbs - Actual Purchase Price
-Less than 16,000 lbs - 75% MSRP

Specific Ownership Tax:
-Year 1 - 2.1% of taxable value
-Year 2 - 1.5% of taxable value
-Year 3 - 1.2% of taxable value
-Year 4 - 0.9% of taxable value
-Years 5 to 9 - .45% of taxable value or \$10.00 whichever is greater
-Year 10 and greater - \$3 / \$4



Tax Class B

Includes both Vehicles¹ and Motor Vehicles²

Every truck, laden or unladen truck tractor, trailer, and semi trailer used for the purpose of transporting property over any public highway in this state and not included in Class A

Example:
Ford F150, Dodge
Ram

Taxable Value:
-Equal to or greater than 16,000 lbs - Actual Purchase Price
-Less than 16,000 lbs - 75% MSRP

Specific Ownership Tax:

-Year 1 - 2.1% of taxable value
-Year 2 - 1.5% of taxable value
-Year 3 - 1.2% of taxable value
-Year 4 - 0.9% of taxable value
-Years 5 to 9 - .45% of taxable value or \$10.00 whichever is greater
-Year 10 and greater - \$2 / \$3



Tax Class C

Includes only Motor Vehicles²

Every motor vehicle not included in Class A or Class B

Taxable Value:
-85% MSRP

Specific Ownership Tax:

- Year 1 - 2.1% of taxable value
- Year 2 - 1.5% of taxable value
- Year 3 - 1.2% of taxable value
- Year 4 - 0.9% of taxable value
- Years 5 to 9 - .45% of taxable value
- Year 10 and greater - \$3

Example:
Chevy Volt, Toyota Camry, Harley Davidson, Fleetwood RV



Tax Class D

Includes only Vehicles¹

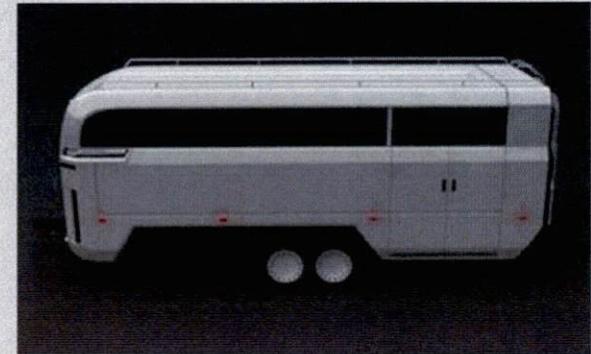
Every utility trailer, camper trailer, multipurpose trailer, and trailer coach

Taxable Value:
-85% MSRP

Specific Ownership Tax:

- Year 1 - 2.1% of taxable value
- Year 2 - 1.5% of taxable value
- Year 3 - 1.2% of taxable value
- Year 4 - 0.9% of taxable value
- Years 5 to 9 - .45% of taxable value
- Year 10 and greater - .45% of taxable value or \$10 whichever is greater

Example:
Coachman, Jayco,
Camper Trailer,
Utility Trailer 2,000
Pounds and Under



Tax Class F

Includes both Vehicles¹ and Motor Vehicles²

Every item of special mobile machinery, except power takeoff equipment, that is required to be registered

Example:
Road graders, Skid Steer, Sign boards

Taxable Value:

-Various - Acquired prior to 1-1-97 Factory list price. If equipment mounted - Factory list price - 75% of original price of equipment. If factory list not available, 75% of original retail delivered price + 75% of original retail delivered price of mounted equipment. Acquired on or after 01-01-97, 85% of MSRP. If equipment mounted - 85% of MSRP + 85% of MSRP of mounted equipment. If MSRP not available, 100% of original retail delivered price. If equipment mounted - 100% of original retail delivered price + 100% of original retail delivered price of mounted equipment.



No Tax Class

Exempt from the statutory definition of Vehicles¹ and Motor Vehicles²

Vehicles that are specified in Colorado Revised Statute as being exempt from one of the tax classes

Taxable Value:
-Not defined and/or no statutory authority to title and register

Example:
Low Power Scooter,
Golf Car,
Implements of
Husbandry



Low Power Scooter statutorily exempt from being a motor vehicle in C.R.S. 42-1-102(58) Motor Vehicle definition. Has its own definition in C.R.S. 42-1-102(48.5)



Golf Car not designed primarily for operation on roadways. Golf Car defined in C.R.S. 42-1-102(39.5)



Implement of Husbandry statutorily exempt from being a vehicle in C.R.S. 42-1-102(112) Vehicle definition. Has its own definition in C.R.S. 42-1-102(44)

Definitions

Term	Titling	Registration	Federal	AAMVA Recommend
Motor Vehicle ²	<p>42-6-102(10), C.R.S.</p> <p>any self-propelled vehicle that is designed primarily for travel on the public highways and is generally and commonly used to transport persons and property over the public highways, including trailers, semitrailers, and trailer coaches, without motive power</p> <p>“Motor vehicle” does not include the following:</p> <p>(a) A low-power scooter, as defined in section 42-1-102;</p> <p>(b) A vehicle that operates only upon rails or tracks laid in place on the ground or that travels through the air or that derives its motive power from overhead electric lines;</p> <p>(c) A farm tractor, farm trailer, and any other machines and tools used in the production, harvesting, and care of farm products; or</p> <p>(d) Special mobile machinery or industrial machinery not designed primarily for highway transportation</p>	<p>42-6-102(58), C.R.S.</p> <p>any self-propelled vehicle that is designed primarily for travel on the public highways and that is generally and commonly used to transport persons and property over the public highways or a low-speed electric vehicle; except that the term does not include low-power scooters, wheelchairs, or vehicles moved solely by human power. For the purposes of the offenses described in sections 42-2-128, 42-4-1301, 42-4-1301.1, and 42-4-1401 for farm tractors and off-highway vehicles, as defined in section 33-14.5-101 (3), C.R.S., operated on streets and highways, “motor vehicle” includes a farm tractor or an off-highway vehicle that is not otherwise classified as a motor vehicle. For the purposes of sections 42-2-127, 42-2-127.7, 42-2-128, 42-2-138, 42-2-206, 42-4-1301, and 42-4-1301.1, “motor vehicle” includes a low-power scooter</p>	<p>49 USC 30102</p> <p>a vehicle driven or drawn by mechanical power and manufactured primarily for use on public street, roads, and highways, but does not include a vehicle operated only on a rail line</p>	<p>N/A</p> <p>a vehicle driven or drawn by mechanical power and manufactured primarily for use on public street, roads, and highways, but does not include a vehicle operated only on a rail line</p>

Definitions (cont.)

Term	Emissions	Collectors	Insurance
Motor Vehicle ²	<p>42-4-304(18), C.R.S.</p> <p>as applicable to the AIR program, includes only a motor vehicle that is operated with four wheels or more on the ground, self-propelled by a spark-ignited engine burning gasoline, gasoline blends, gaseous fuel, blends of liquid gasoline and gaseous fuels, alcohol, alcohol blends, or other similar fuels, having a personal property classification of A, B, or C pursuant to section 42-3-106, and for which registration in this state is required for operation on the public roads and highways or which motor vehicle is owned or operated or both by a nonresident who meets the requirements set forth in section 42-4-310 (1) (c). "Motor vehicle" does not include kit vehicles; vehicles registered pursuant to section 42-12-301 or 42-3-306 (4); vehicles registered pursuant to section 42-12-401 that are of model year 1975 or earlier or that have two-stroke cycle engines manufactured prior to 1980; or vehicles registered as street-roads pursuant to section 42-3-201</p>	<p>42-12-101(10), C.R.S.</p> <p>self-propelled vehicle designed for operation on the highway and not running on rails</p>	<p>10-4-601(6), C.R.S.</p> <p>a "motor vehicle" and a "low-power scooter", as both terms are defined in section 42-1-102, C.R.S.; except that "motor vehicle" does not include a toy vehicle, snowmobile, off-highway vehicle, or vehicle designed primarily for use on rails</p>

Definitions (cont.)

Term	Titling	Registration	Federal	AAMVA Recommend
Vehicle ¹	42-6-102(23), C.R.S. any motor vehicle as defined in subsection (10) of this section	42-6-102(112), C.R.S. means a device that is capable of moving itself, or of being moved, from place to place upon wheels or endless tracks. "Vehicle" includes, without limitation, a bicycle, electrical assisted bicycle, or EPAMD, but does not include a wheelchair, off-highway vehicle, snowmobile, farm tractor, or implement of husbandry designed primarily or exclusively for use and used in agricultural operations or any device moved exclusively over stationary rails or tracks or designed to move primarily through the air	N/A N/A	N/A N/A

Term	Emissions	Collectors	Insurance
Vehicle ¹	42-4-304(23.5), C.R.S. a motor vehicle as defined in subsection (18) of this section	42-12-101(15), C.R.S. a motor vehicle required to have a certificate of title under part 1 of article 6 of this title but does not include commercial vehicles	N/A None

Definitions (cont.)

Other Definitions of Vehicles/Motor Vehicles (85 Total)	Process	C.R.S.	Other Definitions of Vehicles/Motor Vehicles (85 Total)	Process	C.R.S.
All-Terrain Vehicle	Title	42-6-102(1)	Off-Highway Vehicle	Title	42-6-102(11.5)
Appurtenance	Registration	42-1-102(4.5)	Off-Highway Vehicle	Registration	42-1-102(63)
Authorized Emergency Vehicle	Registration	42-1-102(6)	Parts Car	Collector	42-12-101(11)
Authorized Service Vehicle	Registration	42-1-102(7)	Patrol Wagons	Registration	42-3-104(3)(c)
Autocycle	Registration	42-1-102(7.5)	Plug-In Electric Vehicle	Registration	42-3-304(25)(c)
Automobile	Registration	42-1-102(8)	Pole, Pipe Trailer or Dolly	Registration	42-1-102(71)
Bicycle	Registration	42-1-102(10)	Police Ambulances	Registration	42-3-104(3)(c)
Bus Adult	Registration	42-3-306(2)(c)(I)	Power Takeoff Equipment	Registration	42-1-102(72.2)
Bus Juvenile	Registration	42-3-306(2)(c)(II)	Railroad Train	Registration	42-1-102(98)(b)
Camper Coach	Registration	42-1-102(13)	Rebuilt Vehicle	Collector	42-12-101(12)
Camper Trailer	Registration	42-1-102(14)	Reconstructed Vehicle	Registration	42-1-102(77)
Collector's Item	Collector	42-12-101(2)	Recreational Vehicle	Dealers	12-6-102(16.5)
Commercial Vehicle	Registration	42-1-102(17.5)	Road Tractor	Registration	42-1-102(84)
Commercial Vehicle	Collector	42-12-101(3)	Saddlemount Combination	Registration	42-1-102(86)
Electric Personal Assistive Mobility Device	Registration	42-1-102(28.7)	Salvage Vehicle	Title	42-6-102(17)
Electrical Assisted Bicycle	Registration	42-1-102(28.5)	School Bus	Registration	42-1-102(88)
Farm Tractor	Registration	42-1-102(33)	School Vehicle	Registration	42-1-102(88.5)
Fire Truck	Dealers	12-6-102(9.5)	Semitrailer	Registration	42-1-102(89)
Fire-Fighting Vehicle	Registration	42-3-104(3)(b)	Snowmobile	Title	42-6-102(18.5)
Fleet Vehicle	Registration	42-1-102(36)	Snowplow	Registration	42-1-102(91)
Foreign Vehicle	Registration	42-1-102(37)	Special Mobile Machinery	Registration	42-1-102(93.5)
Fullmount	Registration	42-1-102(38)	Special Use Vehicle	Registration	42-3-304(9)
Golf Car	Registration	42-1-102(39.5)	Specially Constructed Vehicle	Registration	42-1-102(93)
Government Vehicles	Registration	42-3-104(1), (2) & (4)	Steam and Electric Trains	Registration	42-1-102(98)
Implement of Husbandry	Registration	42-1-102(44)	Stinger-Steered	Registration	42-1-102(99)
Kit Vehicle	Title	42-6-102(6.5)	Street Rod Vehicle	Title	42-6-102(20)
Kit Vehicle	Registration	42-1-102(45.5)	Street Rod Vehicle	Registration	42-1-102(101.5)
Low-Power Scooter	Registration	42-1-102(48.5)	Streetcar	Registration	42-1-102(98)(c)
Low-Speed Electric Vehicle	Registration	42-1-102(48.6)	Street-Rod Vehicle	Collector	42-12-101(14)
Military Vehicle	Registration	42-1-102(52.5)	Toy Vehicle	Registration	42-1-102(103.5)
Motor Home	Registration	42-1-102(57)	Trailer	Registration	42-1-102(105)
Motor Vehicle	Title	42-6-102(10)	Trailer Coach	Registration	42-1-102(106)
Motor Vehicle	Registration	42-1-102(58)	Truck	Registration	42-1-102(108)
Motor Vehicle	Emissions	42-4-304(18)	Truck Tractor - Laden	Registration	42-1-102(109)
Motor Vehicle	Collector	42-12-101(10)	Truck Tractor - Unladen	Registration	42-1-102(109.5)
Motor Vehicle	Dealers	12-6-102(12)	Used Vehicle	Title	42-6-102(22)
Motorcycle	Registration	42-1-102(55)	Used Vehicle	Registration	42-1-102(110)
Mounted Equipment	Registration	42-1-102(60)	Utility Trailer	Registration	42-1-102(111)
Multipurpose Trailer	Registration	42-1-102(60.3)	Vehicle	Title	42-6-102(23)
New Vehicle	Title	42-6-102(11)	Vehicle	Registration	42-1-102(112)
Noncommercial or Recreational Vehicle	Registration	42-1-102(61)	Vehicle	Emissions	42-4-304(23.5)
Non-Repairable	Title	42-6-102(11.2)	Vehicle	Collector	42-12-101(15)
			Wheelchair	Registration	42-1-102(113)

Title

- Owner provides documents from dealer or manufacturer that direct DMV which vehicle type to title the vehicle as
- If vehicle type is not designated by manufacturer and/or does not meet any Colorado statutory definition of a vehicle DMV completes unconventional vehicle processes

Registration

- DMV first determines the Tax Class of the vehicle
- Once Tax Class is determined DMV determines vehicle type by matching to a statutory definition
- If vehicle type is not statutory defined DMV completes unconventional vehicle processes

Tax, Fees & Plates

- Specific Ownership Tax is based by Tax Class
- Registration Fees are based by vehicle type, fuel type and registration address
- Exemption of taxes and fees is determined by vehicle type (i.e. Government Vehicle) or owner qualifications (i.e., Disabled Veteran)
- License plate is limited by vehicle type then owner qualifications

Unconventional Vehicle*

- DMV contacts National Highway Safety Transportation Administration (NHSTA) and determines if the vehicle has passed all federal vehicle and safety requirements
- DMV contacts American Association of Motor Vehicle Administrators (AAMVA) and reviews their recommendations and best practices
- If DMV is able to make a determination based on NHSTA and AAMVA then DMV makes best vehicle type determination to title and register, if not the vehicle is not titled or registered until statute change or NHSTA ruling

*Unconventional Vehicle – Non-conforming vehicles that do not meet U.S. Federal Motor Vehicle Safety Standards for on-highway operation and registration (e.g., kit cars, hot shot rigs, recreational vehicle conversions, and mini-trucks (AAMVA UVWG Unconventional Vehicle Best Practices November 2012))

Contact Information

- For more information, please contact the Department's Legislative Liaison
 - Saskia Young
 - saskia.young@state.co.us
 - 303.866.2819

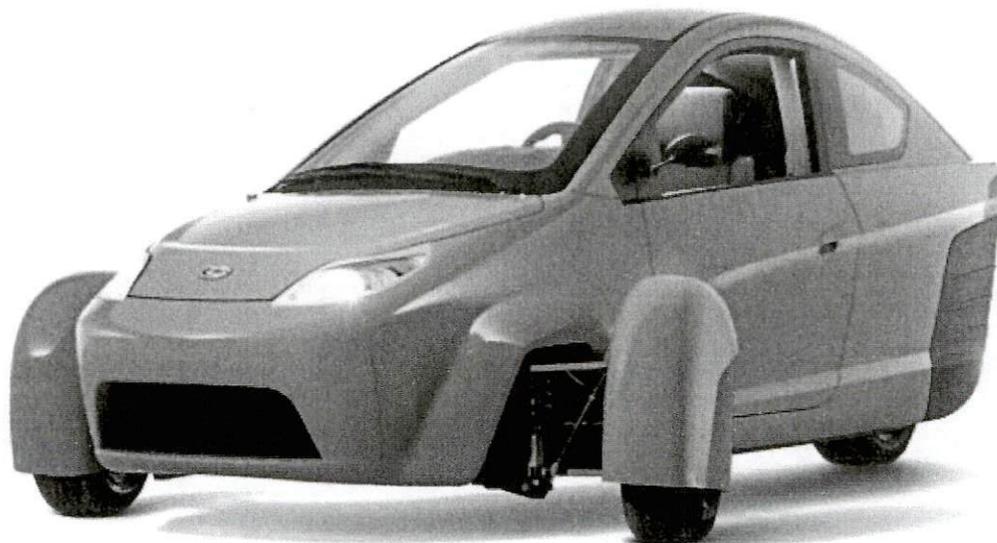


Tax Class	C.R.S.	Description	Weight	Taxable Value	SOT	SOT	SOT	SOT	SOT	SOT	SOT	SOT	SOT	SOT
					Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10 +
A	42-3-107(2)	Every motor vehicle, truck, laden or unladen truck tractor, trailer, and semitrailer used in the business of transporting persons or property over any public highway in this state as an interstate commercial carrier for which an application is made for apportioned registration regardless of base jurisdiction.	Equal to or greater than 16,000 pounds	Actual Purchase Price	2.1% of taxable value	1.5% of taxable value	1.2% of taxable value	0.9% of taxable value	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	\$3
A	42-3-107(2)		Less than 16,000 pounds	75% MSRP	2.1% of taxable value	1.5% of taxable value	1.2% of taxable value	0.9% of taxable value	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	\$4
A	42-3-107(2)	Every Class A personal property greater than 16,000 pounds declared empty vehicle weight that meets the definition of Category 4, Category 4A, Category 4B, Category 4C, Category 7, Category 7A, and Category 9 trucks as defined in section 39-22-516.8, C.R.S	Greater than 16,000 pounds	75% Actual Purchase Prices	2.1% of taxable value	1.5% of taxable value	1.2% of taxable value	0.9% of taxable value	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	\$4
B	42-3-107(8)	Every truck, laden or unladen truck tractor, trailer, and semitrailer used for the purpose of transporting property over any public highway in this state and not included in Class A; except that multipurpose trailers shall be Class D. Includes Utility Trailers 2,001 pounds or greater.	Equal to or greater than 16,000 pounds	Actual Purchase Price	2.1% of taxable value	1.5% of taxable value	1.2% of taxable value	0.9% of taxable value	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	\$2
B	42-3-107(8)		Less than 16,000 pounds	75% MSRP	2.1% of taxable value	1.5% of taxable value	1.2% of taxable value	0.9% of taxable value	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	\$3
B	42-3-107(8)	Every Class B personal property greater than 16,000 pounds declared empty vehicle weight that meets the definition of Category 4, Category 4A, Category 4B, Category 4C, Category 7, Category 7A, and Category 9 trucks as defined in section 39-22-516.8, C.R.S	Greater than 16,000 pounds	75% Actual Purchase Prices	2.1% of taxable value	1.5% of taxable value	1.2% of taxable value	0.9% of taxable value	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	.45% of taxable value or \$10 whichever is greater	\$3

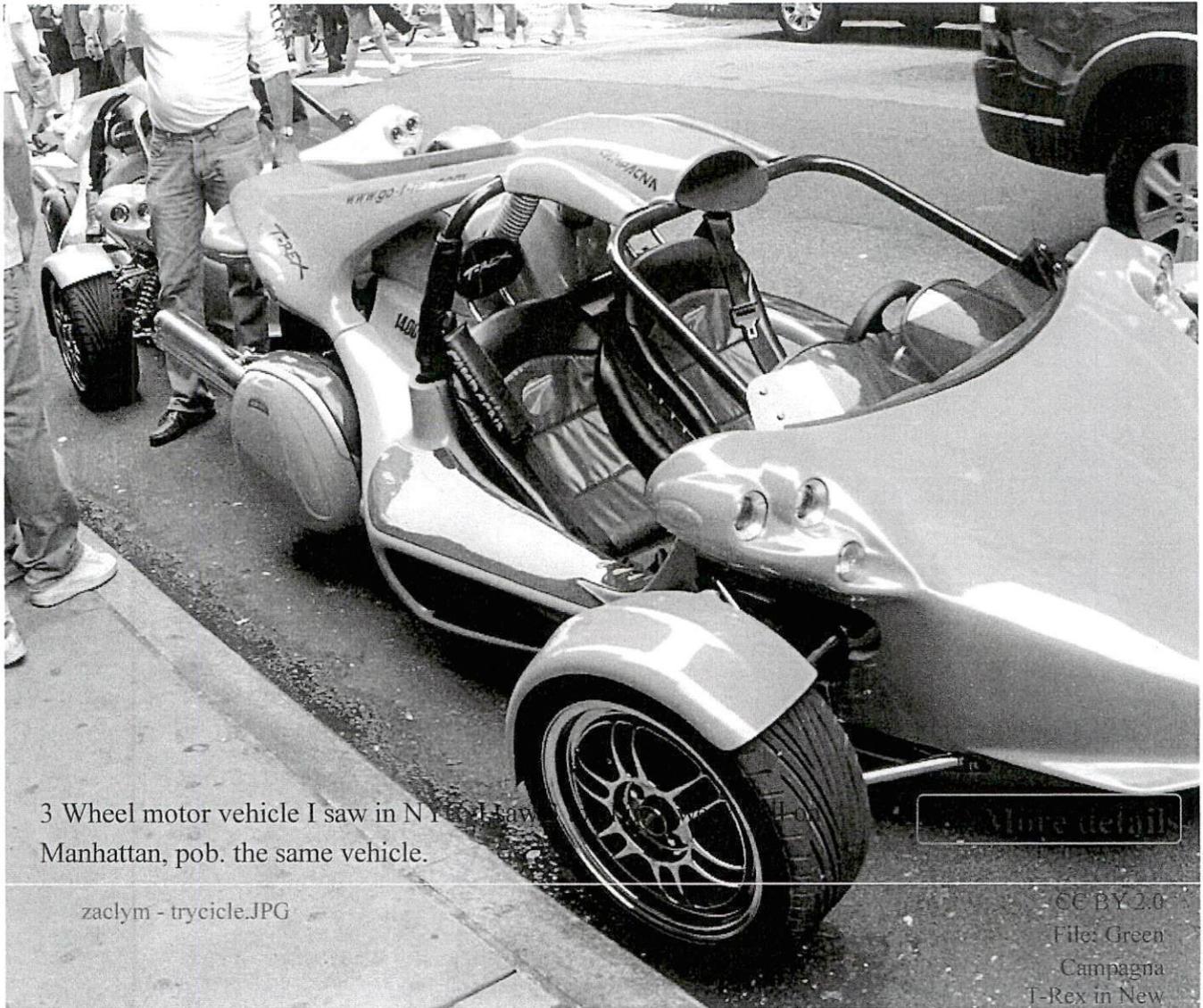
TOYOTA'S I-ROAD



Toyota's Elio



- AMERICAN MADE
- UP TO 84 MPG Hwy (49 city)
- 1228 lbs
- ABOUT \$6800



3 Wheel motor vehicle I saw in NYC I saw in Manhattan, pob. the same vehicle.

zaclym - tricycle.JPG

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Accessible Taxi Cab Needs For Metro Denver

Tuesday, July 07, 2015

How many people are we talking about?

3.3 million wheelchair users in the U.S.

2 million new users annually with
growth in wheelchair market of 2.5%
each year from 2009-2014

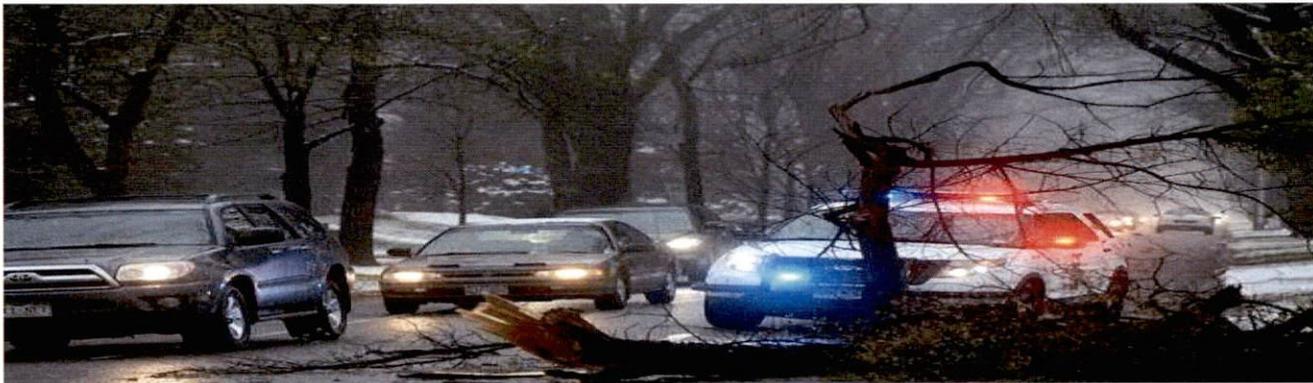
25,103 imputed in Denver County
alone

NYC has committed to have 50% access by 2018

Denver is one of top 5 cities for wheelchair living

Winter Park is one of the top three tourist
destinations for wheelchair users

When might one want to use a taxi



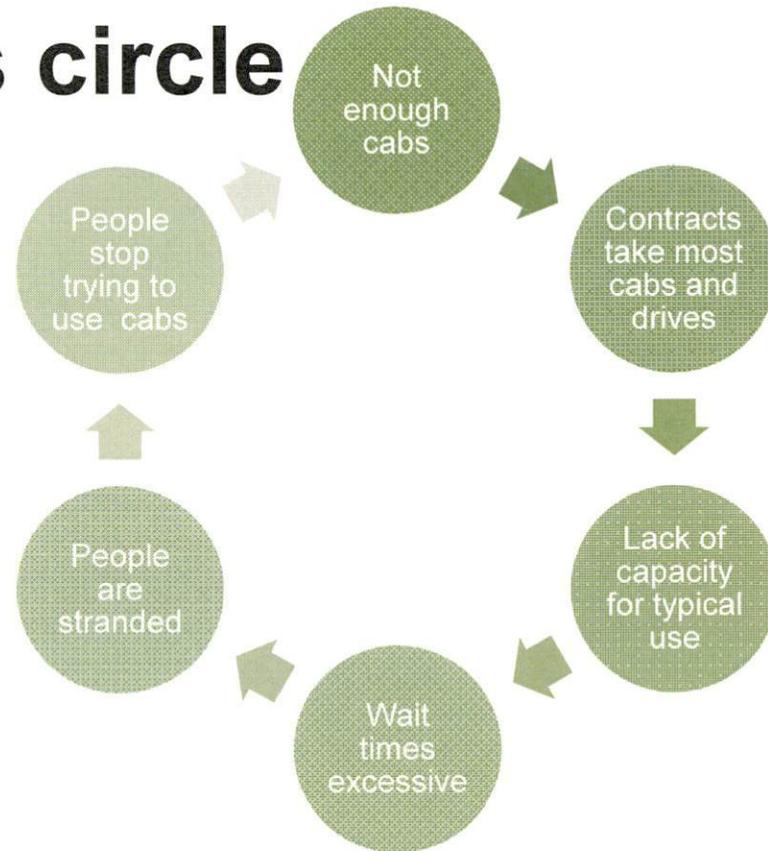
We conducted a survey in Denver

137 responses over 3 weeks

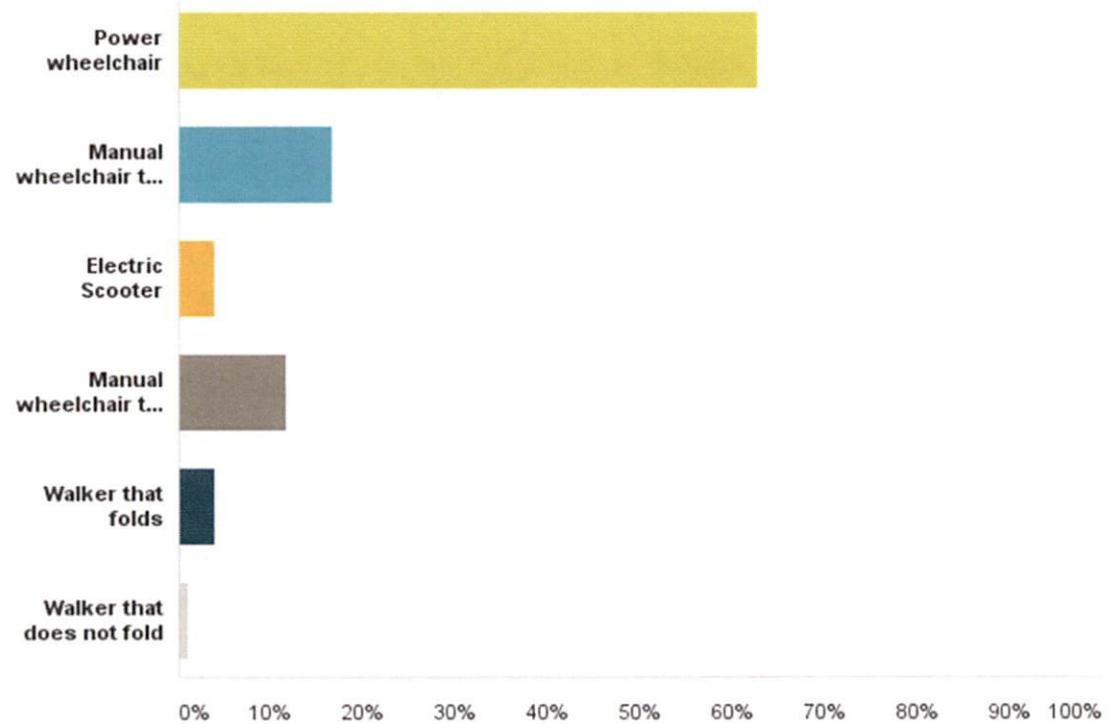
Wheelchair users in Denver want to use taxicabs and other forms of demand/responsive transportation

The system we have in place is not workable because there are not enough wheelchair accessible vehicles to meet the need

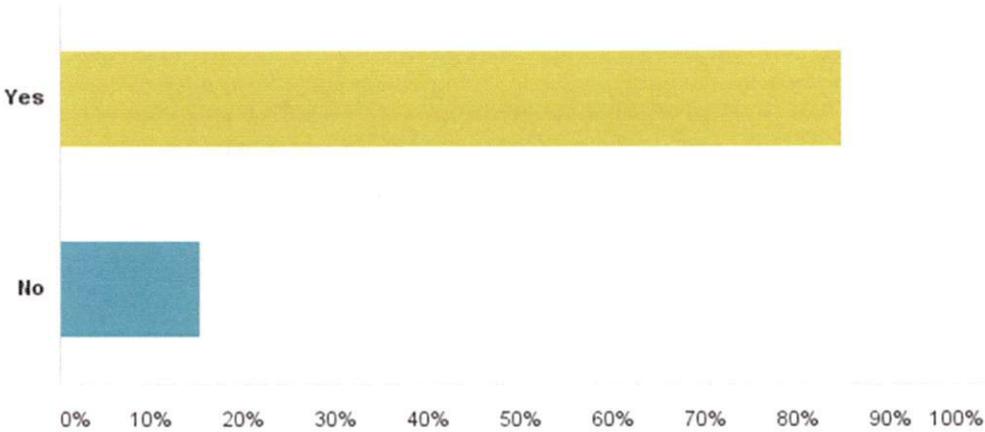
We found a vicious circle



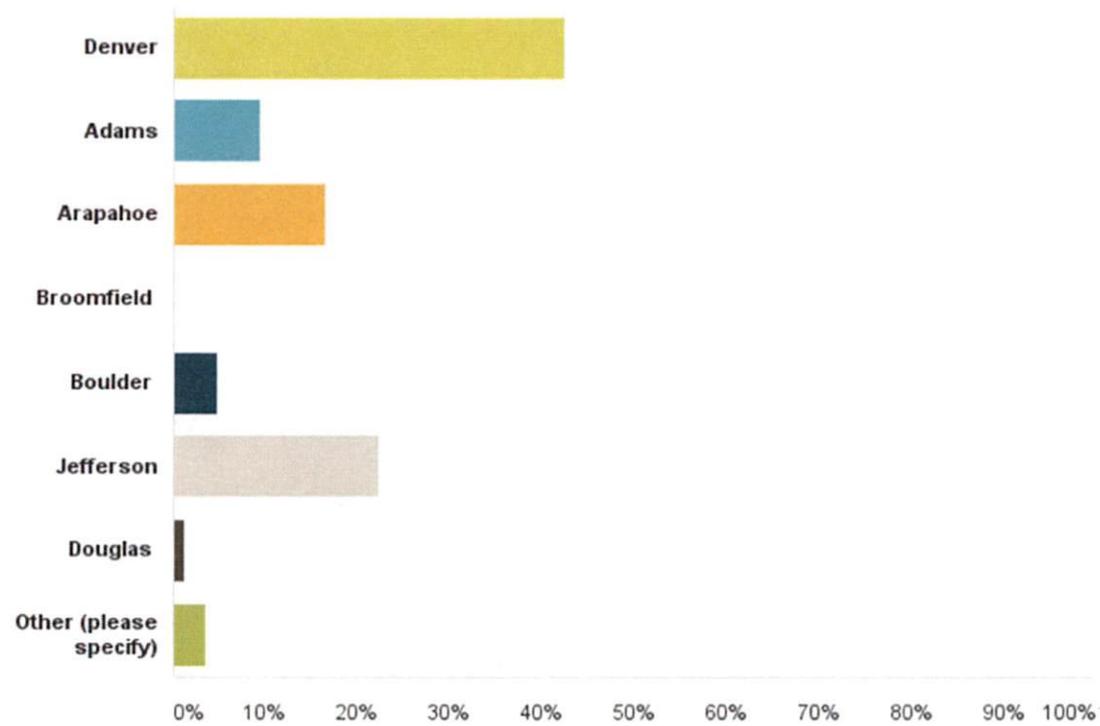
Most used power wheelchairs for mobility



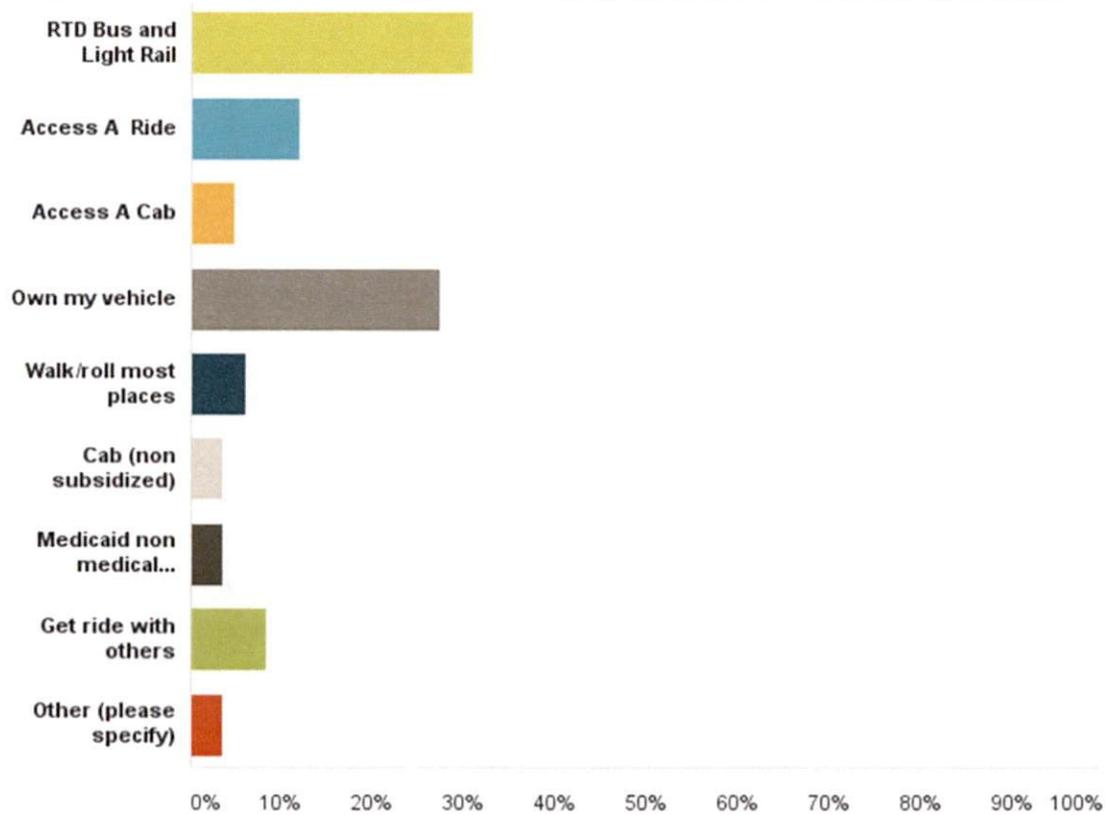
Most lived in the Denver area



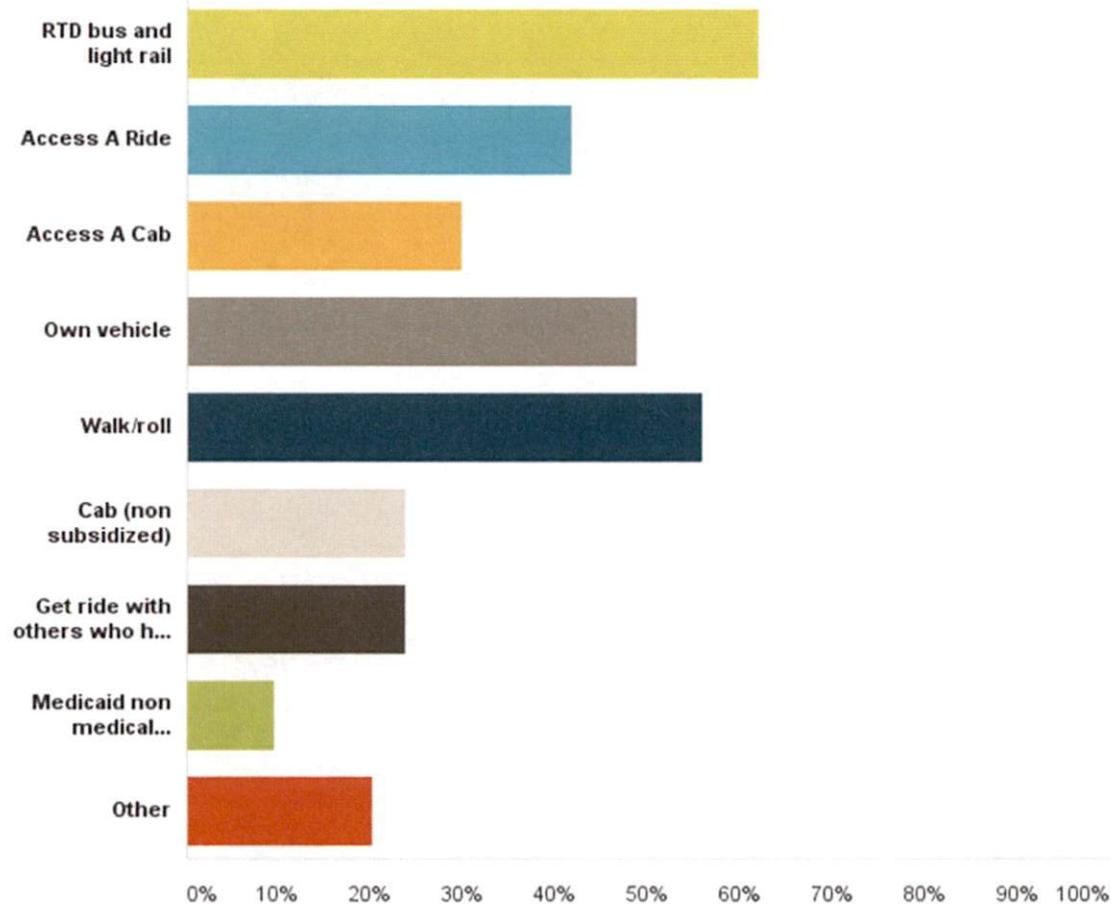
Most lived in Denver or Jefferson Counties---but quite a few in Arapahoe



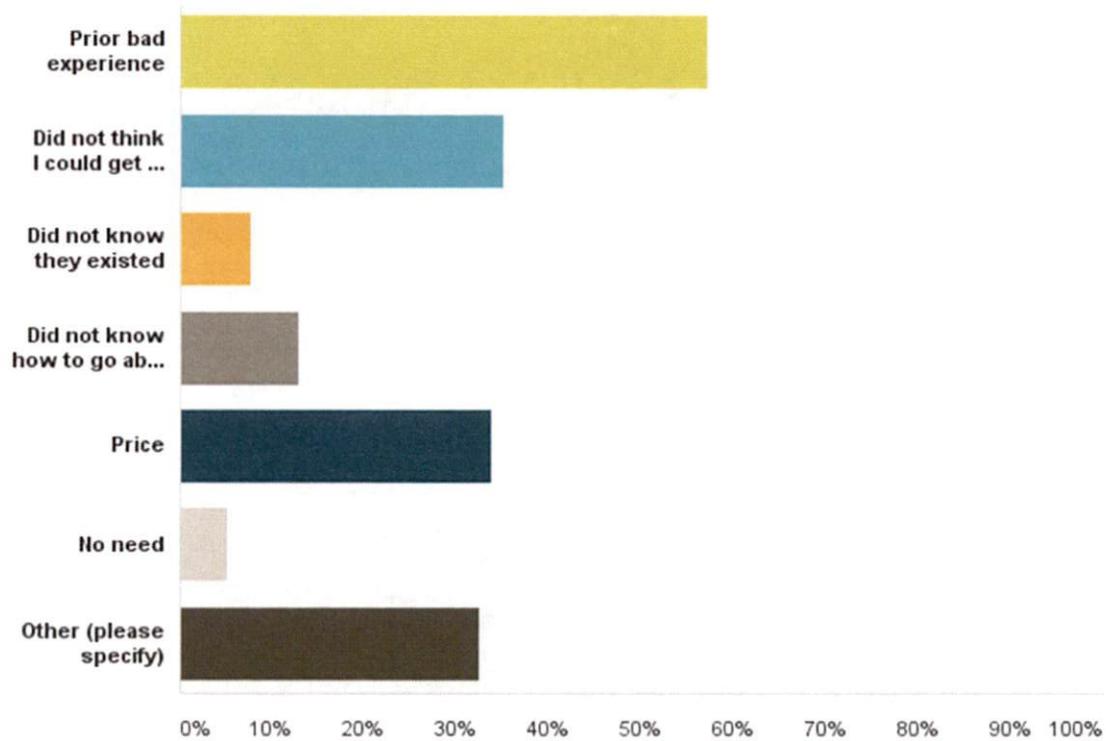
Most either drive or use RTD for daily transportation



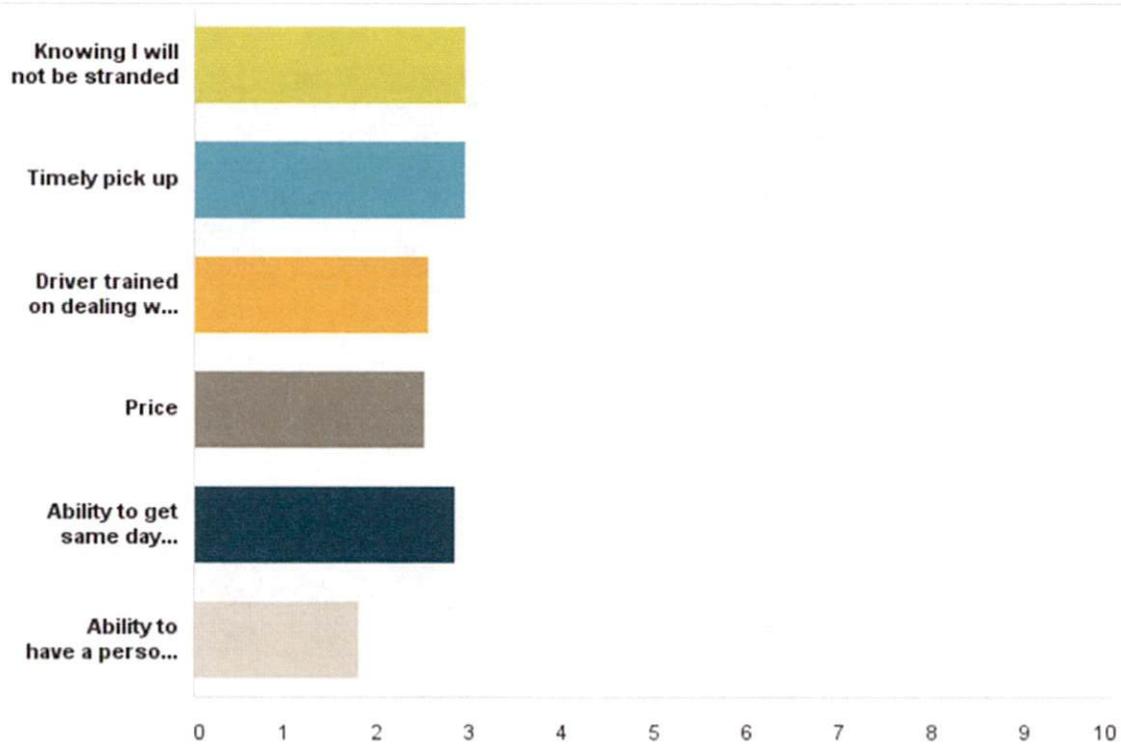
But use a variety of modes of transportation –over the past six months



Prior bad experience is main reason for NOT using a cab

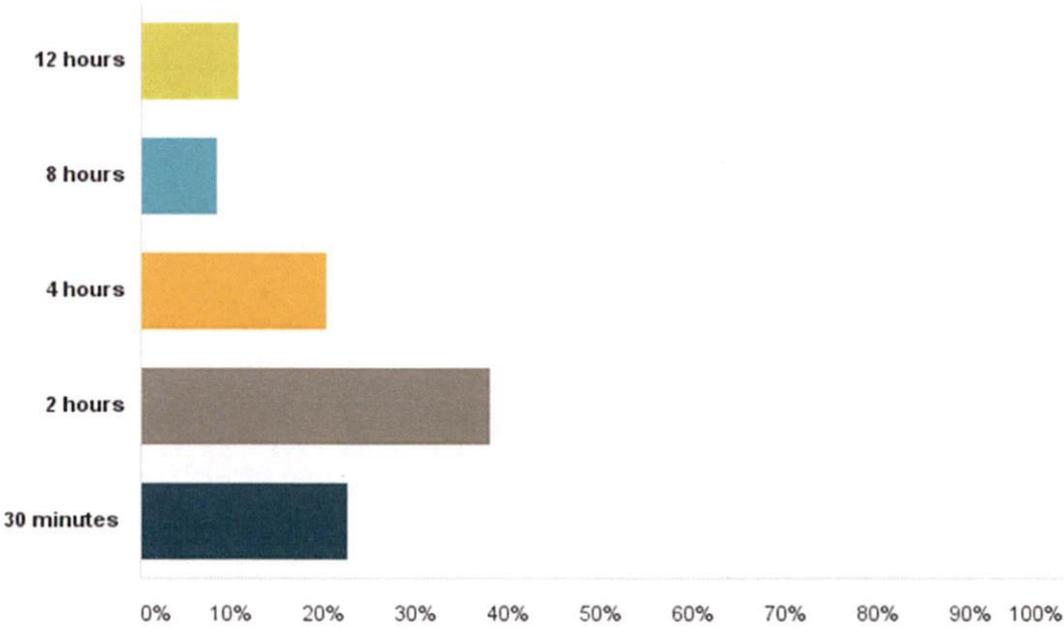


People need to know they will not be stranded

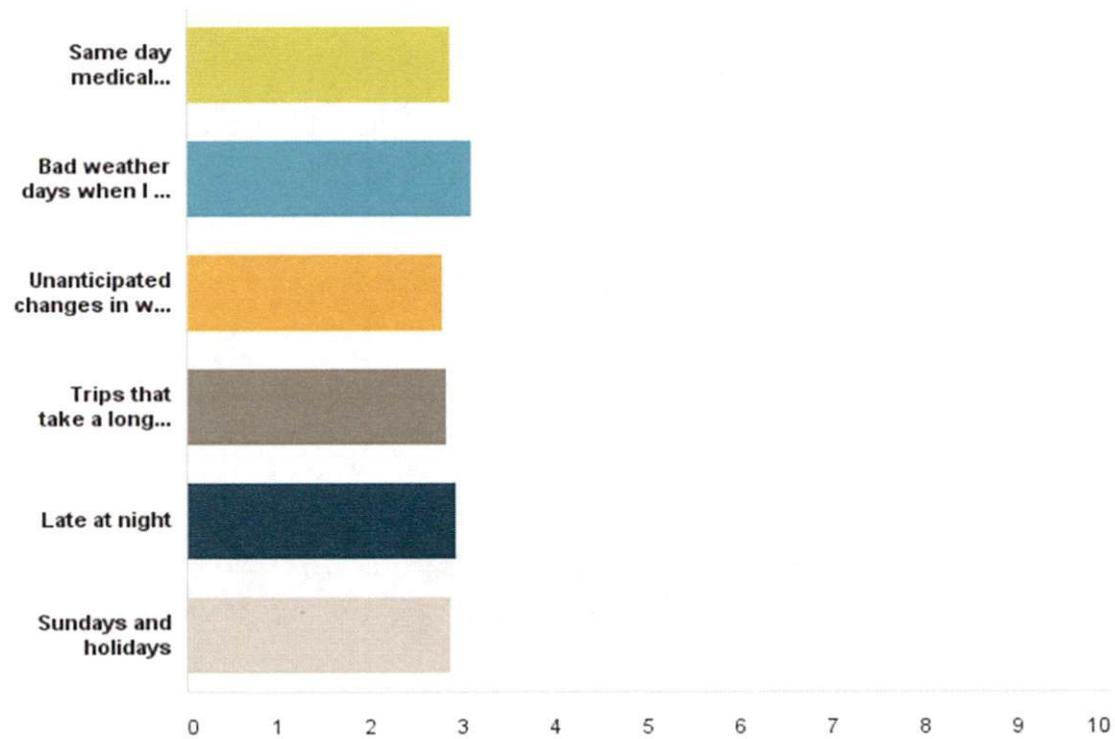


If they are going to pay for a taxi they want same day service

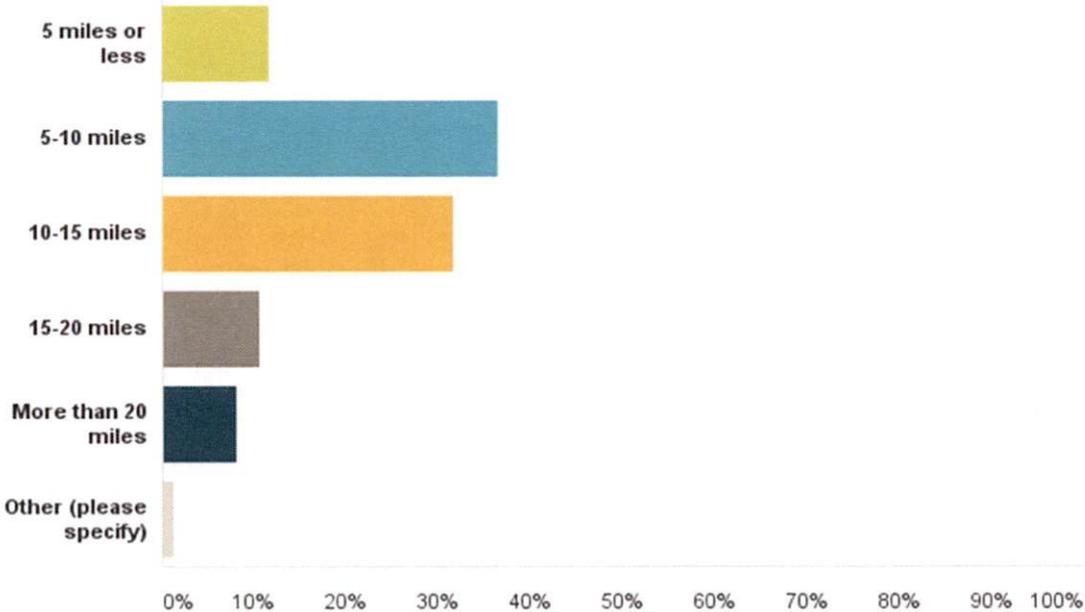
Most people are willing to call up to 2 hours ahead of time



People would use cabs for the same reasons others do

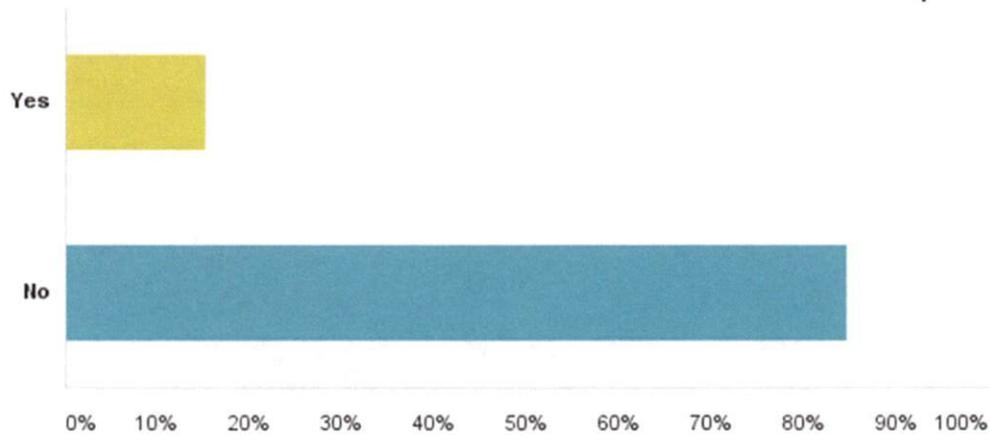


Most trips are between 5-15 miles



Most do not use access a cab

Access a cab is a service of Access A Ride—which is paratransit.



Access A Cab

Is only for access a ride customers

Paratransit is only for those who due to their disability are UNABLE to use the fixed route bus—with our without accommodations.

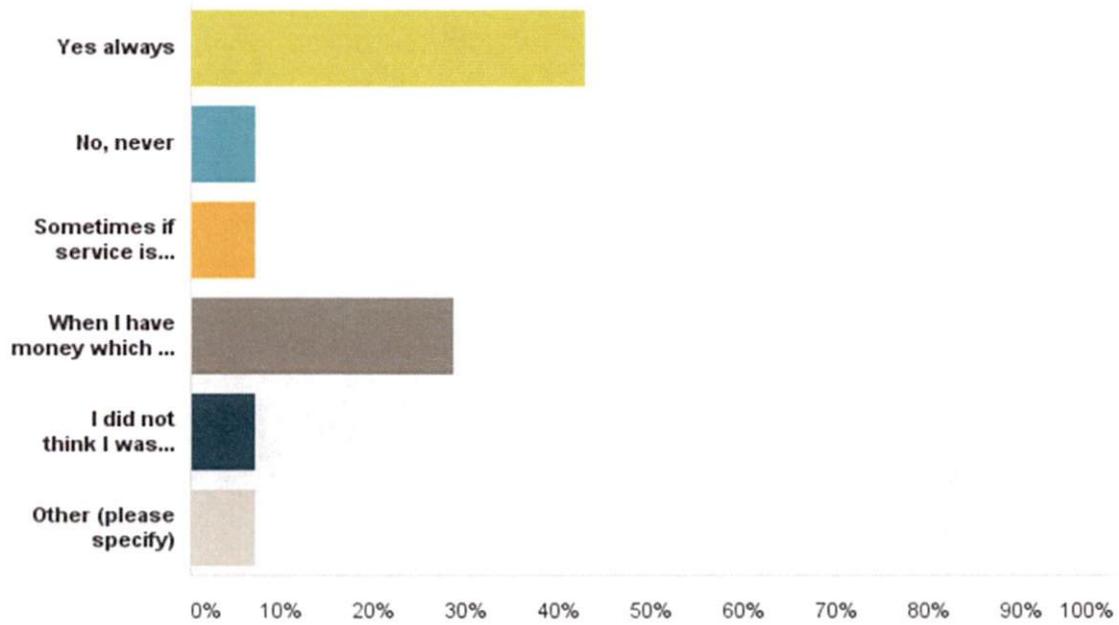
Some people may qualify under some conditions –such as temperature above or below a certain degree.

Most do not qualify

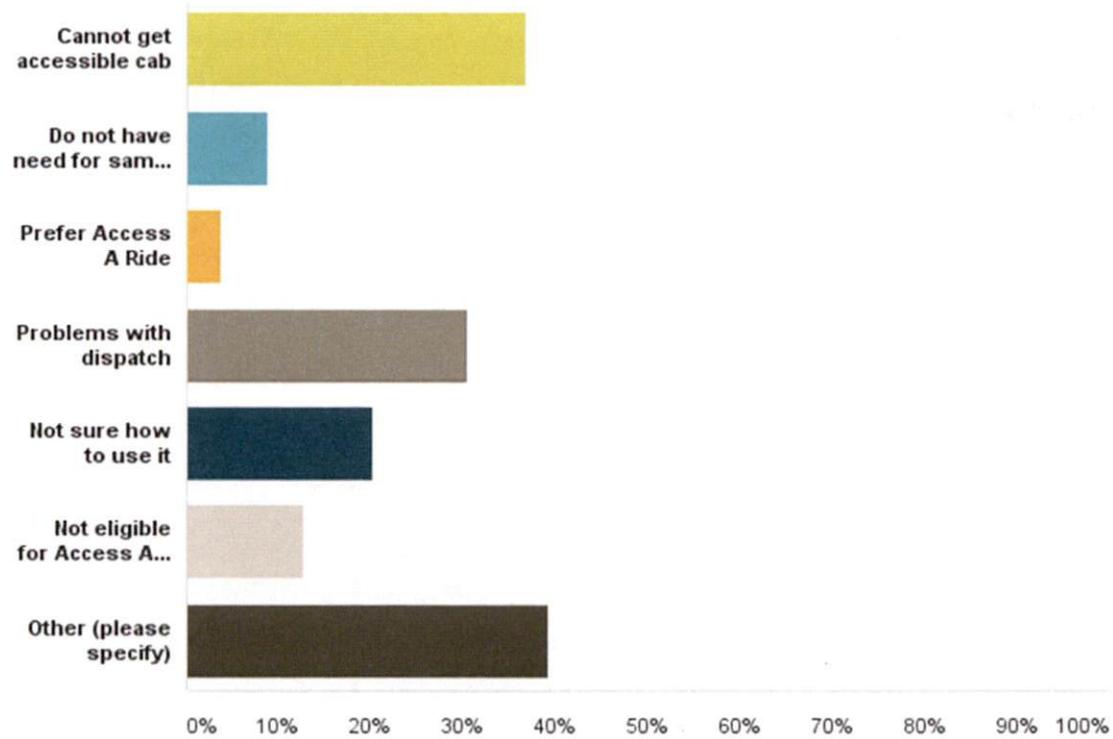
Many access a ride clients do not use wheelchairs.

Thousands of wheelchair users in the metro area are not eligible for paratransit --

Most customers do tip when using Access A Cab



Lack of accessible vehicles main reason for not using Access A Cab



Fewer than 50 vehicles

Medicaid Transportation –
Medical
Non Medical

ACCESS A CAB

**Business
Contracts**

Trip to the store 5 hours under current scenario

9 am call for cab

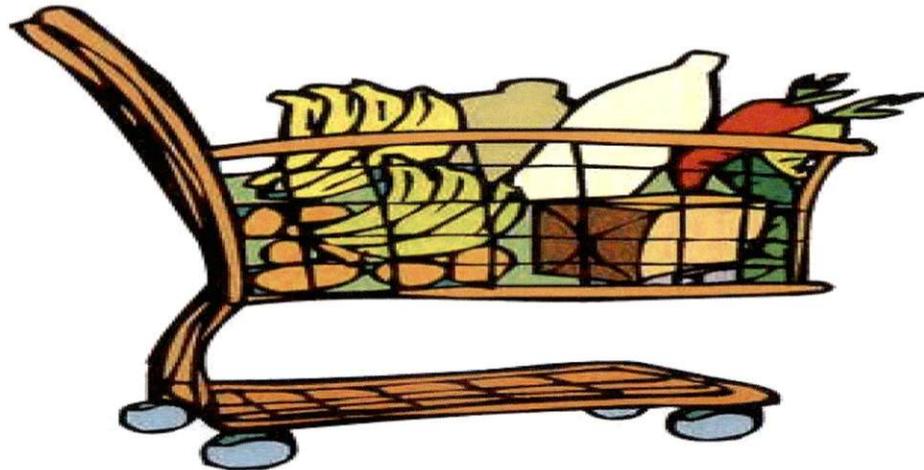
11 am Cab arrives

11:15 am Get to store, call for ride home

11:45 finish shopping

1:30 cab arrives

1:45 return home



Solution



Analysis of Taxicab Deregulation Re-Regulation

Prepared for the
International Taxicab Foundation
3849 Farragut Avenue
Kensington, Maryland 20895

Prepared by
Price Waterhouse
Office of Government Services
Washington, DC

November 8, 1993

\$25 for ITF & ITLA Members
\$50 for Non-Members

© International Taxicab Foundation

Price Waterhouse



8 November, 1993

Mr. Alfred LaGasse
Executive Vice President
International Taxicab Foundation
3849 Farragut Avenue
Kensington, MD 20895

Dear Mr. LaGasse:

We are pleased to submit this final report documenting our findings from an analysis of taxicab regulation and re-regulation that we performed on behalf of the International Taxicab Foundation.

Our findings rest on research methods described in Section 1 of the report, which rely on three data sources: (i) past case studies of taxi deregulation, sponsored by the U.S. Department of Transportation; (ii) taxi fare and license data for individual cities, made available by the International Taxicab and Livery Association; and (iii) telephone surveys of public officials in cities that implemented taxicab deregulation, conducted by Price Waterhouse. Price Waterhouse has not independently audited data from the first two sources, although we have no reason to believe the data have any characteristics that would invalidate our findings.

Our report concludes that the effects of taxi deregulation have ranged from benign to adverse, depending on local markets and conditions. This is a departure from the experience with deregulation in other industries and is influenced by taxi market imperfections that reduce or remove incentives for price and service quality competition. Consequently, we found that most cities that had fully deregulated taxi service have since reverted to some form of control over market entry.

We very much appreciate the assistance provided by you and other members of ITF during this engagement.

Very truly yours,

Price Waterhouse

Analysis of Taxicab Deregulation and Re-Regulation in US Cities

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EXECUTIVE SUMMARY

Taxicab regulation and deregulation refer to opposite ends of a spectrum of government control over taxi services. *Regulation* typically implies government determination of service supply (by limiting taxi licenses), or prices (by setting fixed or maximum fares), or both. *Deregulation*, in contrast, typically implies an absence of government control. Although regulatory choice is not limited to these two extremes, philosophical support for one or the other tends to be the driving force behind changes in public policy.

Since the late 1970s, local governments and the taxi industry have engaged in periodic debate regarding the merits of taxi deregulation. These debates were initially influenced by the deregulation of other prominent industries - airlines, trucking, and telecommunications to name a few. Proponents of taxi deregulation cited several kinds of consumer benefits that were experienced with these other deregulation efforts. These benefits were believed to include more taxi service and faster response times, lower fares, service innovations, and service expansion to under-served neighborhoods. Proponents of taxi regulation argued, in counterpoint, that deregulation would result in poorer service, less safety, less accountability, and less reliability. Because most taxi services in the US were regulated at the time these debates first occurred, there was little empirical evidence to support either argument.

The International Taxicab Foundation engaged Price Waterhouse to analyze and document the experiences with deregulation over the last ten years. Twenty-one cities deregulated taxi services prior to 1983, though no major cities are known to have deregulated since. The short-term effects of deregulation were previously documented in a series of case studies¹ sponsored by the US Department of Transportation, published in 1983 and 1984. The purpose of this report is to add to the record by describing changes in regulatory practices that followed deregulation, and to explore the comparative effects of deregulation over the long term.

It is important for readers to note that Price Waterhouse does not advocate either deregulation or regulation of taxi services. Rather, our purpose is to clarify and compare the effects of deregulation as experienced in a number of metropolitan areas in the US. We trust that this objective rendering of the available facts will assist public decision-makers in their deliberation of the taxi industry regulatory structure.

Short-Term Effects of Deregulation

Deregulation introduced several immediate changes in taxi supply, price, and service quality in the six cities for which detailed case study information is available (see citation above). The experience of these cities generally indicates that the benefits of deregulation were devalued by unanticipated and unattractive side effects:

- *Although the supply of taxi services expanded dramatically, only marginal service improvements were experienced by consumers.* Within a year of deregulation, the supply of taxi services increased an average of 23%. Because most new entrants were independent operators and small fleet owners with limited

¹ Berkeley, Oakland, Phoenix, Portland, San Diego, and Seattle.

capability to serve the telephone-based market, most new service was concentrated at already well-served locations - such as airports and major cabstands. Customer wait times at these locations, already short, were reduced further. Response times in the telephone market were similar to pre-deregulation performance. Trip refusals and no-shows, however, increased significantly.

- *Prices rose in every instance.* Paradoxically, the influx of new entrants did not invoke the price competition typically experienced in other newly-deregulated industries. Prices rose an average of 29% in the year following deregulation. There appear to be two sources of this unexpected event. First, fare increases prior to deregulation had consistently lagged cost increases. Veteran operators thus corrected prices at the first opportunity. Second, new entrants generally charged higher fares than the veteran operators. The cabstand markets on which these operators focused their services are generally price insensitive and, because of the first-in first-out nature of taxi queues, comparison shopping is discouraged. For these reasons, the new entrants had no incentive to introduce price competition.
- *Service quality declined.* Trip refusals, a decline in vehicle age and condition, and aggressive passenger solicitation associated with an over-supply of taxis are characteristic of a worsening in service quality following deregulation.

The negative aspects of deregulation were especially evident at airports and major tourist attractions. As a result, deregulation often acquired the enmity of the business community and adverse media coverage. These effects were most closely associated with cities that implemented an "open entry" policy that enabled an influx of independent owner-operators that were unaffiliated with companies or taxi cooperatives.

The short-term effects of deregulation were less adverse in smaller cities which have an insignificant cabstand market. The telephone-based market, which dominates the smaller cities, is difficult for independent operators to serve effectively. These cities thus avoided the structural changes to the industry that contributed to the problems in larger cities noted above.

Post-Deregulation Changes in Regulatory Practices

All post-deregulation changes in regulatory practices were limited to cities that had implemented a "fully deregulated" system, wherein both market entry and fares were left to the industry's discretion². Other cities which had only partially deregulated - for example, through the use of minimum standards for market entry or by relaxing government involvement in fares - reported no changes in regulatory structure.

Nine of the thirteen cities that had deregulated via "open entry" chose to revert to a regulated system, either in whole or in part, by 1992. Six cities returned to a fully-regulated structure, in which the local government limits market entry and sets a fixed or maximum fare. Two other cities implemented regulations for airport-based service. These eight cities were the

² see Section 1 of this report for a definition of the taxi regulatory structure.

largest of those that had initially deregulated, and had the most intensive airport activity. One other city reverted to a minimum standards approach.

Only four of the 21 cities continue to employ a fully-deregulated system. These are among the smallest cities in the group. Related to the size of these cities is the absence of major structural changes in the industry that precipitated re-regulation in the larger cities.

Long-Term Effects of Deregulation

Long-term price performance in deregulated cities is similar to that of regulated cities, based on price information submitted annually by members of the International Taxicab and Livery Association (ITLA). Between 1985 and 1992, the median fare³ for a five-mile trip rose by 6.5% (\$0.50) in deregulated cities versus 4.8% (\$0.33) in a sample of regulated cities (see appendix B for details). Fares in cities which re-regulated their taxi services rose by only 2% (\$0.17) during this period, a reaction to the high rate of fare growth following deregulation. These results indicate that deregulation, over the long term, has contributed to neither higher nor lower fares than experienced by the industry generally.

Other long-term effects of deregulation are difficult to discern. Taxi supply (i.e., taxis per 1,000 population) in deregulated cities stabilized after the short-term increases noted above, and appears to be lower and more variable than in regulated or re-regulated cities. Very little data is available to support long-term evaluation of service quality. These types of data are rarely collected even in regulated cities, and are especially scarce in deregulated cities.

* * * * *

In retrospect, the effects of taxi deregulation have ranged from benign to adverse, depending on local conditions and markets. There appears to be scant evidence that deregulation fully achieved the goals on which its implementation was premised, though some goals clearly were achieved (e.g., more taxis, less regulatory involvement by government). Market imperfections peculiar to the taxi industry, including unusual product supply (e.g., first-in, first-out queues at cabstands) and poor availability of information on price and quality, tend to negate the consumer benefits typically associated with deregulation in other industries. It is perhaps noteworthy that no major US cities have deregulated taxi services since the early 1980s.

³ In constant 1992 dollars.

1. FRAMEWORK

A wave of deregulation occurred in the taxicab industry during the late 1970s and early 1980s, involving 21 cities across the U.S. Since that time, most deregulated cities experienced unfavorable results and opted to re-regulate, while the remainder have for various reasons remained deregulated. The purpose of this report is to document the experience of each, and to explain the circumstances which led to these different outcomes.

This section of the report introduces the terminology used to describe taxi regulation, and provides an overview of the methods used to compile the record on deregulation.

Regulation, Deregulation, and Re-Regulation

Taxicab regulation and deregulation refer to opposite ends of a spectrum of government control over taxi services. *Regulation* typically implies government determination of service supply (by limiting taxi licenses), or prices (by setting fixed or maximum fares), or both. *Deregulation*, in contrast, typically implies an absence of government control. *Re-regulation* refers to a tightening of government control over service supply and/or prices, following a period of relaxation of controls.

The matrix below illustrates the two basic dimensions of the regulatory structure: market entry mechanisms and fare-setting mechanisms. Market entry mechanisms, shown in the left-most column, range from most restrictive (predetermined ceiling) to least restrictive (open entry). Fare-setting mechanisms, shown in the top-most row, range from most restrictive (regulator defines all fares) to least restrictive (individual operators define fares). Full regulation and full deregulation refer to opposite corners of this matrix, as shown. Between these two extremes lie hybrid approaches by which government may control some aspects of taxi service that are of concern to local interests.

Market Entry Mechanisms	Fare-Setting Mechanisms		
	Regulator Defines All Fares	Regulator Defines Minimum or Maximum Fares	Individual Operators Define Fares
Predetermined Ceiling	<p><i>"Regulated" typically means that both market entry and fares are specified by regulators</i></p> <p><i>In fact, "deregulation" or "re-regulation" can occupy a wide range of middle ground</i></p> <p><i>"De-Regulated" typically means that market entry and fares are unrestricted</i></p>		
Population Ratio			
Convenience & Necessity			
Franchise System			
Minimum Standards			
Open Entry			

Definitions for the types of market entry mechanisms⁴, in order of decreasing government control, are as follows:

- **Predetermined ceiling.** The city limits the number of taxicabs in operation, typically by issuing a fixed number of taxicab permits. If demand for taxicab service exceeds the ceiling, this is effectively a closed entry policy.
- **Population ratio.** The number of taxicabs in operation is set as a function of population (e.g., 0.75 cabs per 1,000). The ratio allows the number of permits to vary with demand.
- **Convenience and necessity.** New permits may be issued under certain conditions. A wide range of criteria fall into this category, usually relevant to demand and the need for additional service.
- **Franchise system.** This system involves granting specific companies the right to operate taxicabs. Its effect may range from closed entry to open entry, depending on the requirements for entry of new companies and the ability of existing companies to increase the number of cabs.
- **Minimum standards.** Cabs are allowed to operate as long as they satisfy certain minimum standards. These standards differ from convenience and necessity in that they are unrelated to demand. The standards may include one or more of these factors: a minimum number of vehicles, radio dispatch capability, 24 hour service, or a vehicle age limit. These regulations limit supply by raising the cost of market entry.
- **Open entry.** Under open entry, almost anyone who owns an operable vehicle can obtain a taxi permit and provide service. There are still requirements under open entry, such as insurance or absence of a criminal record, but these are less restrictive than is the case for minimum standards.

The last two mechanisms - minimum standards and open entry - are most closely associated with deregulation. These mechanisms remove the regulatory body from decisions regarding taxicab supply, relying on market forces to establish an equilibrium. Minimum standards, however, can be used to influence the type of new entrants to the market, and thus the quality and stability of service.

Fare-setting mechanisms form the second dimension of the regulatory matrix. Definitions of these mechanisms are as follows:

- **Government-set fares.** The local government sets the fare that operators may charge. The rationale is that taxicab service is a public utility, and the public must be protected from unreasonable rates.

⁴ Definitions were drawn from: Urban Mass Transportation Administration, *Taxicab Regulation in US Cities: Volume 1 (Final Report)*; October 1983.

- **Minimum and/or maximum fares.** The local government sets a fare ceiling or a floor, and taxicab operators may charge any fare in the allowable range. The minimum or maximum fare may be set precisely by the regulator, or defined as a function of the average or median fare across all operators. It thus allows some amount of price competition.
- **Industry-set fares.** Fares are left up to the discretion of each operator. Often, operators must still file their rates, and the government may limit the number of rate changes per year.

Of these, industry-set fares are most closely associated with deregulation. This removes the regulator from making decisions not only about fares, but also other factors that influence the specification of an acceptable fare, such as productivity and profitability.

Research Methods

The information presented in this report was compiled via the following methods:

- **Literature review:** All references in this report to the short-term impacts of deregulation were drawn from previous studies of taxicab deregulation. Most of these studies were published between 1982 and 1984, and were sponsored by USDOT/UMTA's Service and Management Demonstration (SMD) Program. Other sources were used as well. A bibliography follows the appendices at the end of this report.
- **Telephone surveys:** Phone interviews were conducted with regulators or other city administrative staff in the 21 cities that pursued some form of deregulation. The primary purpose of these interviews was to verify the current regulatory structure, and factors contributing to regulatory change. A limitation of this method is that the deregulations occurred nearly ten years ago, generally exceeding the institutional memory and file retention of city regulatory agencies. A summary of current and historical regulatory changes for these cities is provided in Appendix A.
- **International Taxicab & Livery Association (ITLA) statistics:** Statistics on price and supply for the years 1985 and 1992 were abstracted from the *Taxicab Fact Book*, as reported by ITLA members. These post-deregulation statistics were used to determine the longer-term impacts on price and supply, and to compare the experience of regulated and deregulated cities. Price Waterhouse did not independently verify this information. A table of price and supply statistics referenced in this report is presented in Appendix B.
- **Case studies:** On-site interviews were conducted in San Diego, Seattle, and Phoenix to collect additional information on the transition to and from deregulation.

Information on service quality also was sought but found to be generally unavailable. Consequently, only the short-term impacts on service quality, from the USDOT/UMTA studies, are referenced herein.

2. TAXI REGULATION

Regulations governing the taxicab industry have been in place since the beginning of taxicab service. The most active period for new taxicab regulation in the US occurred during the late 1920s and early 1930s, when the Depression caused extremely competitive conditions, and growing urban centers invariably experienced problems with taxicab service. A *Washington Post* article from 1933, entitled "Taxicab Chaos," effectively conveys the initial desire for taxicab regulations:

Taxicabs are literally running wild on Washington streets, with almost complete lack of supervision or control. Public safety, reasonable working regulations, and equitable rates are almost completely disregarded...Hundreds of inexperienced drivers rent cabs and offer their services to the public. One driver who was recently observed proceeding down Pennsylvania Avenue like a derelict confessed that he had not driven a car for seven or eight years.

A central feature of taxicab service is the potentially low cost of market entry. A serviceable vehicle and a licensed driver are the minimum requirements to start a taxicab operation. In an unregulated environment, the low cost of entry attracts individuals who have limited employment options. Thus, during periods of high unemployment, independent taxi operators flood the market. Conditions such as these during the Depression led cities to regulate taxi services. Once this practice was established, it tended to spread to other cities as a precedent for protecting the public interest.

Accordingly, restriction of market entry is the central feature of the taxi regulatory structure. Three arguments are traditionally cited by the taxi industry in favor of regulating market entry⁵:

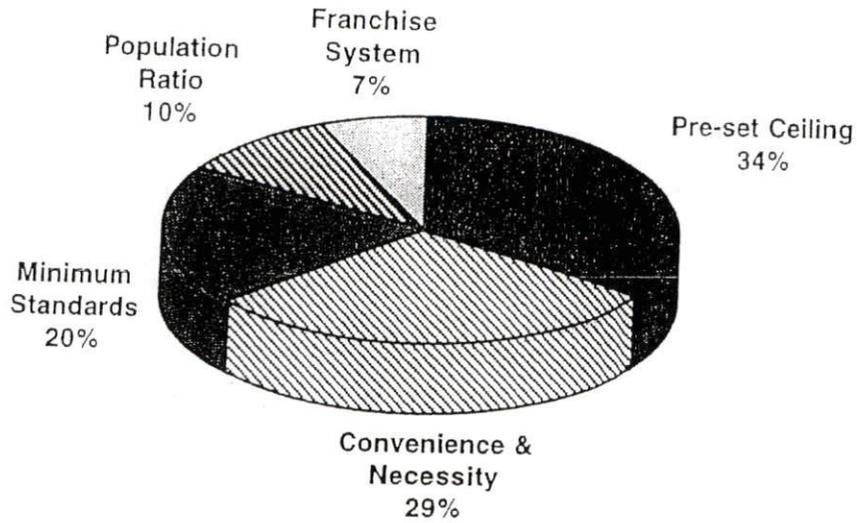
- "natural monopoly" - one firm can provide services at least cost
- "destructive competition" - too many competitors yield insufficient profits and cause declines in safety and service.
- "cross subsidy" - profits in lucrative markets are needed to subsidize service in unprofitable markets.

A 1983 study estimated that 80% of cities limited market entry, and 77% regulated fares. The full distribution of regulatory practices is shown in the graph on the following page.

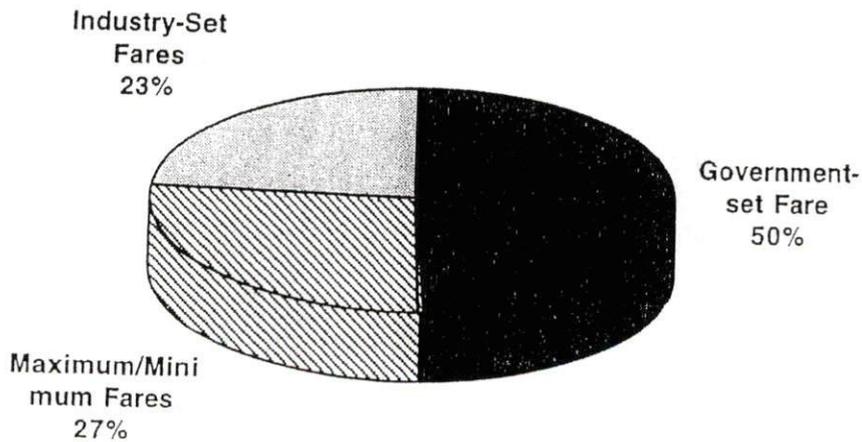
Most taxi regulations are effected by local jurisdictions (i.e., cities and counties). Only three states completely regulate taxis, and seven others exert partial control. The remaining states generally specify only minimum standards for safety, leaving fare and entry regulation to local governments.

⁵ From Teal, et al, *Urban Transportation Regulation in Arizona*, USDOT/UMTA, 1984.

Market Entry Mechanisms



Fare-Setting Mechanisms



Source: Shaw, Gilbert, et al, *Taxicab Regulations in US Cities*, USDOT/UMTA, 1983.

3. TAXI DEREGULATION AND RE-REGULATION

Through 1983, twenty-one US cities opted to deregulate taxi services to various degrees. In the past ten years, six of these cities reverted to a fully-regulated system, and another two cities regulated taxi services at airports. The cities which maintained a deregulated structure tended to have one of the following characteristics: (1) relatively smaller in population than the other cities; (2) less reliant on airport activity; or (3) had implemented other measures that raised the hurdles for market entry. Only four of the 21 cities continue to employ a fully-deregulated system today.

This section of the report describes why these twenty-one cities deregulated, the effects of deregulation, and changes in the regulatory structure following deregulation.

Why Cities Deregulated

Twenty-one US cities, principally in western and Sunbelt states, deregulated taxi services by 1983. Two cities - Atlanta and Indianapolis - deregulated in 1965 and 1973, respectively. The remaining nineteen cities deregulated between 1979 and 1983. Most of these cities moved from traditional regulatory structures to one of two forms of deregulated market entry: (1) open entry (13 cities); and (2) minimum standards (5 cities). Three other cities deregulated fares, but maintained controls over market entry. Graphics showing the locations and dates of these deregulations, and the changes in regulatory structure, are presented on the following page.

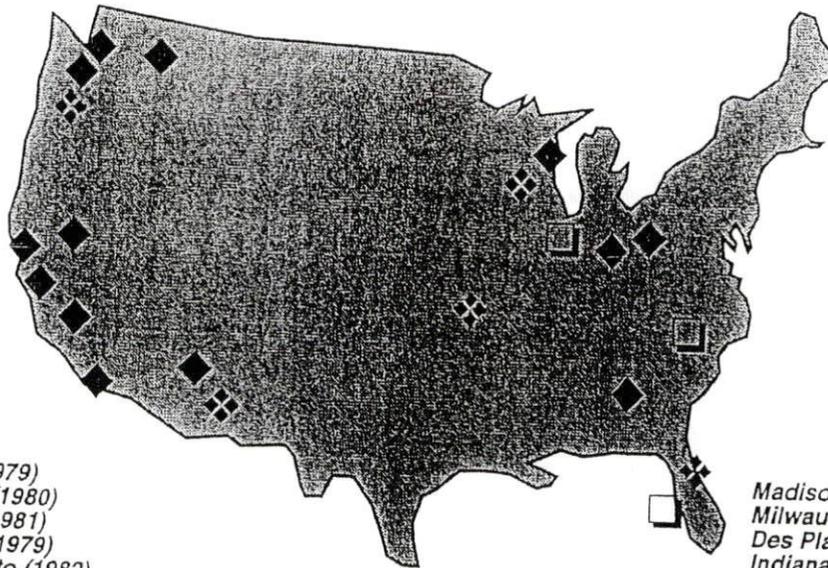
In telephone and on-site surveys of these cities, a free-market ideology was cited as the driving force behind deregulation, which held the following expectations:

- **Price.** Presuming that entry restrictions had enabled incumbent operators to charge higher fares than would prevail in a competitive market, proponents of deregulation expected new entrants to force a reduction in the prevailing rates. The positive license values in regulated cities were cited as evidence that the incumbent operators enjoyed some monopoly power.
- **Level of service.** As entry restrictions are lifted, deregulation proponents expected the number of cabs in service to increase. In theory, these additional cabs should reduce the wait times for street-hailed service and response times for telephone orders.
- **Quality of service.** Proponents of deregulation expected that the new competitiveness of the industry should cause operators to compete based on quality as well as price, resulting in improved service quality and the availability of new pricing and service options.
- **Administrative costs.** Proponents of deregulation expected that open entry would reduce government costs by eliminating permit processing efforts, and that costs would also be saved by eliminating rate change review.

While some of these benefits were realized through deregulation, other less attractive and unanticipated results occurred as well. In most cities, these outweighed the benefits and forced a reconsideration of full-scale deregulation.

Summary of Taxi Deregulation in the US

Location & Timing of Deregulations

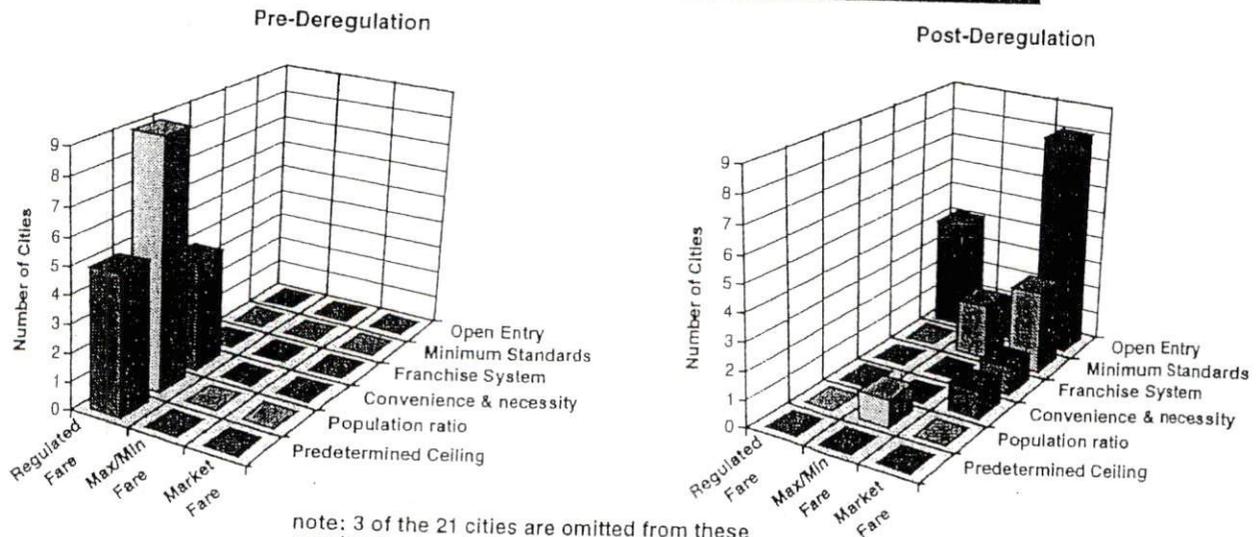


Seattle (1979)
 Spokane (1980)
 Tacoma (1981)
 Portland (1979)
 Sacramento (1982)
 Oakland (1979)
 Berkeley (1980)
 Fresno (1979)
 San Diego (1979)
 Phoenix (1982)
 Tucson (1982)

- ◆ Open Entry
- ✦ Minimum Standards
- Fares Only (restricted entry)

Madison (1979)
 Milwaukee (1979)
 Des Plaines, IL (1981)
 Indianapolis (1973)
 Springfield, OH (1981)
 Kansas City (1983)
 Charlotte (1982)
 Atlanta (1965)
 Jacksonville (1983)
 Tampa (N/A)

Taxi Regulatory Structure: Pre- and Post-Deregulation



note: 3 of the 21 cities are omitted from these graphs due to missing information on the pre-deregulation regulatory structure

Effects of Deregulation

The effects of deregulation varied by location. Cities which had a relatively large population, a high level of airport activity, and conditions conducive to low-cost market entry tended to have a negative experience with deregulation. As a result, these cities either fully or partially re-regulated taxi services (see "Post-Deregulation Changes in Regulatory Structure", following this section). Cities which did not possess the above characteristics, conversely, experienced no dramatic effects - either positive or negative - and have performed much like the rest of the industry over the long-term.

A summary of the effects of deregulation is presented below.

Price

Despite a large increase in service supply (see "Level of Service" on page 11), which in other industries has fostered price competition, prices rose following taxi deregulation in every documented case. The short-term changes in price were quite dramatic. In the long-run, however, prices in deregulated cities have performed similar to the industry as a whole. Please refer to the graphs on page 9 for a summary of short-term and long-term changes in price.

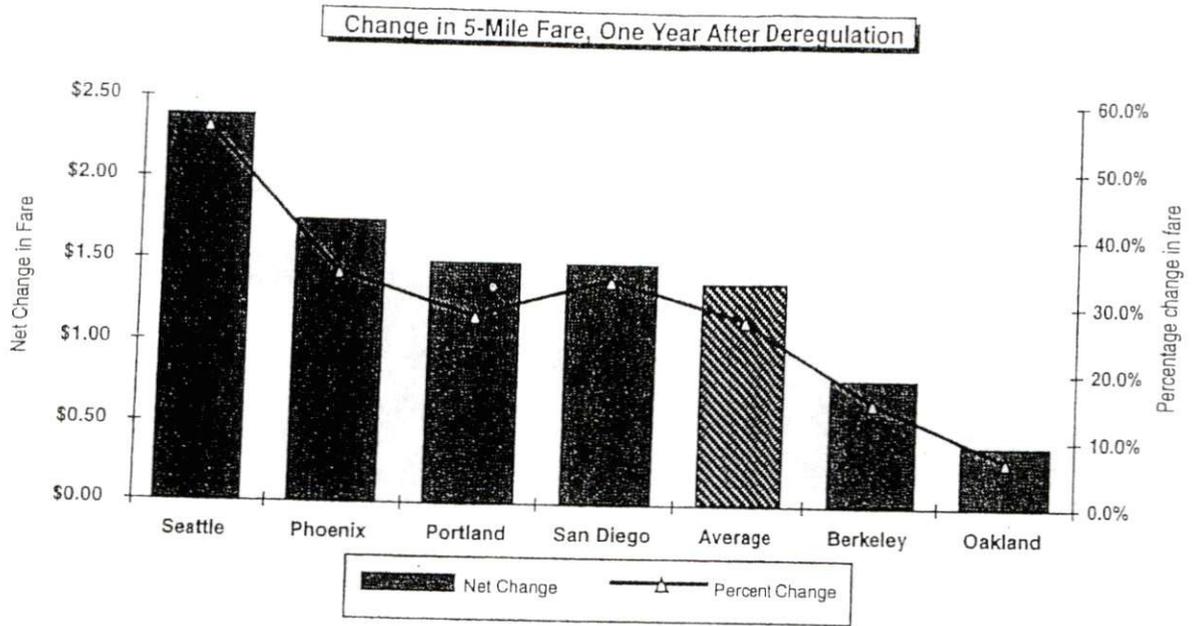
In the first year following deregulation, the average 5-mile fare rose by 29% (\$1.39) in the six cities documented in the USDOT case studies. This ranged from a high of 56% (\$2.40) in Seattle to a low of 7% (\$0.40) in Oakland. The price increases roughly reflect changes in industry structure, particularly an increase in independent and small-fleet operators (see "Level of Service", below). In Seattle and San Diego, these operators were observed to charge higher fares - sometimes substantially higher fares - than those charged by the larger, more-established companies. This can be seen in the graphs on page 10. A similar effect was noted⁶ in Phoenix, but price information by company size was not documented. In all three cities, independent and small-fleet operators focused their service on major cabstands and the airports. These are generally price-insensitive markets with little or no comparison shopping by prospective customers. This condition, along with the fact that these operators spent long wait times in the taxi queues, discouraged price competition on the part of new entrants.

In the long-term (i.e., 1985-1992), price trends in deregulated cities are similar to those in re-regulated cities and regulated cities (see bottom graph on page 9). The median fare⁷ for a five-mile trip rose by 6.5% (\$0.50) in deregulated cities versus 4.8% (\$0.33) in regulated cities. Fares in cities which re-regulated their taxi services rose by only 2% (\$0.17) during this period, a reaction to the high rate of fare growth during their deregulated period. These results indicate that deregulation, over the long term, has had little impact on fare growth relative to the rest of the industry.

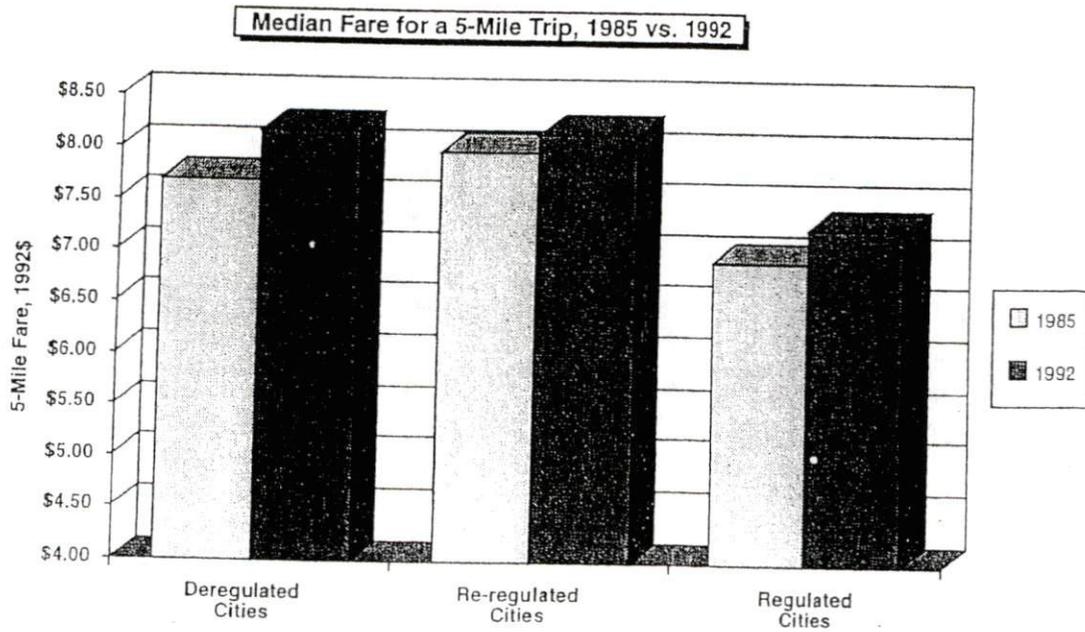
⁶ Teal, et al, Urban Transportation Deregulation in Arizona, USDOT, 1984, page 54.

⁷ In constant 1992 dollars.

Taxi Prices: Short-Term and Long-Term Trends



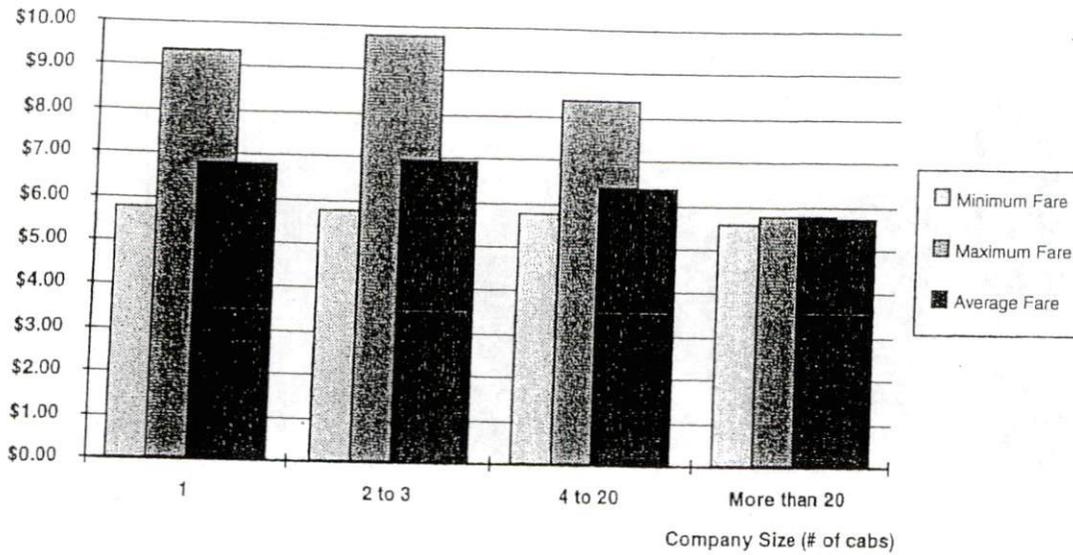
Source: USDOT case studies on the effects of taxi regulatory revision, 1983-1984.



Source: drawn from ITLA Taxicab Fact Book statistics (see Appendix B)

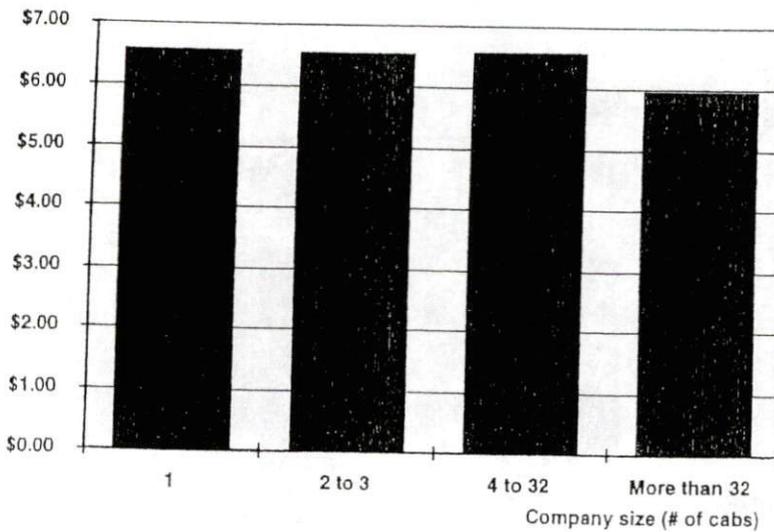
Fares for a 5-Mile Trip, by Company Size

Seattle, one year after deregulation



source: compiled by Price Waterhouse from taxicab rate data reported by the City of Seattle Department of Licenses and Consumer Affairs, June 1980.

San Diego, one year after deregulation



Source: USDOT, *Effects of Regulatory Revision in San Diego, 1983*.

Level of Service

Deregulation produced in most cases an immediate, large increase in the number of taxis. Because new entrants tended to congregate at already well-served locations, this large increase in supply did not produce corresponding improvements in customer service. In the long term, the level of service appears to have stabilized in deregulated cities. Data are insufficient, however, to comment on the long-term effects of taxi supply on service improvements.

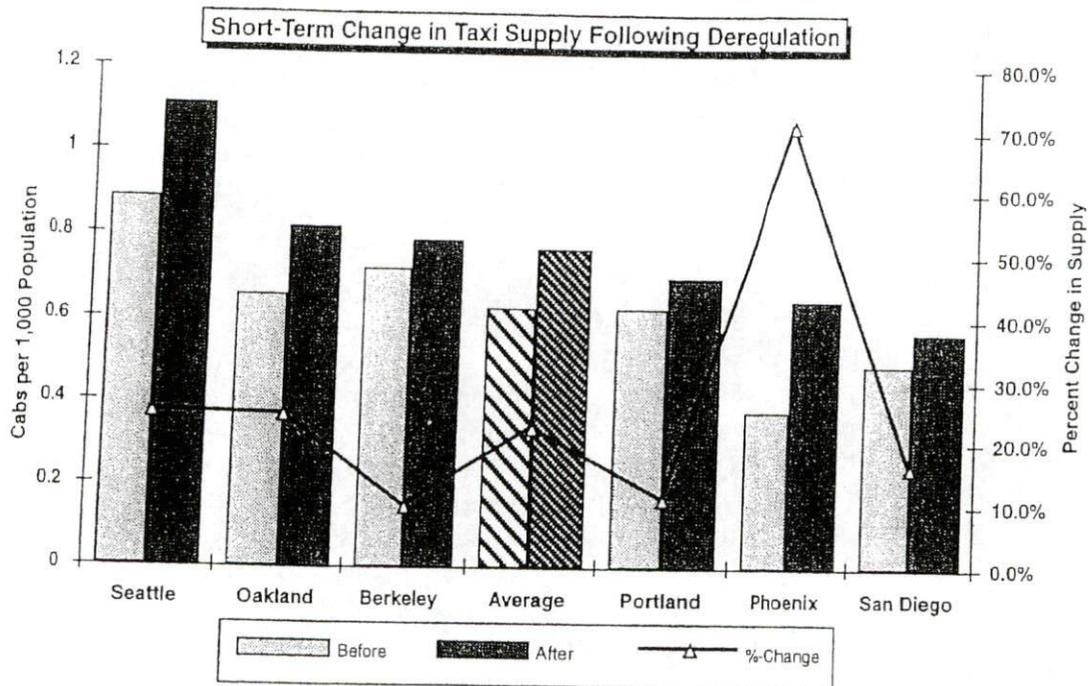
As noted in the graph (top) on the following page, the number of taxi operators immediately after deregulation increased by 23% on average, ranging from a high of 70% (Phoenix) to a low of 10% (Berkeley). The type of new entrants varied considerably among these cities (see bottom graph on following page). In Phoenix, San Diego, and Seattle, the percentage of cabs operated by independents and small-fleet owners grew while the percentage of large fleet operators declined. These operators focused their service on the airports and major cabstands. Consequently, Phoenix, San Diego, and Seattle experienced large fare increases that were in part attributable to small operators serving a price-insensitive market (see "Price", above). In Oakland, on the other hand, new large fleet owners entered the market, while in Berkeley there was little change. In contrast to the other cities above, Oakland and Berkeley experienced little change in fares.

Customer-oriented service improvements expected to occur with the large increase in supply were observed to be marginal. Focus of new entrants on the cabstand market, as noted earlier, reduced already-short wait times to almost zero. Response times for the telephone-based market were not consistently evaluated in the case studies, though the available data suggests that little change occurred. In the only data set containing before-and-after data (for San Diego)⁸ response times for all serviced calls were about the same after deregulation (13.6 minutes) as before (13.4 minutes). The rate of no-shows and trip cancellations, however, increased dramatically - from 2% of all calls to 18.2%. As shown in the graph on page 13, trip refusals and no-shows are most closely related to small fleets and independent operators. This was found to be true in both San Diego and Seattle.

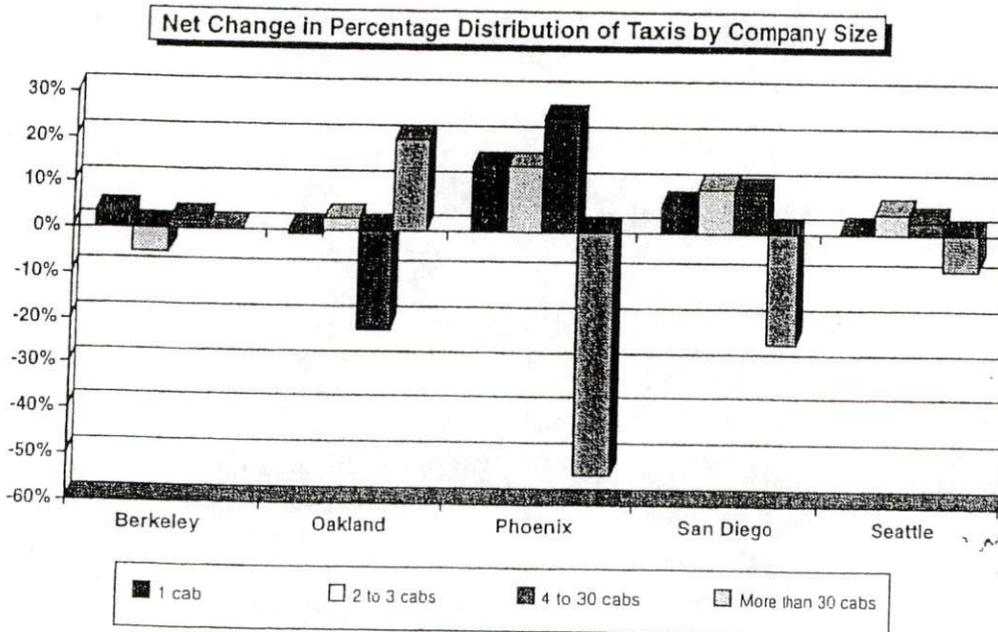
Long-term data for evaluating taxi supply and service improvements are sparse. Although taxi supply data was made available by the ITLA, geographic inconsistencies between taxi supply data and population tend to limit the validity of long-term comparisons to trends within classes of cities - deregulated, re-regulated and regulated (see graph on page 14). It is apparent that growth in taxi supply in currently-deregulated cities has stabilized. Meanwhile, taxi supply has declined relative to population in re-regulated and regulated cities. In re-regulated cities, this reflects a continuing correction to the rapid growth in taxi supply that occurred with deregulation (note: for a description of changes in regulatory structure by city, see "Post-Deregulation Regulatory Changes", below).

⁸ USDOT, *Effects of Regulatory Revision in San Diego*, 1983, Table B-9.

Changes in Taxi Supply & Industry Structure Following Deregulation

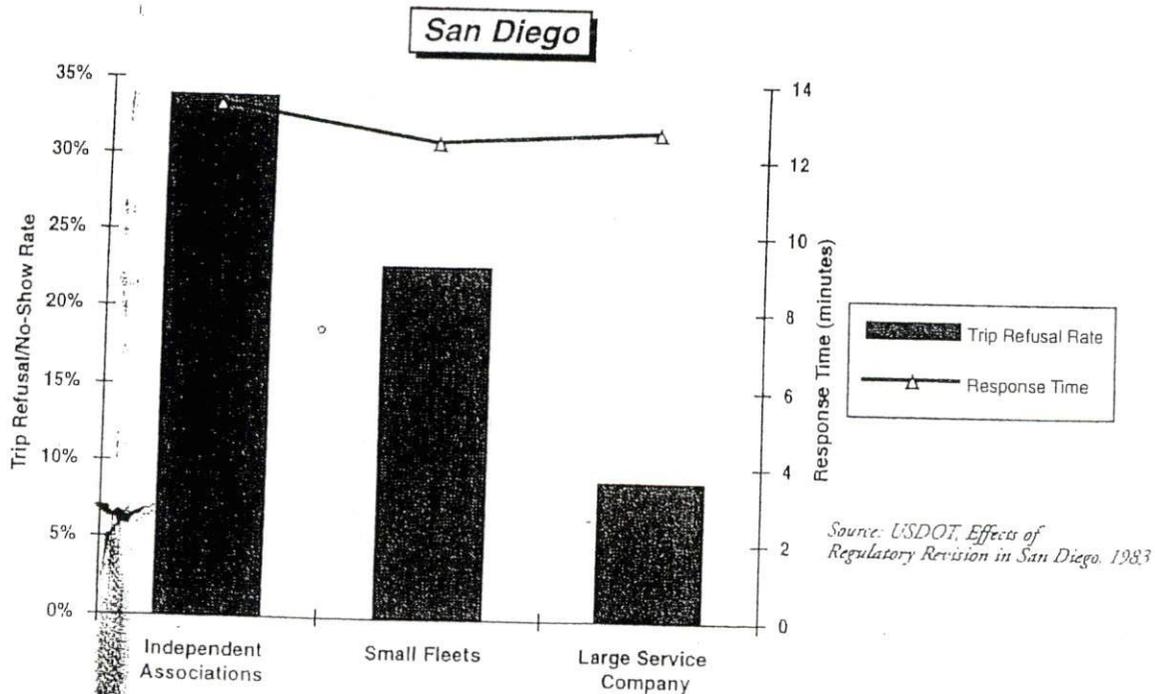
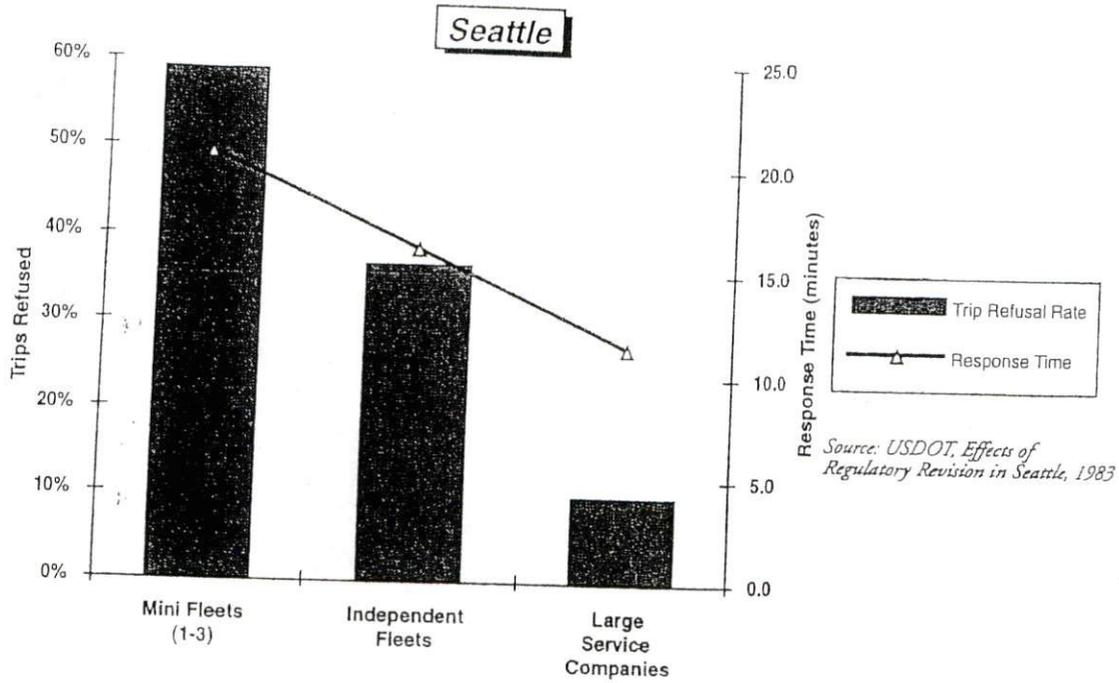


Source: USDOT/UMTA case studies on the effects of regulatory revision, 1983-1984

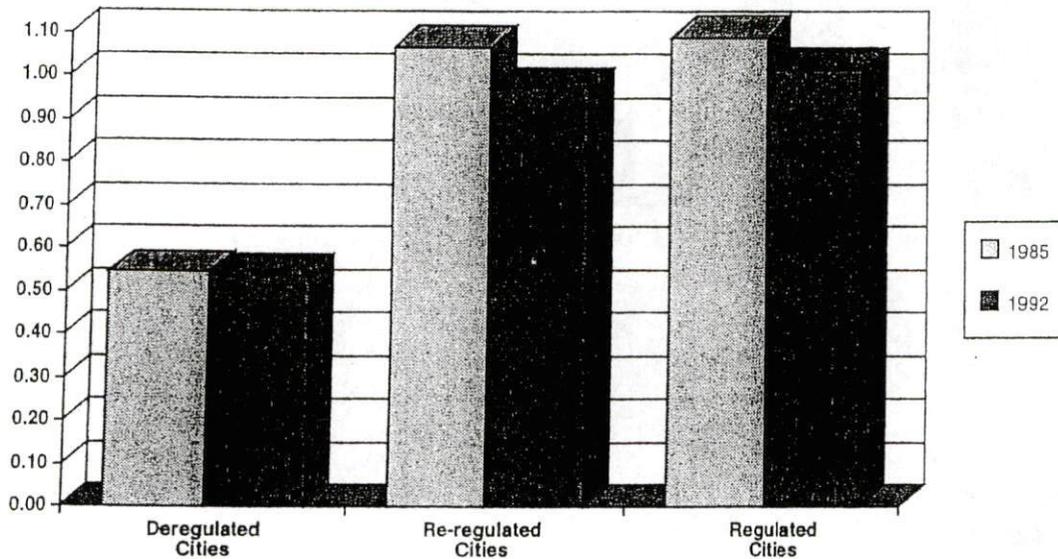


Source: USDOT/UMTA case studies on the effects of regulatory revision, 1983-1984

Response to Telephone-Based Service Requests After Deregulation



Taxis per 1,000 Population (median values)



Note: geographic inconsistencies between taxi supply and population data skew the cabs per 1,000 figure and thus comparisons across categories may not be accurate. The 1985-92 trends, however, should be valid.

Source: ITLA Taxicab Fact Book and US Census. See Appendix B for details.

Service Quality

The quality of taxi service is affected by several variables, including: (1) responsiveness to customers; (2) vehicle condition and cleanliness; and (3) driver behavior. The case studies of the effects of deregulation provide limited, but consistent, data on the first two of these variables. Information on driver behavior is referenced in the case studies, but is less rigorously measured.

As noted above in "Level of Service", the short-term effects of deregulation included a slight improvement in waiting times at cabstands, an insignificant change in response times to telephone-based service requests, and a significant increase in service refusals and no-shows. On balance, it can be said that deregulation provided marginal improvements in customer responsiveness, but only for those customers that taxi operators deemed to be high priority (as evidenced from the trip refusal rate).

The effect of deregulation on vehicle condition can be assessed by changes in vehicle age and inspection results. In San Diego, vehicles owned by new market entrants - generally independents and small fleet owners - were observed to be 7.1 years old on average, versus 2.9 years for the large service company that held most of the taxi licenses prior to deregulation (see graph on following page). Two years following deregulation, all fleets operated with yet older vehicles. In Seattle, the median vehicle age increased to 6 years old following deregulation from 4 years old prior to deregulation⁹. Further, vehicle inspection failures increased to 35% two years following deregulation from 20% the year prior to deregulation. Both cases suggest that a large influx of new entrants causes all operators to defer investment until market conditions allow a greater return on investment.

Information on changes in driver behavior following deregulation is scant. At major cabstands and airports, however, over-supply of taxis was consistently reported to result in aggressive solicitation of passengers and confrontations among drivers. There is no evidence, hearsay or otherwise, indicating that deregulation acted to improve relations between drivers and customers.

Administrative Costs

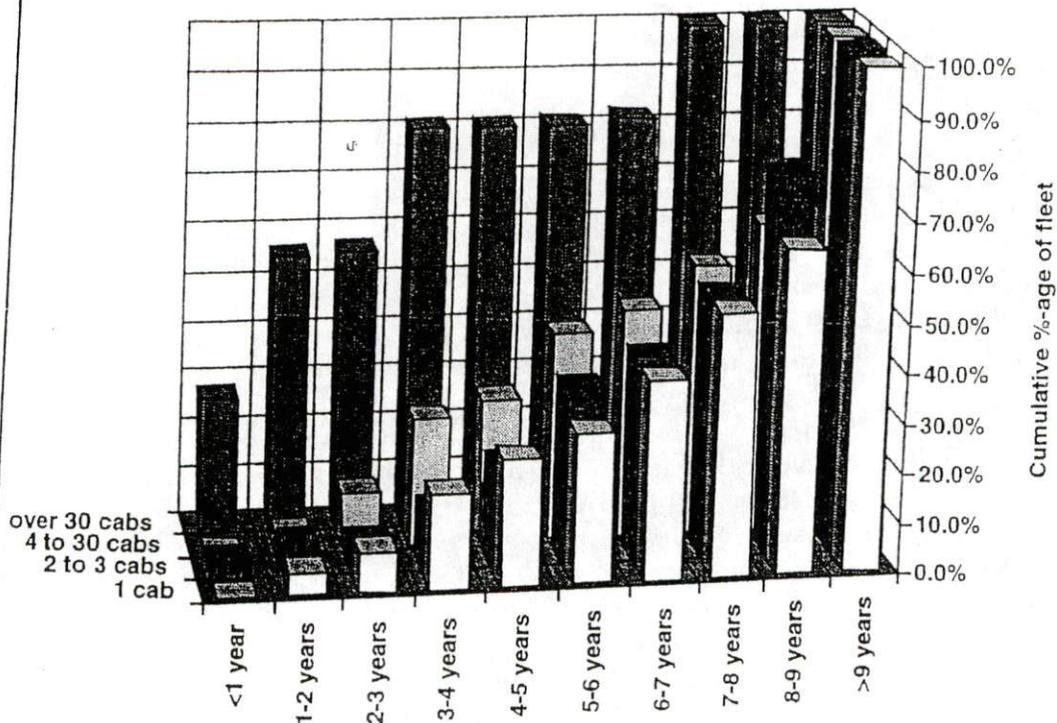
Changes in administrative costs as a result of deregulation depend on several variables, including: (1) the volume of new market entrants; (2) license application and vehicle inspection procedures; (3) the frequency of rate changes; and (4) the fee structure and cost recovery policy of the local jurisdiction.

The USDOT case studies on the effects of deregulation indicate that administrative costs either did not change or increased following deregulation. In San Diego, open entry was reported to increase the time and dollar cost of permit processing and related activities¹⁰. This was influenced primarily by the volume of

⁹ USDOT/UMTA, *Effects of Taxi Regulatory Revision in Seattle*, 1983, p. 98.

¹⁰ USDOT/UMTA, *Effects of Taxi Regulatory Revision in San Diego*, 1983, pp. 200-204.

Comparison of Fleet Age by Size of Taxi Company - San Diego
(one year after deregulation)



how to read this chart:
each bar shows the percentage of a fleet that is equal to or less than the age displayed on the horizontal axis.

source:
USDOT/UMTA, *Effects of Taxi Regulatory Revision in San Diego, 1983*, p. B-11.

[continued from previous page]

new permit requests submitted by market entrants. In Seattle, staff costs were reported to increase due to the larger number of taxis to be inspected. Inspection efforts were exacerbated by the provision for quarterly fare changes, which necessitated a corresponding increase in meter validations¹¹. Oakland and Berkeley, in contrast, experienced immaterial changes in costs¹². As noted earlier, open entry in these cities did not result in a large influx of new operators.

In the cities for which objective and consistent data are available regarding the effects of deregulation, the fully-deregulated model (i.e., open entry and industry-set fares) appears to have yielded few desired changes in taxi service. An increase in the number of taxis was the most clearly-attained objective. Other unanticipated and unattractive results that were associated with the large influx of new operators encouraged most open entry cities to reconsider taxi deregulation. These post-deregulation changes in regulatory structure are described in the following section.

¹¹ USDOT/UMTA, *Effects of Taxi Regulatory Revision in Seattle, 1983*, p. 146.

¹² USDOT/UMTA, *Taxi Regulatory Revision in Oakland & Berkeley, California: Two Case Studies, 1983*, p. 54.

Post-Deregulation Changes in Regulatory Structure

In response to the problems noted above, most of the cities that deregulated have since reverted to some form of regulation. As shown in the graph on the following page (top), this wave of re-regulation was led by the largest cities of the group that had the most intensive airport activity. Particularly notable was a shift from open entry to some form of re-regulation, presented in the table below.

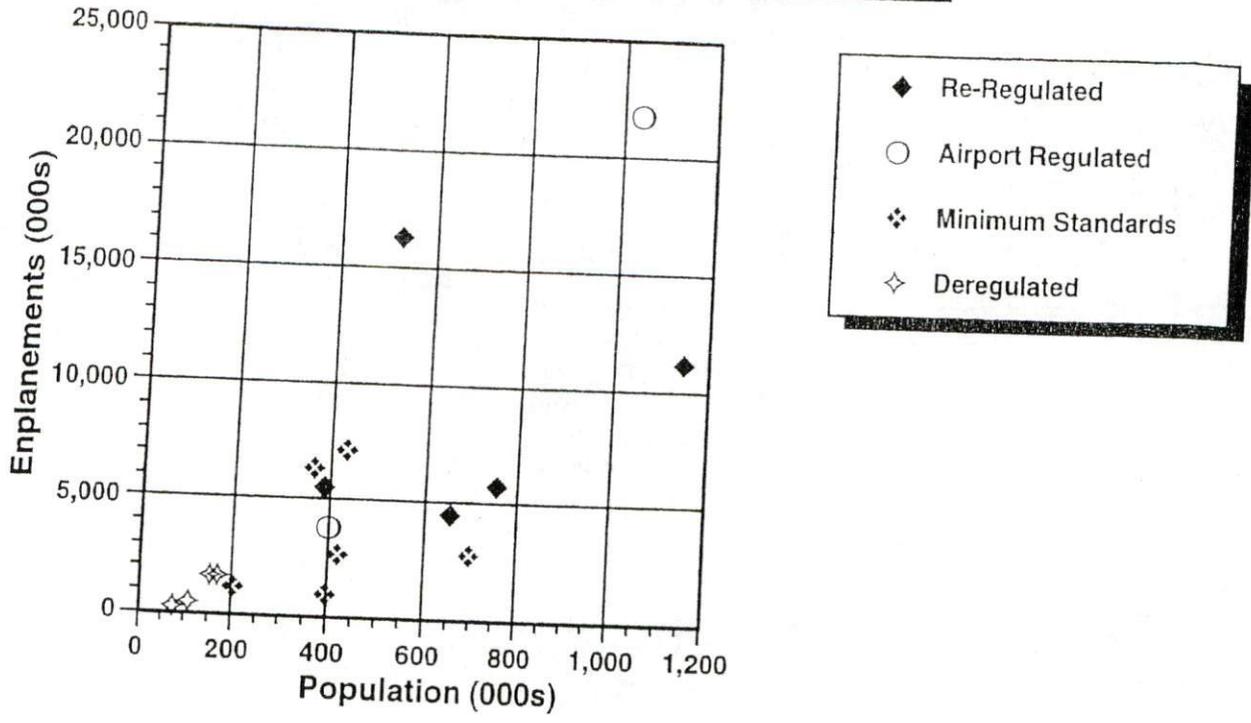
<i>City</i>	<i>Date of Initial Deregulation</i>	<i>Type of Re-Regulation</i>	<i>Date of Re-Regulation</i>
Atlanta	1965	Pre-determined ceiling, regulated fares	1981
Indianapolis	1973	Pre-determined ceiling, regulated fares	1974
Milwaukee	1979	Pre-determined ceiling, regulated fares	1992
Oakland	1979	Pre-determined ceiling, regulated fares	1988
San Diego	1979	Pre-determined ceiling, maximum fares	1982
Seattle	1979	Pre-determined ceiling, maximum fares	1984
Phoenix	1982	Airport franchise	1983
Sacramento	1982	Airport permits	unknown

The current regulatory structure for the original 21 deregulated cities shows a clear split between the fully-regulated and fully deregulated models. The current status of these cities is as follows: (1) six cities that were previously open entry have re-regulated all taxi services; (2) two cities that were previously open entry have regulated airport-based services, while retaining an open entry approach for non-airport services; (3) three cities had deregulated fares only, and have continued this practice while retaining entry controls (e.g., convenience & necessity); (4) six cities retained a minimum standards approach; and (5) four cities retained the fully-deregulated approach, combining open entry with industry-set fares. Of the thirteen cities that had originally opted for open entry, only four continue this practice today.

The cities that have fully "re-regulated" taxi services tend to be larger cities in which deregulation (i.e., open entry) had attracted a large number of independent operators - Atlanta, Indianapolis, San Diego, and Seattle. Two other large cities - Milwaukee and Oakland - re-regulated for other reasons.

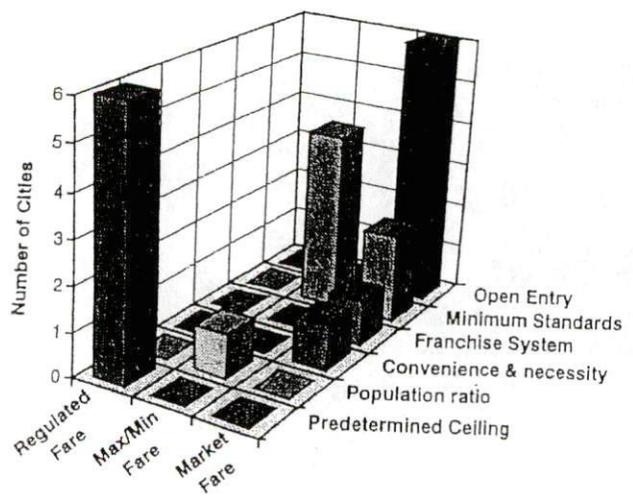
Two open entry cities - Phoenix and Sacramento - chose to regulate taxi service from airports, the most visible source of problems, but retained the open entry system for all other taxi services. In these cities, private-sector "franchise systems" also have evolved wherein major hotels enter into exclusive contracts with taxi companies to provide service to their guests. Thus, the formal and informal regulation of major stand markets was effected in some deregulated cities to protect consumers who are unlikely or unable to shop for the best taxi among competing services.

Current Regulatory Structure in Cities That Deregulated Taxes Between 1979 & 1983

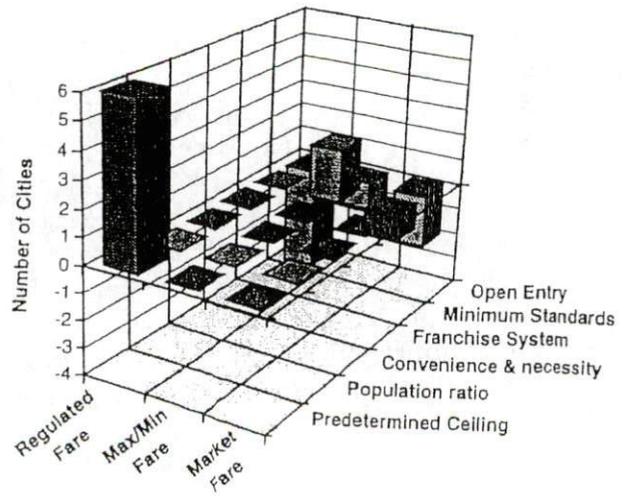


Regulatory Structure in Deregulated and Re-Regulated Cities

Current Regulatory Structure in the 21 Deregulated Cities



Changes in Regulatory Structure Compared to Initial Deregulation



The cities which had limited deregulation to fares only reported no significant issues and to our knowledge have made no ensuing regulatory changes. Each of these cities has entry restrictions, however. The cities include: (1) Tampa (population ratio approach); (2) Des Plaines, Illinois (convenience & necessity approach); and (3) Charlotte (franchise system approach).

The cities which employed a minimum standards approach to market entry, which is a mid-point between full deregulation and full regulation of taxi services, likewise reported no significant issues and accordingly have maintained this structure. These cities include: (1) Portland, Oregon; (2) Fresno, California; (3) Madison, Wisconsin; (4) Kansas City, Missouri; (5) Tucson, Arizona; and (6) Jacksonville, Florida. The minimum standards (e.g., 24-hour dispatch capability) exercised in these cities act to raise the cost of market entry, thus discouraging independent owner-operators that are not affiliated with a taxi cooperative or company.

The four cities which have retained a fully-deregulated system are among the smallest of the cities that had initially implemented full deregulation. These cities include: (1) Berkeley, California; (2) Spokane, Washington; (3) Tacoma, Washington; and (4) Springfield, Illinois.

* * * * *

In retrospect, the effects of taxi deregulation have ranged from benign to adverse, depending on local conditions and markets. There appears to be scant evidence that deregulation fully achieved the goals on which its implementation was premised, though some goals clearly were achieved (e.g., more taxis, less regulatory involvement by government). Market imperfections peculiar to the taxi industry, including unusual product supply (e.g., first-in, first-out queues at cabstands) and consumers' lack of knowledge of taxi price and quality, tend to negate the improvement in price and performance associated with deregulation in other industries.

APPENDICES

A: Current & Historical Regulatory Changes
in Deregulated Cities

B: Comparative Price and Supply Statistics

Bibliography

APPENDIX A:

Current & Historical Regulatory Changes
in Deregulated Cities

MAJOR CHANGES IN TAXICAB REGULATION

Code ¹	City	Type	Initial Regulation	Date	New Regulation	Current Regulation	-Supply -Price ²
	Anchorage, AK (*)	entry fares	population ratio (1:1500) government-set	1982 1983	conv & necess/ceiling (158) maximum fare	same same	158 \$9.50
O	Atlanta, GA	entry fares	predetermined ceiling	1965	open entry		
R	>> re-regulation	entry fares	open entry	1981	predetermined ceiling government-set	same same	1,582 \$7.30
O	Berkeley, CA	entry fares	predetermined ceiling government-set	1980	open entry industry-set	same same	N/A \$11.80
	Charlotte, NC	entry fares	convenience and necessity government-set	1982	franchise/conv & necess industry-set	same same	N/A N/A
	Des Plaines, IL	entry fares	government-set	1981	convenience & necessity industry-set	same same	31 \$7.00
	El Paso, TX	entry fares	franchise system government-set	1981 1987	convenience and necessity government-set (raised)	conv & necess/ceil (250) same	275 \$8.70
O	Fresno	entry fares	N/A N/A	1979	open entry industry-set		
R	>> re-regulation	entry fares	open entry industry-set	1982	minimum standards maximum fares	same same	N/A N/A
O	Indianapolis, IN	entry fares	population ratio	1973	open entry		
R	>> re-regulation	entry fares	open entry	1974	predetermined ceiling (600)	conv & necess government-set	392 \$8.15
M	Jacksonville, FL	entry fares	convenience and necessity government-set	1983	minimum standards maximum fares	same same	400 \$7.25
M	Kansas City, MO	entry fares	predetermined ceil (532) government-set	1984 1983	minimum stds industry-set	same 1986 - max fares (wtd avg)	458 \$8.41

MAJOR CHANGES IN TAXICAB REGULATION

Code ¹	City	Type	Initial Regulation	Date	New Regulation	Current Regulation	-Supply -Price ²
O	San Diego, CA	entry fares	conv & neces / pop ratio government-set	1979	open entry maximum fares		
R	>> re-regulation	entry fares	open entry	1982	closed entry (permit freeze)	N/A N/A	N/A N/A
O	Seattle, WA	entry fares	population ratio government-set	1979	open entry industry-set		
R	>> re-regulation	entry fares	open entry	1984	predetermined ceiling	same N/A	N/A N/A
O	Spokane, WA	entry fares	population ratio government-set	1980	open entry industry-set	same same	N/A N/A
O	Springfield, OH	entry fares	N/A government-set	1981	open entry industry-set	same same	10 \$8.00
O	Tacoma, WA	entry fares	population ratio government-set	1981	open entry industry-set	same same	79 N/A
	Tampa, FL	entry fares	population ratio (1:1000) government-set	N/A	population ratio (1:2000) maximum fares	same same	N/A N/A
M	Tucson, AZ	entry fares	state-regulated government-set	1982	minimum standards industry-set	same same	N/A N/A

1. Codes: O = an open entry city; R = re-regulation of an open entry city; M = a minimum standards city.
2. Current number of cabs and five-mile fare. From telephone interviews with city officials, September 1993.

APPENDIX B:

Comparative Price and Supply Statistics

COMPARISON OF TAXI PRICE AND SUPPLY IN DEREGULATED, REREGULATED, AND REGULATED CITIES

Category/Cities	5-Mile Fare			Taxis per 1K pop		Population		Number of Taxis	
	1985	1985(92\$)	1992	1985	1992	1985	1992	1985	1992
Deregulated Cities									
Fresno	\$9.20	\$10.79	\$9.70	0.24	0.15	268	401	63	62
Kansas City	\$6.20	\$7.27	\$7.50	1.19	1.30	444	431	530	560
Madison	\$5.83	\$6.83	\$8.40	0.42	0.52	168	204	70	107
Portland	\$6.70	\$7.86	\$7.22	0.39	0.49	833	1043	325	506
Sacramento	\$6.80	\$7.98	\$8.20	0.67	0.98	365	367	244	360
Tampa	\$7.00	\$8.21	\$9.94	0.77	0.55	294	401	225	219
Tucson	\$5.75	\$6.75	\$8.15	1.20	0.89	285	450	343	400
	\$6.40	\$7.51	\$7.80	0.35	0.19	371	425	130	80
Average	\$6.73	\$7.90	\$8.36	0.65	0.63	379	465	241	287
Median	\$6.55	\$7.68	\$8.18	0.54	0.54	330	413	235	290
Maximum	\$9.20	\$10.79	\$9.94	1.20	1.30	833	1,043	530	560
Minimum	\$5.75	\$6.75	\$7.22	0.24	0.15	168	204	63	62
Re-Regulated Cities									
Atlanta	\$5.80	\$6.80	\$7.30	3.39	4.30	428	368	1,450	1,582
Indianapolis	\$4.70	\$5.51	\$8.15	0.52	0.52	706	757	366	394
Milwaukee	\$5.75	\$6.75	\$7.50	0.66	0.61	608	657	400	400
Oakland	\$7.00	\$8.21	\$9.40	1.29	1.16	349	388	450	450
San Diego	\$8.00	\$9.38	\$9.00	0.99	0.78	931	1,151	920	900
Seattle	\$6.80	\$7.98	\$8.00	1.15	1.32	490	530	562	700
Average	\$6.34	\$7.44	\$8.23	1.33	1.45	585	642	691	738
Median	\$6.30	\$7.39	\$8.08	1.07	0.97	549	594	506	575
Maximum	\$8.00	\$9.38	\$9.40	3.39	4.30	931	1,151	1,450	1,582
Minimum	\$4.70	\$5.51	\$7.30	0.52	0.52	349	368	366	394
<i>excluding Atlanta</i>									
Average	\$6.45	\$7.57	\$8.41	0.92	0.88	617	697	540	569
Median	\$6.80	\$7.98	\$8.15	0.99	0.78	608	657	450	450
Maximum	\$8.00	\$9.38	\$9.40	1.29	1.32	931	1,151	920	900
Minimum	\$4.70	\$5.51	\$7.50	0.52	0.52	349	388	366	394
Regulated Cities									
Arlington	\$5.80	\$6.80	\$8.30	3.05	3.46	152	175	464	605
Augusta	\$4.30	\$5.04	\$6.40	0.46	0.58	240	240	110	140
Baltimore	\$4.80	\$5.63	\$6.30	1.41	1.60	769	721	1,085	1,151
Boston	\$6.70	\$7.86	\$9.10	2.68	2.67	569	571	1,525	1,525
Buffalo	\$6.15	\$7.21	\$8.75	1.08	1.06	346	343	375	365
Las Vegas	\$8.50	\$9.97	\$9.00	2.53	1.87	179	306	453	573
Memphis	\$5.35	\$6.28	\$6.65	0.40	0.52	646	576	256	300
Mobile	\$5.20	\$6.10	\$7.15	0.24	0.27	205	184	50	50
New Orleans	\$5.90	\$6.92	\$5.90	2.87	3.48	561	462	1,608	1,608
Orlando	\$5.60	\$6.57	\$6.91	1.67	1.21	133	182	222	220
Pittsburgh	\$7.80	\$9.15	\$8.17	1.22	0.82	410	365	500	300
Rochester	\$6.90	\$8.09	\$8.20	1.10	1.26	246	234	270	295
San Antonio	\$6.20	\$7.27	\$6.90	0.57	0.81	846	931	481	750
San Jose	\$6.40	\$7.51	\$10.60	0.22	0.33	673	826	150	270
Tulsa	\$5.35	\$6.28	\$7.25	0.52	0.60	375	366	196	219
Average	\$6.06	\$7.11	\$7.71	1.33	1.37	423	432	516	558
Median	\$5.90	\$6.92	\$7.25	1.10	1.06	375	365	375	300
Maximum	\$8.50	\$9.97	\$10.60	3.05	3.48	846	931	1,608	1,608
Minimum	\$4.30	\$5.04	\$5.90	0.22	0.27	133	175	50	50

Note: several deregulated and re-regulated cities are omitted due to incomplete data for 1985 or 1992.

Deregulated cities include those using minimum standards, as well as open entry.

Sources

Fares & taxis:

Derived from International Taxicab and Livery Association member surveys for 1985 and 1992.

Data for Phoenix were obtained via interviews conducted by Price Waterhouse.

1985 fares were converted to 1992 dollars based on the CPI for private transportation costs (USDOL, Bureau of Labor Statistics)

Population:

Estimated from US Census. 1985 population was interpolated from 1984 and 1986 Census estimates.

1992 population was extrapolated based on growth rate between 1988 and 1990 Census estimates.

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