

TNC 2020: A Profile of Ride-Hailing in California



**San Francisco
County Transportation
Authority**

Draft Report: April 2023

Acknowledgments

We wish to thank the following individuals who contributed to this report:

PROJECT TEAM

San Francisco County Transportation Authority

Drew Cooper, Senior Transportation Modeler

Joe Castiglione, Deputy Director for Technology, Data and Analysis

Jean Paul Velez, Project Management Consultant

Aliza Paz, Principal Transportation Planner

Eric Young, Director of Communications

Maria Lombardo, Chief Deputy Director

Tilly Chang, Executive Director

Abe Bingham, Senior Graphic Designer



**San Francisco
County Transportation
Authority**

1455 Market Street, 22nd Floor,
San Francisco, CA 94103

TEL 415-522-4800

EMAIL info@sfcta.org **WEB** www.sfcta.org

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Executive Summary

Transportation Network Companies (TNCs) such as Uber and Lyft began providing on-demand, app-based transportation ride-hail services in California in 2009, and have been required to submit annual reports to the California Public Utilities Commission (CPUC) since 2014. These TNC Annual Reports contain information about a wide range of topics, including, but not limited to, trip requests and completions, collisions, and incidents, assaults and harassment, and miles and hours driven. The CPUC has designated the TNC Annual Reports from 2020 onward as public, and a proposed decision would make all past reports public. The 2020 reports are the first reports made public by the CPUC.

This information is of great interest to cities like San Francisco where TNCs operate. In February 2022, the San Francisco County Transportation Authority (Transportation Authority) requested the 2020 public TNC Annual Reports for Uber and Lyft from the CPUC, which provided the reports later that month. These reports cover the period from September 2019 to August 2020 and have been highly redacted by the CPUC.

The CPUC also regulates the nascent autonomous vehicle (AV) passenger service industry and is developing AV regulations in the very same proceedings as TNC regulations. AV passenger services are like TNCs in many ways, but with the important distinction that they plan to, and in some cases already do, use self-driving cars without any human safety driver. AV passenger service companies submit quarterly reports which, by contrast, are routinely published by the CPUC, but similar to the public TNC Annual Reports, are heavily redacted.

This report analyzes and summarizes the 2020 public TNC Annual Reports, and is intended to inform the Transportation Authority Board, as well as state and local policy-makers, and the public, on general characteristics of the TNC market, and on the performance of TNCs in terms of public safety, labor, the environment, and accessibility. Unredacted TNC public Annual Reports could also be used to validate San Francisco's Prop D Traffic Congestion Mitigation Tax receipts, which have been irregular.

The following findings summarize the Transportation Authority's analysis of the 2020 TNC Annual Reports, which cover the six months before the COVID pandemic and the first six months of the pandemic. Transportation patterns changed during the pandemic and continue to evolve. When the 2021 and 2022 Annual Reports are disclosed consistent with the CPUC's data confidentiality rulings, the Transportation Authority will prepare summaries for these reporting years as well.

Key Findings

REPORTING COMPLIANCE & INTEGRITY

The public Annual Reports are incomplete by the standards set by the CPUC. In the 2020 public Annual Reports, Lyft reported 36% of the required data as measured by the percent of required public fields and records that are present and unredacted. Uber reported 99.99% of the required data.

Uber's and Lyft's data is internally inconsistent. For example, Lyft's Annual Reports include two different totals for the number of completed trips in the state, differing by 49.7 million trips, or 81%. Uber's Annual Reports also include two different totals for the number of completed trips, differing by 9.3 million trips, or 6%. As a result, it is not possible to identify basic facts such as the number of completed TNC trips that occurred in California in the 2020 reporting year.

Many reporting requirements are not clearly defined, preventing effective regulatory oversight. For some types of data – such as collisions, DUI complaints, law enforcement citations, and accessibility data, the CPUC provides examples but not requirements

about how to report the data. As a result, the companies report this data differently, preventing effective regulatory oversight.

Due to more extensive redactions in the 2021 Annual Reports, a less extensive evaluation of consistency is possible. However, where consistency can be evaluated, inconsistencies are reduced in some instances. For example, Uber’s number of completed trips in the Requests Accepted and Aggregated Requests Accepted in their 2021 Annual Reports are perfectly consistent, and Lyft’s number of completed trips in these reports are nearly perfect, differing by 0.004%.

GENERAL CHARACTERISTICS

TNC trips are highly concentrated in a few urban areas. TNCs and ride-hail trips are an urban, not a statewide, transportation issue, as shown in Figure 1.

Nearly two-thirds of TNC trips are in San Francisco, Los Angeles, and San Diego counties. Within these counties, trips are most highly concentrated in just a few areas: San Francisco’s downtown core, Los Angeles’ Westside, and at the San Diego airport, respectively.

San Francisco has 500 times more TNC trips per square mile than the rest of California.

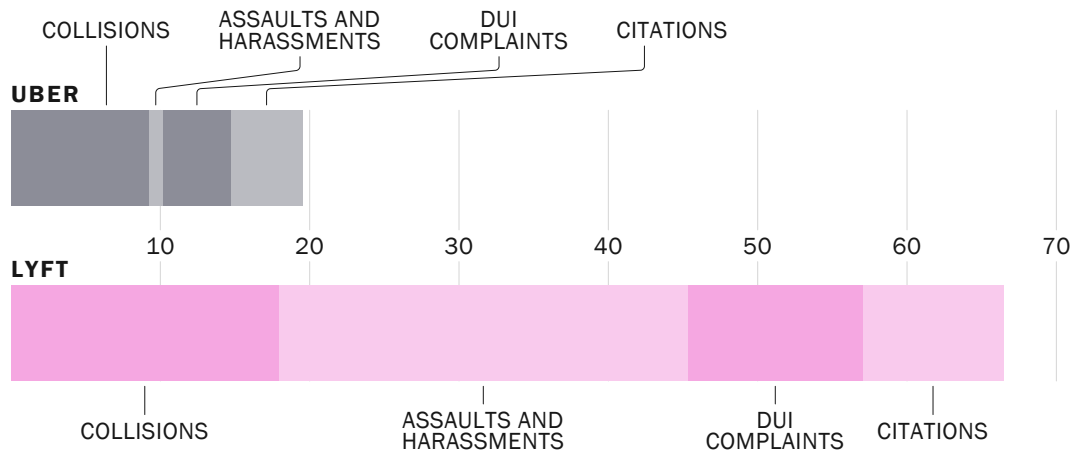
Figure 1. Trip Density by Zip Code from September 2019 to August 2020



PUBLIC SAFETY

Lyft reports 3 times more total public safety incidents per trip than Uber, and 30 times more assaults and harassments per trip. Figure 2 shows the incident rate per hundred thousand trips and suggests that the companies may be reporting public safety incidents differently, pointing to the need for increased review by regulators.

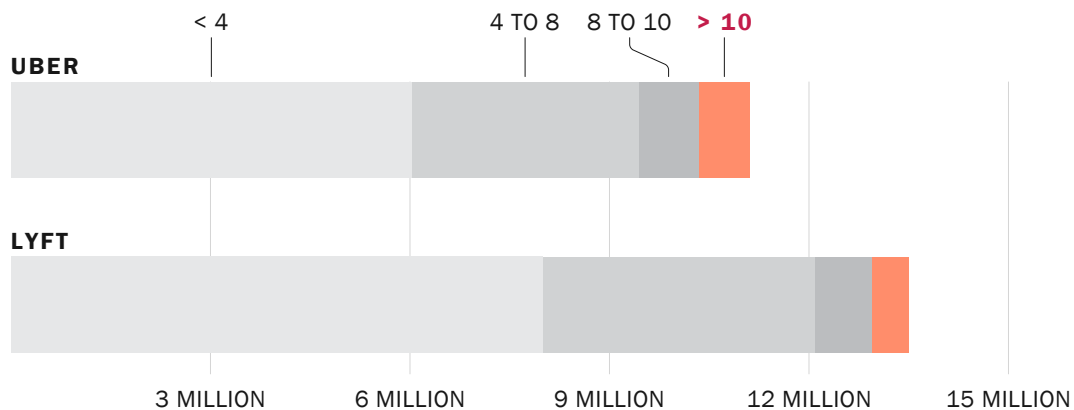
Figure 2. Incidents per 100,000 trips from September 2019 to August 2020



LABOR

Uber and Lyft drivers may violate legal drive-time limits. California law limits drivers providing passenger transportation to “10 hours in any 24-hour period unless 8 consecutive hours off duty have elapsed.” The Annual Reports include 1.3 million days during which drivers drove more than 10 hours. While this report alone cannot confirm that a drive-time violation has occurred, the reports do not account for additional factors like drivers who may be in violation due to driving for both services, or whose shifts straddle 2 or more calendar days. No public enforcement actions have been taken regarding possible violations of legal drive-time limits.

Figure 3. Driver Days by Hours Worked from September 2019 to August 2020



ENVIRONMENT

Lyft's redacted reports prevent environmental oversight. Lyft's annual report withholds key data items necessary to estimate emissions: vehicle miles traveled (VMT), geographic trip origin and destination data, and vehicle make, model, and year.

Uber produced 494,000 metrics tons of CO2 in reporting year 2020, based on a Transportation Authority estimate. Almost 30% of those emissions occurred with no passengers in the vehicle. This is comparable to the CO2 emitted by the 2020 Caldwell Fire in northern California, which burned 81,000 acres.

ACCESSIBILITY

Less than half of all Wheelchair Access Vehicle (WAV) trip requests are served. Under the TNC Access for All Act (Senate Bill No. 1376), the CPUC established a program where TNCs collect a fee from riders for every TNC each trip, which is then used to subsidize on-demand transportation for persons with disabilities, including wheelchair users who need a WAV. But even with this additional financial support, less than half of WAV trip requests are fulfilled.

Uber provides nearly all TNC WAV trips in California. Uber provided 16 times as many WAV trips as Lyft.

	UBER	LYFT	TOTAL
WAV Requests	217,935	11,605	229,540
Completed WAV Trips	101,594	6,158	107,752
Completion Rate	47%	53%	47%

Conclusions

The 2020 public TNC Annual Reports reveal numerous issues related to basic compliance with data reporting requirements, and the integrity of the data itself. At the most basic level, Lyft's 2020 Public Annual Reports are incomplete according to the rules adopted by the CPUC: 8 of their 19 public reports are missing required data fields, and 64% of all Lyft's required public data items are missing. By contrast, Uber's 2020 Public Annual Reports contain all but one of the required public fields. This suggests that reporting rules are applied or enforced inconsistently.

The data contained within the 2020 TNC Public Annual Reports is often self-contradictory and internally inconsistent. For example, Uber's total number of trips differs by more than 9 million from one report to the next, while Lyft's differs by nearly 50 million trips. In some cases, the data submitted is erroneous or unreasonable: Lyft's

reports indicate that it accepted 100% of trip requests received across vast swaths of California. These issues are exacerbated by, if not directly caused by, data reporting requirements that are, at times, unclear; lack of quality assurance or enforcement of quality standards; and application of confidentiality standards that are not consistent with the CPUC's orders.

The lack of accurate, timely and transparent data has left localities without necessary information to support a basic understanding of TNC operations in their jurisdictions or their potential impacts. Timely and accurate data is fundamental to developing sensible public policy and to identify where it is appropriate to seek improved oversight. The pervasive data quality issues suggest the need for quality control, greater adherence to CPUC direction regarding disclosure of data, and enforcement of reporting requirements.

TNCs operate almost exclusively in dense urban areas and during the busiest times of day, where they have been shown to exacerbate congestion and reduce transit ridership. As the reports show, there may be public safety risks, environmental harm, and issues of equitable access to TNC services. California cities, which have no regulatory authority over TNCs, rely on the CPUC to manage impacts, enforce regulations, and provide relevant, timely, thorough, and quality data to support the effective development of informed public policy. Cities face similar regulatory reliance on CPUC regarding AV passenger services. CPUC's public AV reports are following a similar pattern to the public TNC reports of redacted data. Timely, thorough, quality data reporting is essential to effective research and policy-making for both TNC and AV ride-hail passenger services, and effective regulation is critical as these new services become more widely available.

CHAPTER 1

Introduction and purpose

Transportation Network Companies (TNCs) such as Uber and Lyft began providing on-demand, app-based transportation ride-hail services in California in 2009. In 2012, the California Public Utilities Commission (CPUC) began formally regulating TNCs in the state. The CPUC develops regulations through public rulemaking proceedings, and implements regulations through its Consumer Protection and Enforcement Division (CPED).

Since 2014, TNCs operating in California have been required to submit annual reports to the CPUC. These TNC Annual Reports contain information about a wide range of topics, including, but not limited to, trip requests and completions, collisions and incidents, assaults and harassment, and miles and hours driven.

This information is of great interest to cities like San Francisco where TNCs operate. While TNCs can argue for confidential treatment of specific data required to be submitted in their Annual Reports, the CPUC has designated the TNC Annual Reports from 2020 onward as presumptively public, and a proposed decision would make all past reports public.

In February 2022, the San Francisco County Transportation Authority (“Transportation Authority”) requested the 2020 public TNC Annual Reports for Uber and Lyft from the CPUC.¹ The CPUC treated the request as a Public Records Act (PRA) request, and provided the reports later that month. These reports cover the period from September 2019 to August 2020 and are highly redacted. Subsequently, in October 2022, the CPUC published substantially redacted versions of the 2021 public TNC Annual Reports.² Of these reports, only Uber’s 2020 public TNC Annual Reports satisfy the CPUC’s reporting requirements, while the others were redacted to remove public data. When the CPUC releases the 2021 public TNC Annual Reports consistent with its confidentiality determinations, the Transportation Authority will produce a follow-up report documenting findings.

The CPUC also regulates the nascent autonomous vehicle (AV) passenger service industry. The CPUC develops AV regulations in the very same proceedings as TNC regulations, and likewise implements them through the CPED. AV passenger services are like TNCs in more ways than not, but with the important distinction that they plan

Following the rapid rise of ride-hailing and other private mobility services, San Francisco transportation agencies adopted 10 Guiding Principles to serve as a framework for evaluating emerging mobility services and technologies and promote their deployment toward the achievement of city goals, including San Francisco’s Transit-First and Vision Zero policies, and climate and equity objectives. Key among these is the principle of Accountability:

“Emerging Mobility Services and Technologies providers must share relevant data so that the City and the public can effectively evaluate the services’ benefits to and impacts on the transportation system and determine whether the services reflect the goals of San Francisco.”

¹ As detailed below in Chapter 1, Section V, the CPUC has granted confidential treatment over limited data required to be submitted in the TNC’s Annual Reports. Use of the term “public TNC Annual Report” is meant to refer to the portions of the full TNC Annual Reports that the CPUC has deemed to be public and not subject to confidentiality redactions.

² CPUC. <https://www.cpuc.ca.gov/regulatory-services/licensing/transportation-licensing-and-analysis-branch/transportation-network-companies/tnc-data-portal>

to, and in some cases already do, use self-driving cars without any human safety driver. AV passenger service companies submit quarterly reports which, by contrast, are routinely published by the CPUC, but similar to the public TNC Annual Reports, are heavily redacted.

The purpose of this document is to provide information on TNC activity in San Francisco and throughout California as summarized from the CPUC's 2020 public TNC Annual Reports. The report is intended to inform the Transportation Authority Board, as well as state and local policy-makers in other arenas, and the general public, on general characteristics of the TNC market (how many, when, and where are trips happening?), and on performance of TNCs in terms of public safety, labor, environment, and accessibility.

This document examines the 2020 public TNC Annual Reports to present findings organized into topic areas:

- Reporting Compliance and Integrity
- General Characteristics
- Public Safety
- Labor
- Environment
- Accessibility

Each section describes the public interest in TNC activities in that area, the CPUC's role in providing oversight, and what the 2020 public TNC Annual Reports tell us about TNCs. Note that Lyft's 2020 public Annual Reports are substantially incomplete, which is discussed in detail in Section 2.

In 2019, San Francisco voters approved Proposition D, which imposes a tax on all ride-hail trips originating in San Francisco, revenue from which started to be collected in 2020. The Prop D revenue trends have been highly variable prompting the Transportation Authority to explore ways to validate Prop D revenues, including by analyzing the CPUC's public TNC Annual Reports.

1.1. What are TNCs?

TNCs are companies that provide on-demand passenger service through a web-enabled platform. Uber and Lyft are the most well-known TNCs and collectively provide almost all TNC service in California. These services provide taxi-like point-to-point transportation, which is primarily provided in TNC drivers' personal vehicles. TNCs rapidly grew into a popular transportation option likely due to the conveniences that TNCs initially provided including point-to-point service, ease of booking and paying for rides, shorter wait times, generally lower fares (relative to taxis), and real-time communication with drivers. However, due to their widespread adoption in urban areas, TNCs have been shown to increase congestion and emissions by shifting trips from walking, biking, and transit to private vehicles, by adding zero-occupancy "deadheading" mileage in between passenger trips, and by blocking travel lanes for pickups and drop-offs.¹ They have also been shown to decrease transit ridership in these areas.²

1.2. Who regulates TNCs in California?

In California, TNCs are generally regulated by the CPUC, pursuant to the Passenger Charter-party Carriers' Act, PU Code § 5351. TNCs operate under different regulatory constraints, oversight, and enforcement than taxis, which are regulated at the local level and are often subject to limits on fleet size and pricing, safety requirements, and are required to serve all types of passengers. TNCs are required to comply with insurance requirements, regulations on the transportation of minors, and to conduct criminal background checks on drivers. TNCs are required to have a driver training program, an accessibility plan, a zero-tolerance policy, and a plan for avoiding a divide between able and disabled communities. TNCs are required to submit annual reports to the CPUC, and the CPUC may require additional reports or plans to be filed at its discretion. Reporting requirements are discussed in detail in the following section.

¹ Erhardt. Do TNCs Decrease or Increase Congestion? *Science Advances*. Vol 5, Issue 5. May 8, 2019. <https://doi.org/10.1126/sciadv.aau2670>

² Graehler. Understanding the Recent Transit Ridership Decline in Major US Cities: Service Cuts or Emerging Modes? 2019. 98th Annual Meeting of the Transportation Research Board. <https://trid.trb.org/view/1572517>; Erhardt. Transportation Network Companies Increase or Decrease Transit Ridership? Empirical evidence from San Francisco. 2021. <https://doi.org/10.1007/s11116-021-10178-4>

1.3. What are the 2020 TNC reporting requirements?

The 2020 TNC Annual Reports are a collection of individual reports submitted to the CPUC by each TNC operating in California. The 2020 public TNC Annual Reports are the portions of the full 2020 TNC Annual Reports that the CPUC designates public. Table 1 lists the required 2020 TNC Annual Reports and identifies whether they are confidential, public, or partly public. There are 20 individual reports, of which the CPUC has designated 19 either completely or partially public (some items within the reports are confidential and may be redacted). Two reports include “Confidential” in their name for legacy reasons but are, in fact, public. The document *Driver Names & IDs* is the sole report designated entirely confidential as it contains personal information of drivers.

Table 1. Confidentiality Determination of the 2020 TNC Annual Reports

REPORT NAME	CONFIDENTIALITY DETERMINATION
Driver Names & IDs	Confidential
Accessibility Report (Confidential)	Public
Accessibility Report (Public)	Public
Accessibility Complaints (Confidential)	Partially public
Accessibility Complaints (Pub)	Public
Accidents & Incidents	Partially public
Assaults & Harassments	Partially public
50,000+ Miles	Partially public
Number of Hours	Partially public
Number of Miles	Partially public
Driver Training	Public
Law Enforcement Citations	Partially public
Off-platform Solicitation	Partially public
Aggregated Requests Accepted	Public
Requests Accepted	Partially public
Aggregated Requests Not Accepted	Public
Requests Not Accepted	Partially public
Suspended Drivers	Partially public
Total Violations & Incidents	Public
Zero Tolerance	Partially public

1.4. How did the CPUC arrive at these reporting requirements?

The CPUC develops TNC regulations through a quasi-legislative public rulemaking proceeding. The CPUC's Rulemaking R12-12-011 is the primary TNC proceeding and is charged with developing regulations in the areas of safety, ride sharing between multiple passengers, transportation access (including access to public highways and to transportation services using public highways), and insurance.¹ Major decisions related to data reporting, confidential treatment of data, and public sharing of data are summarized in Appendix A. Annual reporting requirements were first established by Decision 13-09-045 (D. 13-09-045) in 2013, which include:

- Detailed trip data
- Public safety incidents
- Driver mileage
- Driver hours

D. 13-09-045 also required TNCs to submit plans to ensure accessible TNC service to disabled communities.

Decision 16-04-041, issued in 2016, expanded the annual data reporting to include:

- a report on vehicles that were driven over 50,000 miles in a year
- a report on incidents arising from fare-splitting (or "pooling")² services
- a report on how fare-splitting operations have impacted the environment
- a report on the effect of fare-splitting operations on traffic-related injuries
- a report documenting drivers suspended for public safety reasons, including violation of zero-tolerance policy, assaulting a passenger or member of the public, harassing a passenger or member of the public, or soliciting business without the TNC app platform

The annual report templates include a report for vehicles driven over 50,000 miles in a year, and reports on public safety incidents and related driver suspensions, but do not include any reports on the effects of fare-splitting on public safety, traffic injuries, or the environment.

¹ Order Instituting Rulemaking on Regulations Relating to Passenger Carriers, Ridesharing, and New Online-Enabled Transportation Services, R.12-12-011, issued December 27, 2012.

² "Fare-splitting" and "pooling" are synonyms which refer to passengers that agree to share all or part of their trip with another paying customer who has also agreed to the same, regardless of whether the separate paying passengers are ultimately matched together resulting in a shared ride.

The 2016 decision also imposed several one-time reporting requirements that TNCs must submit:

- waybills to document the calculation of fares for fare-splitting services
- a plan for studying the impacts of fare-splitting services on traffic safety
- a plan for studying the impacts of fare-splitting services on the environment
- a plan for studying the impacts of TNC vehicles on traffic congestion and VMT

The CPUC has not shared the annual reports required by D. 13-09-045 and D. 16-04-041 publicly to date, with the exception of the incomplete and heavily redacted 2020 public TNC Annual Reports released to the Transportation Authority in response to our request, and the even further redacted 2021 public TNC Annual Reports. The record indicates Uber submitted documentation of their fare-splitting calculations, but not any other one-time requirements, pursuant to D. 16-04-041. The record does not indicate that other companies submitted any of the D. 16-04-041 one-time requirements.

While the rulemaking track identifies the categories of data required of TNC Annual Reports, CPUC CPED staff develop report templates and reporting guidance. CPED staff have revised report templates and guidance over time both with and without general public noticing.

1.5. How did the CPUC determine what is confidential vs public data?

The CPUC rulemaking R12-12-011 also establishes what data is confidential and what data is public. D. 13-09-045 established a presumption of confidentiality, which was reversed by D. 20-03-014. Reports filed before 2020 were presumed confidential, while reports filed in 2020 and after are presumed public. Under D. 20-03-014, a TNC must request confidential treatment of certain data items in their annual reports, and substantiate their requests with “granular specificity”.

Both Uber and Lyft submitted motions with sweeping requests for confidential treatment of their 2020 TNC Annual Reports. The CPUC’s Administrative Law Judge has ruled in favor of public disclosure of the reports, while respecting the need to prevent the disclosure of potentially personally identifiable information.^{1,2} The 2020

¹ Motion of Uber Technologies, Inc. for Leave to File Confidential Information Under Seal; [Proposed] Order. CPUC Rulemaking R12-12-011. Filed 6/22/2020.

² Motion of Lyft, Inc. for Confidential Treatment of Certain Information in Its 2020 Annual Report. CPUC Rulemaking R12-12-011. Filed 6/22/2020.

Confidentiality Ruling granted confidential treatment to data items relating to driver information, precise latitude and longitude, certain information about assaults and harassments, and information that is sealed under a court order or protected through a confidentiality agreement, but rejected confidential treatment of the majority of data items, finding no merit in the claims of disclosure of personal information or of trade secrets.¹ The Commission also found “significant difficulties and delays in obtaining TNCs’ annual report data based upon broad-brush-style or rushed confidentiality claims,” and that “TNCs’ failures to timely comply with the annual reporting requirements have delayed the expeditious review of TNC data and the production of nonconfidential data to the public.”²

The CPUC has twice upheld its 2020 Confidentiality Ruling directing the public release of the 2020 public TNC Annual Reports in response to repeated appeals by Lyft.^{3,4} However, the CPUC has yet to release any TNC Public Annual Reports that fully comply with the Administrative Law Judge’s confidentiality rulings (i.e. reports which fully provide the data categories deemed public by the Commission and which only redact categories of data deemed confidential). The Commission’s latest decision denying Lyft’s appeal of the 2020 Confidentiality Ruling directed Lyft to submit to the CPUC a full public version of their 2020 Annual Report before the end of March 2023. The Transportation Authority has not yet received the re-submitted version of the Lyft’s 2020 Public TNC Annual Report. It’s possible that data missing or redacted from Lyft’s 2020 Public TNC Report was removed pending final dispensation of Lyft’s confidentiality challenges.

1 “2020 Confidentiality Ruling”. Assigned Administrative Law Judge’s Ruling on Uber Technologies, Inc.’s and Lyft’s Motion for Confidential Treatment of Certain Information in Their 2020 Annual Reports. CPUC Rulemaking R12-12-011. 12/21/2020.

2 Decision 21-06-023, page 26. CPUC Rulemaking R12-12-011. 6/3/2021.

3 Decision 22-05-003. CPUC Rulemaking R12-12-011. 5/5/2022.

4 Decision 23-02-041. CPUC Rulemaking R12-12-011. 2/23/2023.

CHAPTER 2

Reporting Compliance & Integrity

Data reporting compliance and integrity is a prerequisite for effective analysis to guide the development of public policy and enforce regulations. This section examines the 2020 public TNC Annual Reports for compliance with reporting requirements and data integrity (meaning that the data is logical and internally consistent).

2.1. Are TNCs submitting the required reports?

Both companies filed the required 2020 TNC Annual Reports. In February 2022, the Transportation Authority requested 2020 public TNC Annual Reports for Uber and Lyft from the CPUC. The CPUC treated the request as a Public Records Act (PRA) request and provided the reports later that month.

2.2. Are the reports complete?

CPUC Staff prepared the 2020 public TNC Annual Reports, including its redactions.¹ A report is considered complete if all of the fields designated as public are present and not redacted.² Table 2 shows the percent completeness of each report by each company, as measured by the percent of required public fields and records that are present and unredacted. Uber's 2020 public TNC Annual Reports are complete, with the exception of one redacted field in the *Accidents & Incidents* report. Lyft's 2020 Annual Reports are not complete.

Table 2. 2020 Public TNC Annual Report Completeness of Required Public Fields

REPORT NAME	UBER	LYFT
Driver Names & IDs	Withheld	Withheld
Accessibility Report (Confidential)	100%	100%
Accessibility Report (Public)	100%	100%
Accessibility Complaints (Confidential)	100%	100%
Accessibility Complaints (Pub)	100%	100%
Accidents & Incidents	95%	87%
Assaults & Harassments	100%	79%
50,000+ Miles	100%	57%
Number of Hours	100%	100%
Number of Miles	100%	100%
Driver Training	100%	100%
Law Enforcement Citations	100%	81%
Off-platform Solicitation	100%	80%
Aggregated Requests Accepted	100%	100%
Requests Accepted	100%	26%
Aggregated Requests Not Accepted	100%	100%
Requests Not Accepted	100%	38%
Suspended Drivers	100%	100%
Total Violations & Incidents	100%	100%
Zero Tolerance	100%	82%

Note: The percentages denote the share of required public fields that are present and unredacted in the public annual reports.

¹ Confirmed by email from CPUC staff dated 3/29/2023.

² CPUC staff redacted data from the 2020 TNC Public Annual Reports by deleting entire columns of data. The following year's reports were redacted by replacing the contents with "REDACTED".

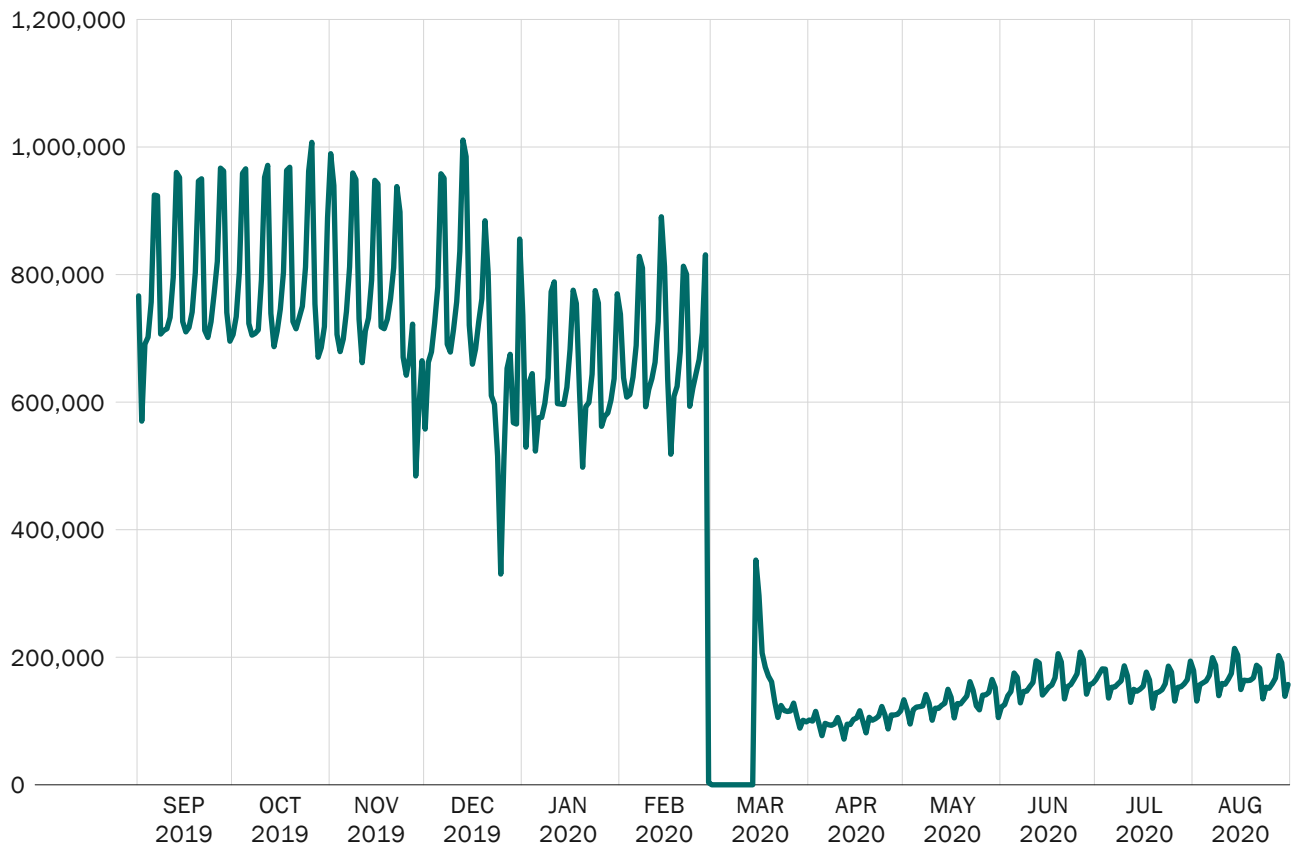
CPUC staff prepared the 2020 public TNC Annual Reports from the original reports provided by the companies. It is not clear whether Lyft's original reports, like the public versions, are substantially incomplete. Among the redacted data are trip date, time and location, VMT data, fares, and vehicle make, model and year. Both Uber and Lyft's reports, in some cases, include required data fields but the data itself is blank, including trip occupancy.

Complete data is important to summarize and support evaluation of the industry's activities:

- Date and time information can be used to evaluate whether trips are taking place during the most congested times of day or whether they are providing late night or weekend service when transit runs less frequently.
- Location information can be used to evaluate whether TNCs are driving in the busiest parts of cities or near regional transit hubs.
- VMT information, combined with time and location can be used to analyze how TNCs may be contributing to congestion.
- VMT information when paired with vehicle make, model, and year can be used to evaluate emissions.
- Trip occupancy can be used to evaluate the number of passengers transported per vehicle (a measure of efficiency) and TNC's compliance with the CO₂ per-passenger-mile requirements of the Clean Miles Standard.
- The missing data from Lyft's reports prevents these analyses for Lyft and for the industry as a whole. See Appendix B: Report Completeness Inventory for detailed accounting of each report's completeness.

A closer look at the data can reveal other issues. For example, Figure 4 shows the daily total number of completed trips from Uber's *Requests Accepted* report, revealing that the first two weeks of March 2020 are missing. This two-week period does not correspond with local COVID Shelter-in-Place (SIP) orders, which went into effect the week following the missing data. It is unclear whether any other Uber reports are also missing data from these two weeks. The redactions and omissions in Lyft's incomplete *Requests Accepted* report hides these kinds of gaps and irregularities, hampering analysis and hindering regulatory oversight.

Figure 4. Uber Trips by Date from September 2019 to August 2020



The 2021 public TNC Annual Reports, available on the CPUC website since October 2022, are even more heavily redacted. Table 3 compares the overall completeness of Uber’s and Lyft’s 2020 and 2021 public TNC Annual Reports, as measured by the percent of required public fields and records that are present and unredacted. Lyft’s 2020 and 2021 reports were both heavily redacted, but while Uber’s 2020 reports were nearly complete, their 2021 reports were redacted similarly to Lyft’s. When the CPUC releases the 2021 public TNC Annual Reports with only properly reacted data, the Transportation Authority will produce a follow-up report documenting findings.

Table 3. Comparison of Completeness of the 2020 and 2021 Public TNC Annual Reports

	2020	2021
Uber	> 99.99%	28%
Lyft	36%	30%

2.3. Is the data reported internally consistent?

Internal consistency means that the data in one part of a company's reports does not contradict data in another part. Contradictory or internally inconsistent data prevents monitoring and evaluation, informed policy-making, and effective regulatory oversight. For a subset of metrics, the TNC Annual Reports contain multiple sources of information from different reports, and each company's reports should produce consistent metrics across all the sources. This section evaluates the internal consistency of the following metrics reported or derived from the 2020 public TNC Annual Reports. These are the most basic descriptors of TNC activity.

- Trip requests
- Completed trips
- Incomplete trip requests
- Vehicle miles traveled (VMT)
- Driver days
- Driver hours

TOTAL TRIP REQUESTS

The total number of trip requests is a measure of TNC demand. It can be calculated 3 ways using data found in 5 reports:

1. By adding the counts of the number of records in the *Requests Accepted* and *Requests Not Accepted* reports,
2. By adding the number of requests in the *Aggregated Requests Accepted* and *Aggregated Requests Not Accepted* report, and
3. By adding the total trip requests in the *Accessibility Report (Confidential)*.¹

Table 4 and Table 5 show total trip requests by source. In the 2020 public TNC Annual Reports, Uber's reported trip requests are internally inconsistent, differing by nearly 20 million trips, or 12%. Lyft's reported trip requests are also internally inconsistent, differing by almost 50 million, or 75%. Lyft's internal inconsistencies are up to 13 times greater than Uber's internal inconsistencies.

¹ Despite the term "Confidential" in the name of this report, it is designated as public per the 2020 Confidentiality Ruling.

Table 4. Total Uber Trip Requests in the 2020 Public TNC Annual Reports

SOURCE	TRIP REQUESTS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from <i>Requests Accepted, Requests Not Accepted</i>)	160,849,005	-	-
Aggregate by zip code (from <i>Aggregated Requests Accepted, Aggregated Requests Not Accepted</i>)	170,145,612	9,296,607	6%
Aggregate by month (from <i>Accessibility Report</i>)	180,483,335	19,634,330	12%

Table 5. Total Lyft Trip Requests in the 2020 Public TNC Annual Reports

SOURCE	TRIP REQUESTS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from <i>Requests Accepted</i>)	66,292,592	-	-
Aggregate by zip code (from <i>Aggregated Requests Accepted</i>)	116,006,968	49,714,376	75%
Aggregate by month (from <i>Accessibility Report</i>)	90,937,292	24,644,700	37%

COMPLETED TRIPS

Completed trips are a measure of total travel and can be used to evaluate a company's share of the TNC market and the TNC share of the total travel market. It is the most basic statistic describing TNC services provided. Completed trips are reported in the Requests Accepted report as a list where each record represents a completed trip, and in the Aggregated Requests Accepted report which contains annual completed trip totals for the reporting period by zip code.¹

Table 6 and Table 7 show the number of completed trips reported by Uber and Lyft in each report. Uber's reported completed trips are internally inconsistent, differing by 9.3 million, or 6%. Lyft's reported completed trips are also

¹ It is not clear whether the number of trips ("TotalAcceptedTrips") in Aggregated Requests Accepted refers to person-trips or requests. Because the report name implies requests, we treat them as such. By contrast, each record in Requests Accepted is clearly a request, and the party size is designated by ("VehicleOccupancy").

The Traffic Congestion Mitigation Tax is a tax on all ride-hail trips originating in San Francisco, which began collections in 2020. San Francisco's revenues from the tax have been highly irregular. Redactions of fare data in the TNC Annual Reports prevent independent validation of tax revenues, and the inconsistencies in the 2020 Annual Reports documented in this report raise questions about whether the 2020 TNC Annual Report data would be sufficient for independent validation even if fare data weren't redacted. However, consistent, unredacted data from the TNC Annual Reports would support independent validation of tax revenues.

internally inconsistent, differing by 49.7 million, or 81%. Lyft's internal inconsistencies are 14 times greater than Uber's internal inconsistencies.

Table 6. Uber Completed Trips in the 2020 Public TNC Annual Reports

SOURCE	COMPLETED TRIPS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from <i>Requests Accepted</i>)	157,167,691	-	-
Aggregated by zip code (from <i>Aggregated Requests Accepted</i>)	166,464,298	9,296,607	6%

Table 7. Lyft Completed Trips in the 2020 Public TNC Annual Reports

SOURCE	COMPLETED TRIPS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from <i>Requests Accepted</i>)	61,072,046	-	-
Aggregated by zip code (from <i>Aggregated Requests Accepted</i>)	110,786,422	49,714,376	81%

INCOMPLETE TRIP REQUESTS

Incomplete trip requests are a measure of unserved demand and can be used to calculate completion rates. Incomplete trip requests are reported in *Requests Not Accepted* as a list and in *Aggregated Requests Not Accepted* as annual totals aggregated by zip code.

Table 8 and Table 9 show the total requests that were not accepted reported by Uber and Lyft in each report. Uber's incomplete trip requests are internally consistent (numbers match exactly) in each report. Lyft's incomplete trip requests are internally consistent in each report.

Table 8. Uber Total Incomplete Trip Requests in the 2020 Public TNC Annual Reports

SOURCE	INCOMPLETE TRIP REQUESTS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from <i>Requests Not Accepted</i>)	3,681,314	-	-
Aggregate by zip code (from <i>Aggregated Requests Not Accepted</i>)	3,681,314	0	0%

Table 9. Lyft Total Incomplete Trip Requests in the 2020 Public TNC Annual Reports

SOURCE	INCOMPLETE TRIP REQUESTS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from Requests Not Accepted)	5,220,546	-	-
Aggregate by zip code (from Aggregated Requests Not Accepted)	5,220,546	0	0%

VEHICLE MILES TRAVELED (VMT)

VMT is a measure of the total amount of travel. It is used in many system performance metrics, including in environmental analysis to calculate emissions, and is a key indicator of demand and congestion. It is reported by trip in *Requests Accepted* and aggregated by driver-day in *Number of Miles*.¹

Table 10 and Table 11 show VMT reported by Uber and Lyft in each report. Uber's reported VMT is internally inconsistent, differing by nearly 1 billion VMT, or 59%. Lyft's *Requests Accepted* report is incomplete and cannot be assessed for consistency of reported VMT.

Table 10. Uber VMT in the 2020 Public TNC Annual Reports

SOURCE	VMT	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from <i>Requests Accepted</i>)	1,624,860,871	-	-
Aggregate by driver day (from <i>Number of Miles</i>)	662,247,794	-962,613,077	-59%

Table 11. Lyft VMT in the 2020 Public TNC Annual Reports

SOURCE	VMT	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list (from <i>Requests Accepted</i>)	Missing	-	-
Aggregate by driver day (from <i>Number of Miles</i>)	1,082,681,881	Unknown	Unknown

DRIVER DAYS

Driver days are used to measure labor conditions and can be used to evaluate compliance with labor laws. Each record in the *Number of Miles* and the *Number of Hours* reports represents a driver day.

¹ TNC service is defined in three phases: phase 1 is when a driver has not accepted a ride, phase 2 is when a driver has accepted a ride, and is en-route to pickup the passenger(s), and phase 3 is when the passenger is in the vehicle (i.e., the trip).

Table 12 and Table 13 show the total driver days reported by Uber and Lyft in each report. Uber's reported driver days are internally inconsistent, differing by 1.4 million, or 15%. Lyft's reported driver days are also internally inconsistent, differing by 100,000, or 1%. Uber's internal inconsistency is 22 times higher than Lyft's.

Table 12. Uber Driver Days in the 2020 Public TNC Annual Reports

SOURCE	DRIVER DAYS	DIFFERENCE	PERCENT DIFFERENCE
Aggregate by driver day (from <i>Number of Miles</i>)	9,666,788	-	-
Aggregate by driver day (from <i>Number of Hours</i>)	11,112,666	1,445,878	15%

Table 13. Lyft Driver Days in the 2020 Public TNC Annual Reports

SOURCE	DRIVER DAYS	DIFFERENCE	PERCENT DIFFERENCE
Aggregate by driver day (from <i>Number of Miles</i>)	13,602,436	-	-
Aggregate by driver day (from <i>Number of Hours</i>)	13,509,188	-93,248	1%

DRIVER HOURS

Driver hours are also used to measure labor conditions and can support evaluation of compliance with labor laws. *Number of Miles* reports total driver hours by driver day. Driver hours by trip for Period 2 (when a driver is en-route to pick up a passenger) and Period 3 (when the passenger is in the vehicle) can be derived from the *Requests Accepted* reports, but Period 1 (when a driver is waiting for a ride request) cannot be derived. Therefore, the total of Period 2 and Period 3 hours in *Requests Accepted* should be strictly less than the total hours in *Number of Hours*.

Table 14 and Table 15 show driver hours reported by Uber and Lyft in each report. Uber's *Requests Accepted*, which only includes hours for Periods 2 and 3, reports 59 million driver hours, **higher** than the 47 million driver hours reported in *Number of Miles* which includes hours for Periods 1, 2 and 3. Lyft's driver hours cannot be evaluated for consistency due to redactions of date and time information from Lyft's *Requests Accepted* report.

Table 14. Uber Driver Hours in the 2020 Public TNC Annual Reports

SOURCE	DRIVER HOURS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list, P2+P3 only (from <i>Requests Accepted</i>)	58,897,421	-	-
Aggregate by driver day, P1+P2+P3 (from <i>Number of Hours</i>)	46,885,564	-12,011,857	-20%

Table 15. Lyft Driver Hours in the 2020 Public TNC Annual Reports

SOURCE	DRIVER HOURS	DIFFERENCE	PERCENT DIFFERENCE
Disaggregate trip list, P2+P3 only (from <i>Requests Accepted</i>)	Missing	-	-
Aggregate by driver day, P1+P2+P3 (from <i>Number of Hours</i>)	52,351,454	Unknown	Unknown

SUMMARY OF INTERNAL CONSISTENCY

Table 16 summarizes the internal consistency findings for the 6 metrics for which consistency was evaluated for each company. The only metric Uber and Lyft reported in an internally consistent manner was incomplete requests. Uber's reports were internally inconsistent for the remaining 5 metrics. Of the remaining metrics, Lyft's reports were internally inconsistent for 3 and could not be evaluated for 2 because the required data is missing.

Table 16. Summary of Internal Consistency of the 2020 Public TNC Annual Reports

METRIC	UBER	LYFT
Total Requests	Inconsistent	Inconsistent
Completed Trips	Inconsistent	Inconsistent
Incomplete Requests	Consistent	Consistent
VMT	Inconsistent	Incomplete
Driver Days	Inconsistent	Inconsistent
Driver Hours	Inconsistent	Incomplete

The 2020 public TNC Annual Reports for both Uber and Lyft are internally inconsistent for many of the most basic metrics. In two of the cases evaluated, Lyft's reports are incomplete and their internal consistency cannot be evaluated.

The extent and scale of these inconsistencies prevent a sound understating of the state of the industry, and hinders the development of informed policy-making and effective regulatory oversight of TNCs. For example, whether Lyft completed 61 million trips, or 110 million trips, is critical to understanding the overall TNC market size. The discrepancy of one billion VMT in Uber’s Annual Reports is highly relevant for understanding California’s progress in meeting emission reduction goals.

Table 17 summarizes the consistency of the 2021 public TNC Annual Reports. Due to more extensive redactions in the 2021 public Annual Reports, a less extensive evaluation of consistency is possible. However, where consistency can be evaluated, inconsistencies are reduced in some instances. For example, Uber’s number of completed trips in the *Requests Accepted* and *Aggregated Requests Accepted* in their 2021 Annual Reports are perfectly consistent, and Lyft’s number of completed trips in these reports are nearly perfect, differing by 0.004%. But in many cases it is not possible to assess consistency because of the increased level of redaction in the 2021 Public Annual Reports.

Table 17. Summary of Consistency of the 2021 Public TNC Annual Reports

METRIC	UBER	LYFT
Total Requests	Inconsistent	Inconsistent
Completed Trips	Consistent	Inconsistent
Unaccepted Requests	Consistent	Consistent
VMT	Incomplete	Incomplete
Driver Days	Consistent	Inconsistent
Driver Hours	Incomplete	Incomplete

CHAPTER 3

General Characteristics

The previous section evaluated the completeness and integrity of the 2020 public TNC Annual Reports, revealing extensive data quality issues. This section explores the reports, in order to identify general characteristics of TNC activity, where possible, and acknowledge limitations and uncertainty otherwise. In some places, this section reveals additional data quality issues. The 2020 public TNC Annual Reports, and the figures presented in this section, cover the period of September 2019 through August 2020.

3.1. How many TNC trips were taken?

Due to internal inconsistencies in the reports noted in the prior section, the number of TNC trips taken vary from 218 million and 277 million trips, a range of 59 million trips (27%). Table 18 shows the reported trip totals by company. Uber's reported trips range from 157 million to 166 million and Lyft's range from 61 million to 111 million; the total ranges from 218 to 277 million.

Table 18. TNC Trips from September 2019 to August 2020

REPORT	UBER	LYFT	TOTAL
Completed Trips (from <i>Requests Accepted</i>)	157,167,691	61,072,046	218,239,737
Completed Trips (from <i>Aggregated Requests Accepted</i>)	166,464,298	110,786,422	277,250,720
Difference	9,296,607	49,714,376	59,010,983
Percent Difference	6%	81%	27%

3.2. Where were TNC trips taken?

TNC trips were highly concentrated in urban areas.¹ Figure 5 shows total trips and trips per square mile by county for the 10 counties with the most TNC trips. Nearly two-thirds (64%) of all TNC trips in California occurred in just 3 counties: Los Angeles, San Francisco, and San Diego, which collectively contain only 5% of its land area. While Los Angeles has the most trips of any county, San Francisco has by far the greatest concentration of TNC trips, with nearly 500 times more TNCs per square mile than the rest of the state.

¹ The total number of trips by zip code is based on the Aggregated Requests Accepted reports because Lyft's Requests Accepted report is incomplete and does not include zip codes. As noted previously, the total number of trips is not consistent across reports.

Figure 5. Total Trips and Trip Density by County for the Top 10 Counties by Number of Trips from September 2019 to August 2020

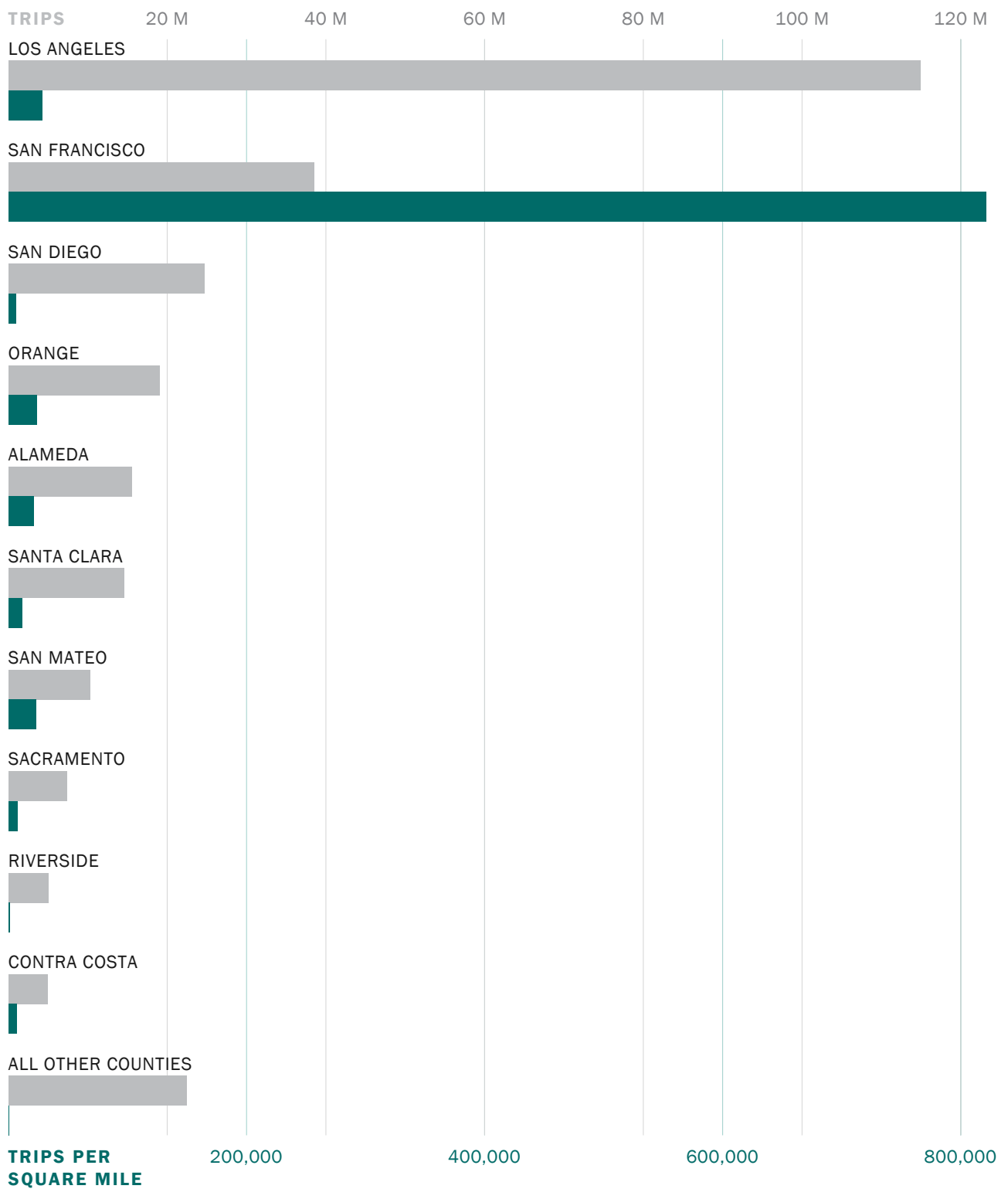


Figure 6 shows trip density by zip code tabulation area (“zip code”). It illustrates the extreme concentration of trips within a few small areas, most prominently San Francisco. Within San Francisco, trips are further concentrated within the downtown core on the city’s most congested streets where the city prioritizes sustainable, space-efficient modes of travel, such as transit, bicycling and walking.

Figure 6. TNC Trip Density by Zip Code from September 2019 to August 2020



3.3. When were TNC trips taken?

This section is limited to Uber because Lyft’s 2020 TNC Public Annual Reports are missing required data and time information necessary for temporal analysis.

Figure 7 shows the average Uber trips by day of week for the 6 months prior to the pandemic and the first 6 months during the pandemic. The figure shows that Uber trips steadily increased from Monday to Friday, are at their highest on Friday and Saturday, and their lowest on Sunday. It further shows that trips declined by 80% during the first 6 months of the pandemic.

Figure 7. Average Trips by Day of Week, Before and During the Pandemic, from September 2019 to August 2020

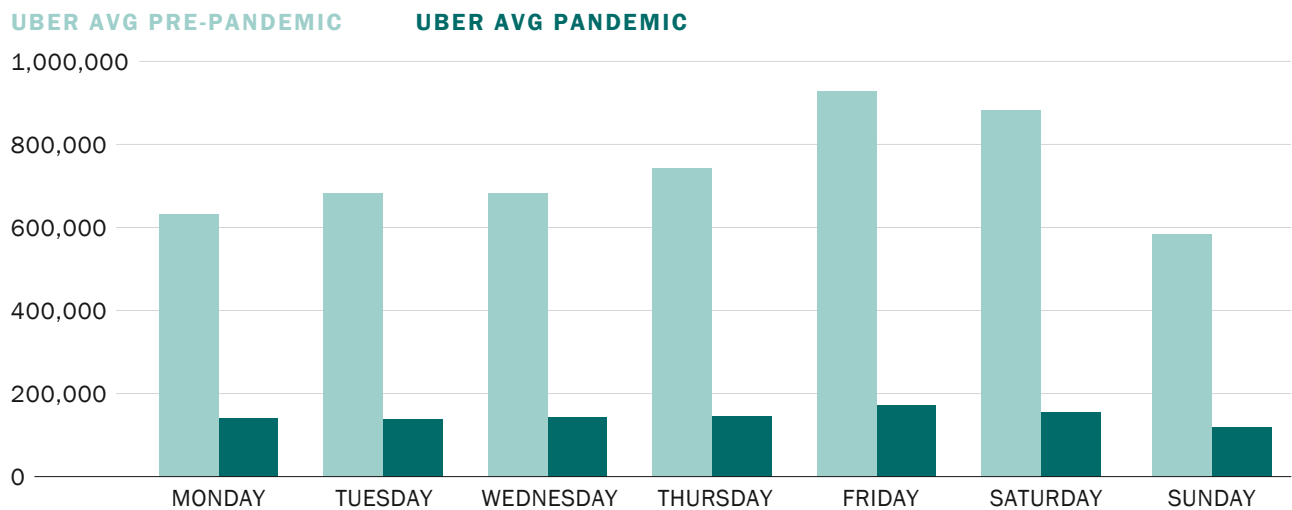
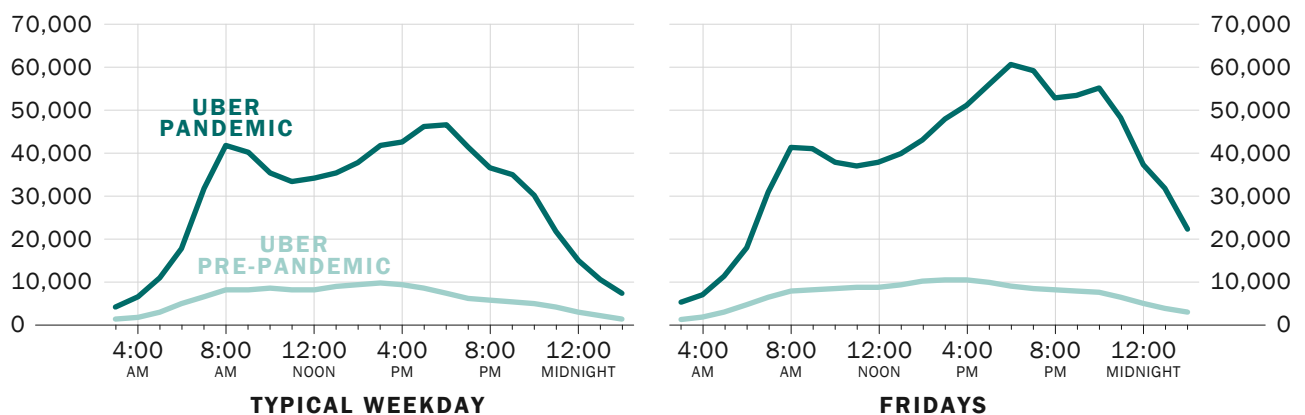


Figure 8 shows Uber trips by time of day for a typical weekday and average Friday before and during the pandemic.¹ Prior to the COVID pandemic, trips had a diurnal distribution during typical weekdays: low trip volumes during late night, peaks of activity in the morning and early evening when roadway congestion is most severe, and sustained but lower volumes throughout the midday. Fridays had a similar morning peak, but higher trips throughout the midday, a much larger evening peak, and a third late-evening peak. During the pandemic, Uber trips decreased substantially and time-of-day profiles were flatter, and peaked earlier, in the mid-afternoon.

Figure 8. Trip by Time of Day on an Average Typical Weekday and Friday, Before and During the Pandemic, from September 2019 to August 2020



¹ A typical weekday is an average of non-holiday Tuesdays, Wednesdays, and Thursdays.

Uber trips take place on all days of the week and at all times of day, with a trend towards increased usage as the work week progresses. Uber usage is greatest during traditional AM peak and PM peak hours, extending into the evening. Due to Lyft's incomplete 2020 public TNC Annual Reports, Lyft's trips by day of week and by time of day are not known.

3.4. How many miles did TNCs drive?

VMT is a measure of the total amount of travel. It is used in environmental analysis to calculate emissions and is a key indicator of driving demand.

Table 19 shows the VMT reported by each company. Uber's reported VMT ranges from 662 million to 1.6 billion, a difference of 960 million. The CPUC redacted VMT data from *Requests Accepted* and reported 1.1 billion VMT in *Number of Miles*. Fleetwide VMT is unknown due to internal inconsistencies and data redacted from Lyft's reports. Fleetwide VMT could range between 1.7 billion and 2.7 billion, or even exceed these figures.

Table 19. Total VMT from September 2019 to August 2020

COMPANY	UBER	LYFT	TOTAL
VMT (from <i>Requests Accepted</i>)	1,624,860,871	Missing	Unknown
VMT (from <i>Number of Miles</i>)	662,247,794	1,082,681,881	1,744,929,675
Difference	-962,613,077	Unknown	Unknown
Percent Difference	-59%	Unknown	Unknown
Minimum VMT	662,247,794	1,082,681,881	1,744,929,675
Maximum VMT	1,624,860,871	1,082,681,881	2,707,542,752

3.5. How many total hours of service does each TNC provide?

Total hours of service is a measure of the service provided, and when compared with completed trips or VMT can give insights into service efficiency. The number of hours worked are reported for each driver on each day worked by that driver in the *Number of Hours* report.

Table 20 shows the total and share of driver hours reported by each company. Uber reports 46.9 million hours and Lyft reports 52.4 million hours. Uber reported 47% of the total hours, which is much lower than their share of trips presented in Chapter 3 where, depending on the report, Uber's share of trips could be as low as 60% or as high as 72%. This could either mean that Lyft drivers log many more hours for each trip they provided, effectively parked or driving empty more of the time than Uber, or Uber and Lyft are not reporting trips or hours the same way.

Table 20. Total Driver Hours from September 2019 to August 2020

	UBER	LYFT	TOTAL
Total Hours	46,885,564	52,351,454	99,237,018
Share of Total Hours	47%	53%	100%

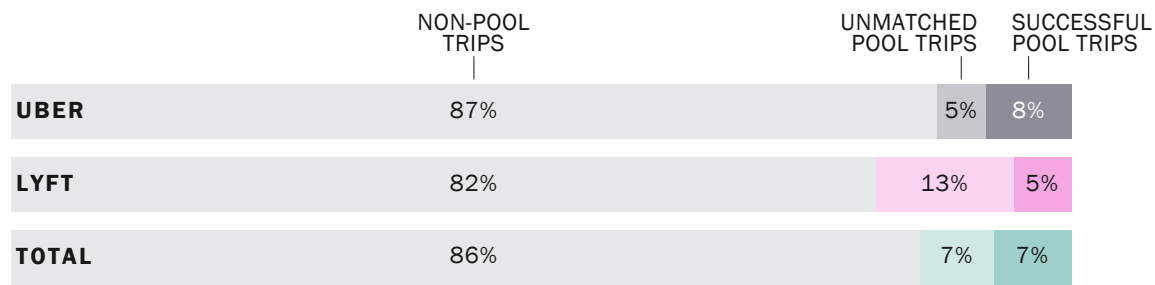
3.6. How many TNC trips are “pooled”?

A “pooled” TNC trip is a trip when a passenger indicates they are willing to share a ride with another passenger in exchange for a reduced cost. A pooled trip is “matched” when two or more passenger requests are put into a single driver itinerary that results in the passengers sharing some portion of their trip. In theory, if pooling led to sufficiently high vehicle occupancy rates, it could reduce VMT enough to compensate for the increased VMT due to TNC deadheading and due to shifts to TNCs from lower VMT modes such as transit, biking, and walking.

Figure 9 compares shares of pooled trips out of all completed trips, based on the *Requests Accepted* and *Requests Not Accepted* reports. About 31 million (14%) of all completed TNC trips were requests to be pooled. Only 16 million were successfully matched with another passenger. In other words, more than half of pool-requested trips are functionally solo TNC trips.

About 31 million (14%) of all completed TNC trips were requests to be pooled. Only 16 million were successfully matched with another passenger. In other words, more than half of pool-requested trips were functionally solo TNC trips.

Figure 9. Pooling of Completed Trips from September 2019 to August 2020



Pooling services were suspended starting in March 2020 due to the COVID-19 pandemic. Lyft’s reports withheld trip dates and times, so the effect of the pandemic on Lyft’s overall pooling rates cannot be evaluated. Uber’s data indicates that 85% of all their trips during the reporting period of September 2019 to August 2020 occurred before shelter-in-place orders went into effect on March 17, 2020. Figure 10 shows that 15% of Uber’s pre-pandemic trips were requested to be pooled, and 10% were successfully matched.

Figure 10. Pre-pandemic Uber Pooling of Completed Trips

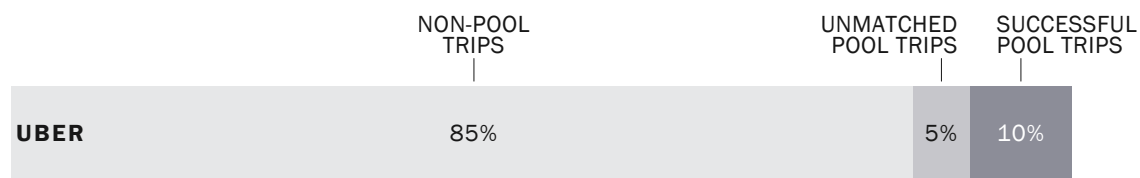
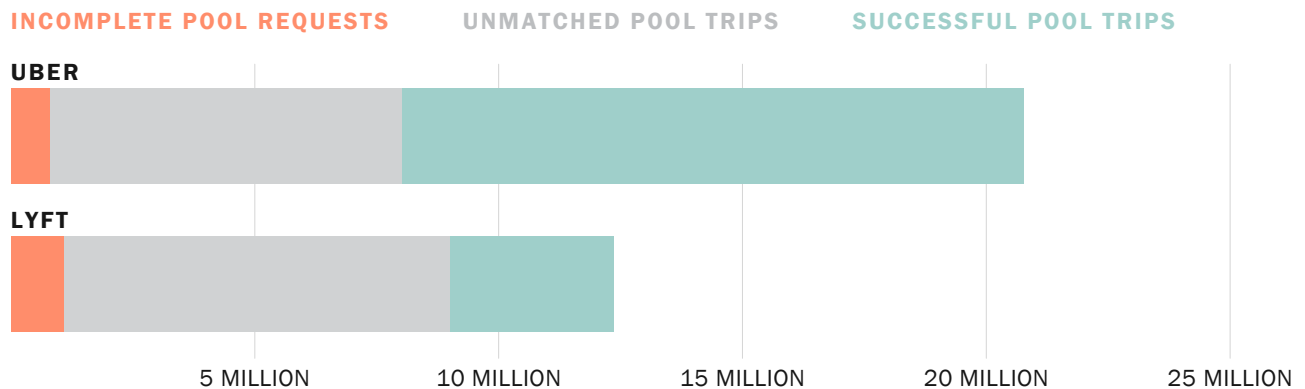


Figure 11 shows the pooled requests received by each company. Uber receives more total pooled requests, accepts more, and matches more of them than Lyft does. Uber received 20.7 million requests for pooled trips, of which 20.0 million (96%) were accepted, and 12.7 million (61%) were matched. Lyft received 12.4 million requests for pooled trips, of which 11.3 million (91%) were accepted, and 3.4 million (27%) were matched.

Figure 11. Requests for Pooled Trips from September 2019 to August 2020

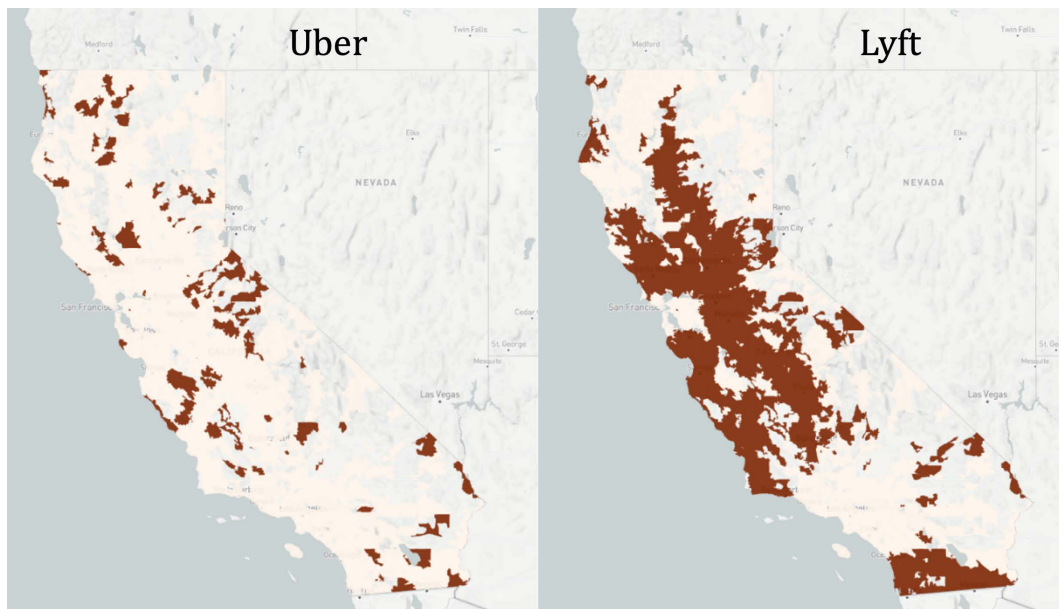


3.7. Where are requests not completed?

Requests for TNC trips may not result in completed trips for a number of reasons. For example, a request may not be successfully matched with an available driver, or may be accepted by a driver and then cancelled, or a passenger may cancel their request after some time has passed. The TNC company, the driver, and the prospective passenger each play a role in whether a request results in a completed TNC trip. The trip acceptance rate is the number of trip acceptances divided by the number of trip requests, expressed as a percentage. Trip acceptance rates may reveal implicit or explicit biases if, for example, drivers are less likely to accept trip requests from some areas compared to others.

Extensive discrepancies in Lyft's aggregated request data make it impossible to perform meaningful analysis of trip acceptance rates. Figure 12 shows areas where Uber and Lyft have reported completing 100% of trip requests. Uber has perfect trip completion rates in only a handful of zip codes, within which it received fewer than 400 total trip requests. Lyft reports perfect trip acceptance rates in half of the zip codes where it provided trips, including all of Sacramento County, and most of San Diego and Santa Clara counties. This implies, for example, that of the 4.2 million trip requests received in Sacramento County alone, not a single one was ever cancelled by a passenger, or not accepted by a driver, or not matched with an available driver. Across all of these zip codes Lyft received more than 26 million trip requests. It's extremely unlikely that Lyft's reported trip completion rates in these zip codes are accurate.

Figure 12. Zip Codes with Perfect 100% Trip Acceptance Rates from September 2019 to August 2020 for Uber (left) and Lyft (right)



CHAPTER 4

Public Safety

The Passenger Charter-party Carriers' Act, enacted in 1961, authorizes the CPUC to regulate “[t]he use of public highways for the transportation of passengers for compensation ... and to promote carrier and public safety through its safety enforcement regulations.”¹ The CPUC requires TNCs submit a number of annual reports relevant to passenger and public safety:

- *Accidents & Incidents* documents vehicle collisions
- *Assaults & Harassments* documents reports of assault and harassment
- *Law Enforcement Citations* documents citations issued by law enforcement officers
- *Zero Tolerance* documents reports of driving under the influence

This section presents an analysis of public safety incidents from September 2019 to August 2020 from the 2020 public TNC Annual Reports. It includes incident totals, rates per square mile, and rates per 100,000 trips. Areal (per square mile) rates are useful for understanding incidents that may impact the general public. Trip-based rates are useful for understanding risks to TNC users. VMT-based rates (which are preferable over trip-based rates) are useful in assessing risks to passengers and to the general public relative to the total amount of driving, but cannot be included because Lyft's reports are redacted to remove VMT information.

¹ California Public Utilities Code § 5352(a). https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=PUC&division=2.&title=&part=&chapter=8.&article=1.

4.1. How many TNC public safety incidents were reported?

Figure 13 shows the number of incidents reported by each company within the categories of collisions, assaults and harassments, DUI complaints, and citations. Uber reported 30,000 public safety incidents, while Lyft reported almost 45,000 public safety incidents. There were nearly 27,000 collisions, approximately 14,800 reported by Uber and 11,200 reported by Lyft. In addition, over 20,000 assaults and harassments (almost all of them reported by Lyft), 15,000 DUI complaints, and 14,000 citations were also reported.

Figure 13. Public Safety Issues by Category

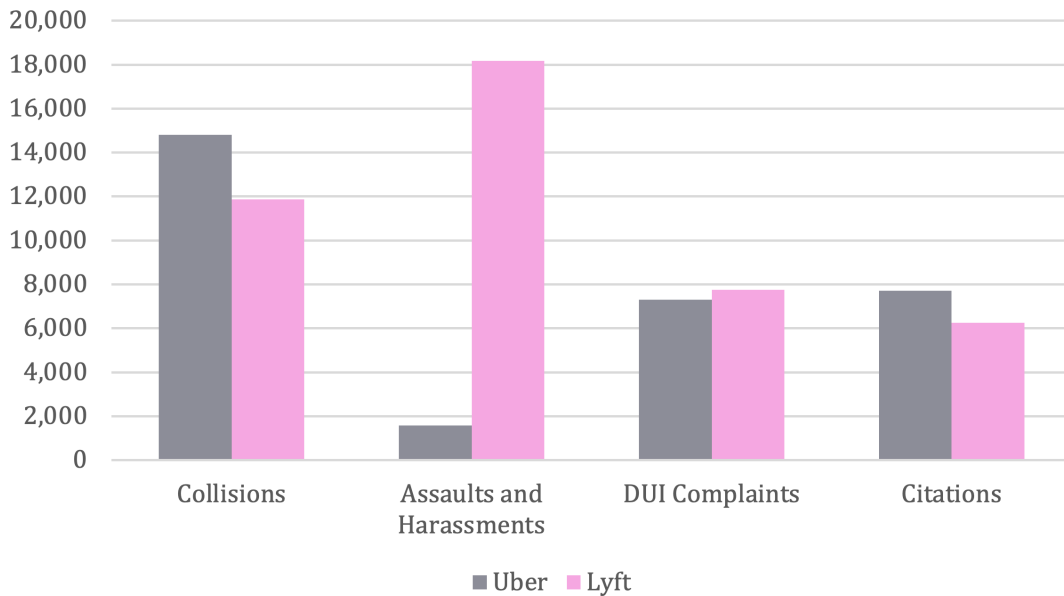
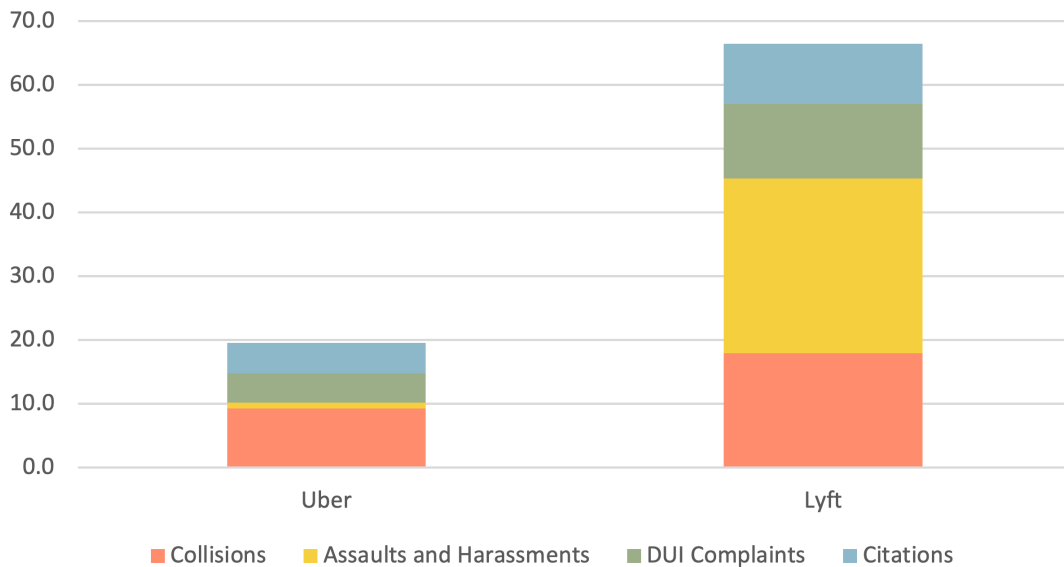


Figure 14 shows the rates of incidents per 100,000 trips. Lyft reported total public safety incidents rates that were more than 3 times higher than Uber. Lyft’s collisions rates were twice Uber’s. Lyft’s assaults and harassment rates were more than 30 times Uber’s, Lyft’s DUI complaints were over 2.5 times Uber’s, and Lyft’s citations were twice Uber’s. These figures suggest that the companies may be reporting public safety incidents differently, pointing to the need for increased review by regulators.

Figure 14. Incidents per 100,000 trips from September 2019 to August 2020

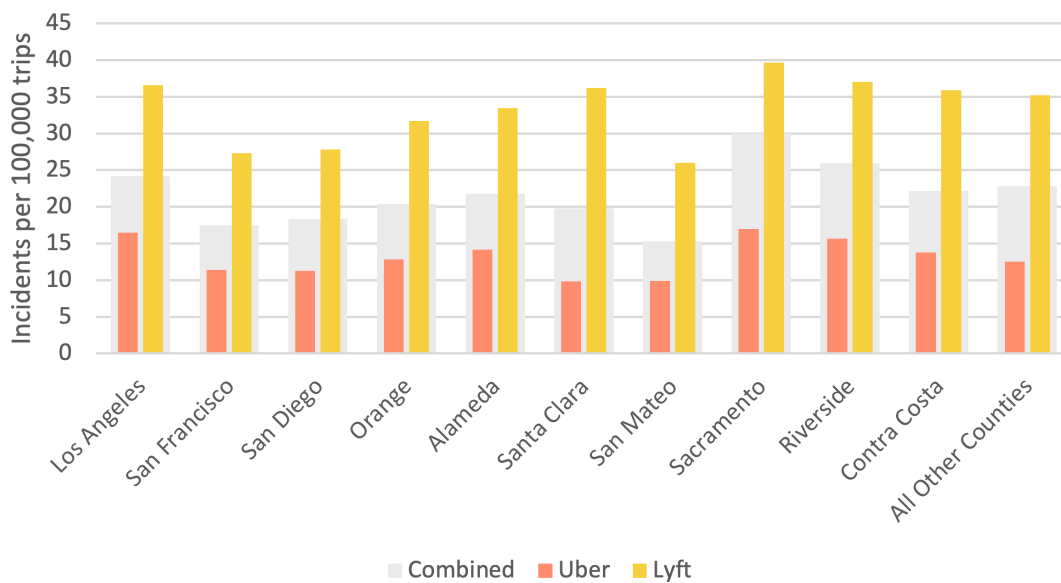


4.2. Where did public safety incidents occur?

Assaults and harassments, collisions, and DUI complaints happened everywhere that TNC trips happened. Figure 15 shows incident totals and rates per 100,000 trips by category for the top 10 counties by number of trips. Incident rates vary by county and by company. San Francisco, which has the highest density of trips, has among the lowest public safety incident rates. By contrast, Sacramento, which has a low trip density, has the highest rate of public safety incidents. This may be partly explained by trip lengths, as denser counties with shorter average trip lengths may be less likely to be involved in a public safety incident on any particular trip. However, Lyft’s incomplete reports prevent an analysis of the relationship between public safety events and trip lengths.

Lyft’s public safety incident rates were much higher than Uber’s in each of the top 10 counties with the most TNC trips. The percent difference in incident rates between the companies was closest in Los Angeles County, where Lyft’s rate is 122% higher than Uber’s, and furthest in Santa Clara County, where Lyft’s rate is 268% higher than Uber’s.

Figure 15. Rates of Public Safety Incidents per 100,000 trips by Company and County from September 2019 to August 2020



Assaults and harassments, collisions, and DUI complaints, like trip requests were reported by zip code. Citations, per the *Law Enforcement Citations* template were reported with a citation location. However, the CPUC did not provide explicit requirements for how the location should be reported and as a consequence each company reported it differently.

Table 21 shows the total number of citations by location. It is not clear why nearly all the reported citations were at airports. Uber reported 7,711 citations, all at airports. Lyft reported 6,259 citations, 6,038 (96%) of which were at airports, while 214 were in cities, and the remaining 7 were in other locations like an unincorporated neighborhood.

Table 21. Number of Citations by Company and Location from September 2019 to August 2020

LOCATION	UBER	LYFT	TOTAL
Citations at Airports	7,711	6,038	13,749
Citations in Cities	0	214	214
Citations at Other Locations	0	7	7
Citations	7,711	6,259	13,970

CPUC has not provided guidance to report citations solely at airports. The almost complete absence of TNC citations in locations other than airports suggests inconsistent or incomplete reporting and prevents the CPUC from assessing a key indicator of public safety and compliance with laws and regulations.

4.3. What types of public safety incidents occurred?

It is difficult to provide a clear depiction of the types of public safety incidents because the CPUC has not standardized reporting requirements for collisions, assaults and harassments, DUI complaints, or law enforcement citations. The lone exception, Decision 22-06-029, issued on June 24, 2022, adopted taxonomies for sexual assault and sexual harassment. These taxonomies only apply to a subset of the events reported in the Assaults and Harassments reports and had not been adopted when the 2020 Annual Reports were filed. In any event, the type of assault and/or harassment has been removed from the 2020 Public Annual Reports entirely.

In the absence of clear and consistent requirements, **each company decides themselves** how they report public safety data. As a result, this report is limited to only summarizing the overall number of incidents and cannot provide a more detailed analysis of types of public safety incidents. Similarly, it is difficult to develop public policy or exercise any meaningful or consistent regulatory oversight with respect to these public safety concerns.

Table 22 shows how each company reports the types of public safety incident for collisions, DUI complaints, and citations. Note that the public version of *Assaults & Harassments* does not contain any incident descriptions or categorizations. The table that each company uses reflects a different taxonomy to categorize the type of collision. Uber uses 7 response codes briefly describing the collision type. Lyft uses 5 response codes that describe, not the type of collision, but a qualitative description of the extent of damage. For DUI complaints, Uber uses 8 response codes, all describing allegations against the driver. Lyft used 4 response codes, 2 for describing allegations against the driver and 2 describing allegations against the passenger. One of the response codes is qualified as a first occurrence, "alleged_marijuana_smell__first_instance", but no other response codes for further occurrences. The other codes Lyft uses are not qualified in this way. For citations, Uber used 657 unique response codes and Lyft used 347 unique response codes.

Table 22. Public Safety Incident Taxonomies in the 2020 Public Annual Reports

CATEGORY	FIELD	UBER	LYFT
Collisions	IncidentAccidentType	<ul style="list-style-type: none"> • Multiple Vehicle Collision • Open Door Into Vehicle • Pedestrian • Single Vehicle Collision • Struck Animal • Struck Debris • Struck Road Debris/Animal 	<ul style="list-style-type: none"> • No Damage • Not driveable • major damage • minor damage • not reported
DUI	ZeroToleranceDescr	<ul style="list-style-type: none"> • Rider alleged the driver had the appearance of impairment • Rider alleged alcohol or containers present in vehicle • Rider alleged drugs or paraphernalia were present in the vehicle • Rider alleged the driver had the appearance of impairment • Rider alleged the driver sounded impaired • Rider alleged the smell of alcohol was present in the vehicle • Rider alleged the smell of marijuana was present in the vehicle • Rider alleged unsafe driving behavior 	<ul style="list-style-type: none"> • alleged_marijuana_smell__first_instance • alleged_zero_tolerance • passenger_alleged_drug_possession • pax_allegedly_had_open_container
Citations	CitationReason	Unique incident description	Unique incident description

Table 23 shows the consequences to the driver resulting from public safety incidents. As with incident classifications, the CPUC has in most cases not provided clear guidance for how to report consequences to the driver, leaving companies to determine themselves how to report driver consequences.¹ Some classification of consequences to the driver is reported for assaults and harassments, DUI complaints, and citations, but not for collisions. Additionally, a binary indicator of whether the involved driver is currently authorized to drive is available for assaults and harassments and DUI complaints.

¹ To describe the driver consequences of assaults and harassments, Uber uses 2 response codes and Lyft uses 3 response codes. For DUI complaints, a description of the resolution and a driver consequence are reported. Uber uses 4 response codes to describe the DUI complaint, and the same 4 response codes to classify the driver consequence. Lyft used 3 response codes to describe the DUI complaint resolution and 3 different response codes to describe the driver consequences. The only consequence reported for citations is the payor of the citation. Lyft’s responses include both “LYFT” and “DRIVER”, while Uber’s only include “Uber”.

Table 23. Driver Consequences and Status in the 2020 Public Annual Reports

CATEGORY	FIELD	UBER	LYFT
Assaults & Harassments	DriverConsequence	<ul style="list-style-type: none"> • Deactivated • Waitlisted 	<ul style="list-style-type: none"> • Driver provided with warning and/or education • Driver was permanently deactivated • Driver was temporarily suspended
Assaults & Harassments	DriverCurrentAuth	<ul style="list-style-type: none"> • N • Y 	<ul style="list-style-type: none"> • N • Y
Collisions	IncidentAccidentGuiltyParty	not reported	not reported
Collisions	Liability	not reported	not reported
Collisions	PrimaryCollisionFactor	<ul style="list-style-type: none"> • Claimant Primarily • Driver Primarily • Undetermined 	not reported
DUI	ComplaintResolveDescr	<ul style="list-style-type: none"> • Driver Deactivated – Confirmed Allegation • Driver Deactivated – Third Unconfirmed Allegation • Driver Previously Deactivated • Driver Reactivated – Unconfirmed Allegation 	<ul style="list-style-type: none"> • Deactivation not warranted after investigation • Driver reactivated after investigation • Driver remained deactivated after investigation
DUI	DriverConsequence	<ul style="list-style-type: none"> • Driver Deactivated – Confirmed Allegation • Driver Deactivated – Third Unconfirmed Allegation • Driver Previously Deactivated • Driver Reactivated – Unconfirmed Allegation 	<ul style="list-style-type: none"> • Driver provided with warning and/or education • Driver was permanently deactivated • Driver was temporarily suspended
DUI	DriverCurrentAuth	<ul style="list-style-type: none"> • N • Y 	<ul style="list-style-type: none"> • N • Y

4.4. How many drivers were suspended or deactivated?

While suspending a driver can adversely affect drivers' livelihood by cutting off an income stream, suspending a driver is one of the actions a TNC company can take to protect its customers. Though each company used their own taxonomy for reporting driver consequences, both identified whether a driver was temporarily suspended or

permanently deactivated. Table 24 shows the consequences to drivers resulting from assaults and harassments.

For this analysis, temporary suspensions are those that Uber classified as “Waitlisted” and Lyft classified as “Driver was temporarily suspended”, and permanent deactivations are those that Uber classified as “Deactivated” and Lyft classified as “Driver was permanently deactivated”. The table shows that 76% of Uber’s reported assaults and harassment resulted in a temporary suspension, and 24% resulted in a permanent deactivation, while 3% of Lyft’s reported assaults and incidents of harassment resulted in a temporary suspension, 2% resulted in a permanent deactivation, and 95% were neither temporarily suspended nor deactivated. The data suggests that Uber more aggressively suspends or deactivated drivers than Lyft does. It also suggests that the companies use different standards for reporting assaults and harassments.

Table 24. Driver Consequences of Assaults & Harassments from September 2019 to August 2020

	UBER	LYFT	TOTAL
Total Incidents	1,573	18,178	19,751
Temporary Suspensions	1,200	582	1,782
Permanent Deactivations	373	297	670
Not temporarily suspended or permanently deactivated	0	17,299	17,299
Percent temporarily suspended	76%	3%	9%
Percent permanently deactivated	24%	2%	3%
Percent neither temporarily suspended nor deactivated	0%	95%	88%

The CPUC requires that “[p]romptly after a zero-tolerance complaint is filed, the TNC shall suspend the driver for further investigation.”¹ As with assaults and harassments, driver consequences of DUI complaints are reported with different taxonomies by each company, but each identifies temporary suspensions and permanent deactivations. Table 25 shows the driver consequences resulting from DUI complaints for each company. In this analysis, permanent deactivations are those Uber classified as “Driver Deactivated – Confirmed Allegation”, “Driver Deactivated – Third Unconfirmed Allegation”, and “Driver Previously Deactivated”, and Lyft classified as “Driver was permanently deactivated”. Temporary suspensions are those Uber classified as “Driver Reactivated – Unconfirmed Allegation” and Lyft classified as “Driver was temporarily suspended”. The remaining record records are those which Lyft classified as “Driver

¹ D. 13-09-045, p. 27. CPUC Rulemaking R12-12-011. 9/19/2013.

provided with warning and/or education,” which implies neither a temporary suspension nor permanent deactivation. The table suggests that Lyft frequently fails to comply with the CPUC’s requirement to suspend drivers following DUI complaints, only suspending or deactivating drivers in 6% of cases. By contrast, 94% of DUI complaints against Uber drivers resulted in a temporary suspension, and 6% resulted in a permanent deactivation.

Table 25. Driver Consequences of DUI Complaints from September 2019 to August 2020

	UBER	LYFT	TOTAL
Total Incidents	7,358	7,745	15,103
Temporary Suspensions	6,911	468	7,379
Permanent Deactivations	447	37	484
Not temporarily suspended or permanently deactivated	0	7,240	7,240
Percent temporarily suspended	94%	6%	49%
Percent permanently deactivated	6%	< 1%	3%
Percent neither temporarily suspended nor deactivated	0%	93%	48%

Driver suspensions are also reported in the *Suspended Drivers* report. These suspensions, unlike the ones reported above, are not linked to a specific type of incident. Figure 16 shows the total driver suspensions for each company. Lyft suspended nearly 5 times the number of drivers as Uber. Lyft also permanently suspended 50% more drivers than Uber.

Figure 16. Driver Suspensions from September 2019 to August 2020

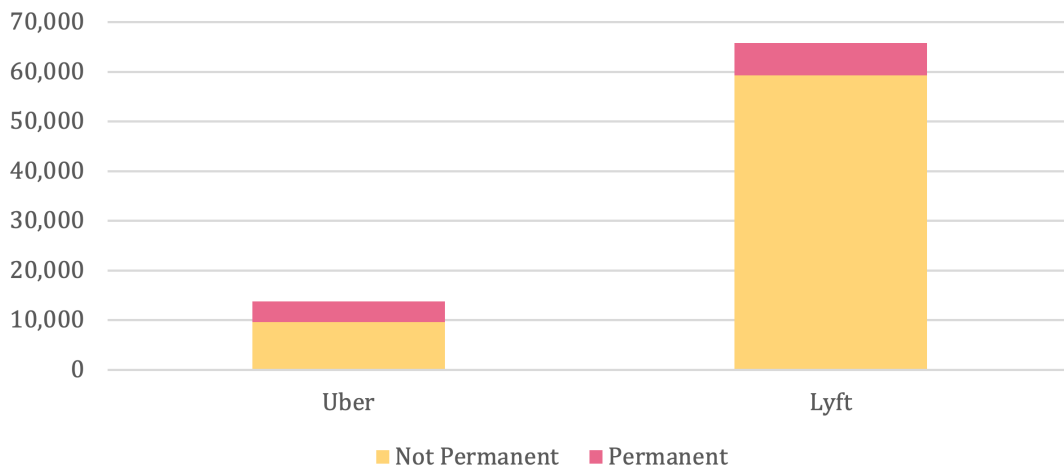
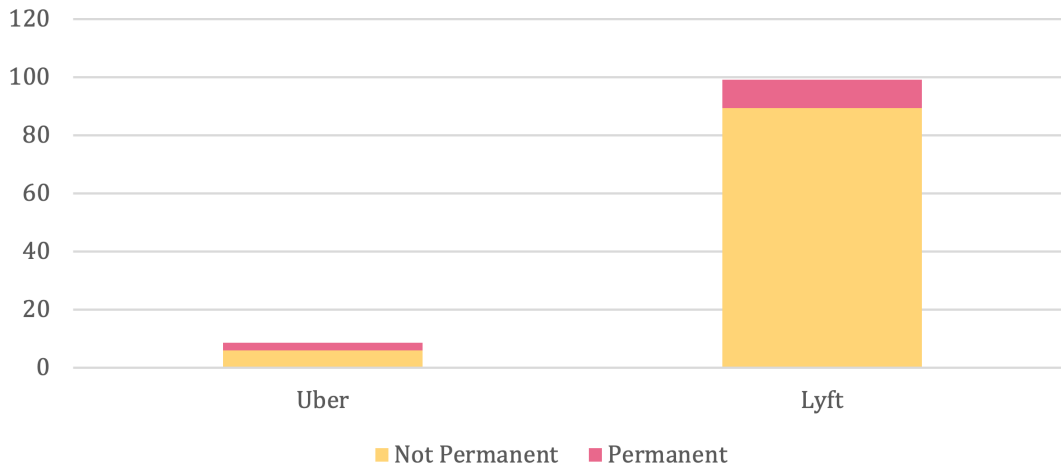


Figure 17 shows driver suspension rates by company. Lyft suspended drivers at more than 11 times the rate of Uber and permanently suspended drivers at 15 times the rate of Uber.

Figure 17. Driver Suspensions per 100,000 Trips from September 2019 to August 2020



These two figures reveal either that each company has significantly different approaches to driver suspensions or that they report driver suspensions differently.

For each driver suspension, the companies report whether drivers were permanently deactivated, and whether they have been reactivated. Driver suspensions by suspension type and reactivation status for Uber are shown in Table 26 and for Lyft in Table 27. Presumably, a driver that is permanently deactivated cannot be reactivated. As expected, none of Lyft’s permanently suspended drivers are reported to be reactivated. But Uber data shows that 1,250 (30%) of the 4,162 drivers classified as permanently suspended are also classified as reactivated. It is unclear whether these drivers are permanently deactivated or not. If they were reactivated, it is not clear why their permanent suspension was overturned, or the potential impacts to the safety of passengers and the general public.

Table 26. Uber Driver Suspension Type by Driver Reactivation Status from September 2019 to August 2020

	NOT REACTIVATED	REACTIVATED	TOTAL
Not Permanently Suspended	110	9,505	9,615
Permanently Suspended	2,912	1,250	4,162
Total	3,022	10,755	13,777

Table 27. Lyft Driver Suspension Type by Driver Reactivation Status from September 2019 to August 2020

	NOT REACTIVATED	REACTIVATED	TOTAL
Not Permanently Suspended	9,974	49,322	59,296
Permanently Suspended	6,492		6,492
Grand Total	16,466	49,322	65,788

CHAPTER 5

Labor

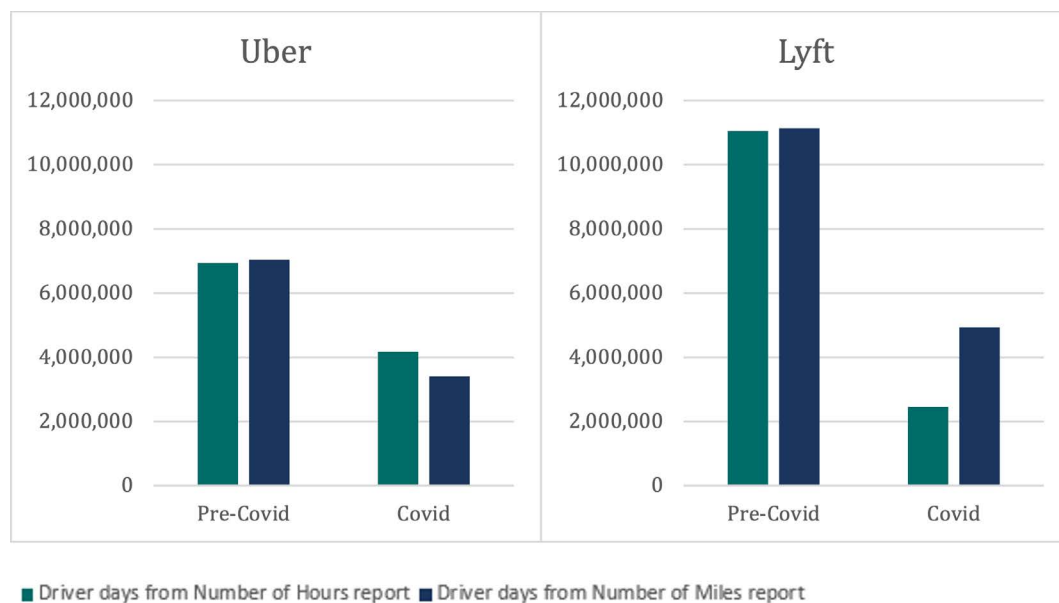
This section examines hours worked, miles driven, and driver suspensions from September 2019 to August 2020 as reporting the 2020 Public Annual Reports.

Each record in the *Number of Hours* and *Number of Miles* reports is a driver day. Driver IDs are withheld from the public TNC Annual Reports, even though Driver IDs can be anonymized to not contain personal information. The absence of Driver IDs limits analysis of driver patterns such as the number of drivers that exceed drive-time limits, how often drive time limits are exceeded, or distributions of annual driver mileage.

5.1. How many days did drivers work?

Figure 18 shows the number of driver days each company reported in the *Number of Hours* and *Number of Miles* reports. As discussed in Chapter 2, these reports are internally inconsistent. This figure reveals further inconsistencies. Both companies' pre-COVID, during-COVID, and total driver days are inconsistent, but the differences are much greater during COVID. Uber's driver days differ by 96,000 (1.4%) pre-COVID and differ by 768,000 (18%) during COVID. Lyft's driver days differ by 80,000 (0.7%) pre-COVID and differ by 2.4 million (101%) during COVID. Lyft reports more driver days than Uber, which seems contradictory to the higher total number of Uber trips reported in Chapter 3.

Figure 18. Driver Days Before and During COVID from September 2019 to August 2020



The lack of consistency within each company's reports and a comparison of the companies to each other suggests that reporting requirements are not adequately defined.

5.2. How many hours a day do drivers drive?

The daily number of hours worked can give insights into labor conditions, serve as an indicator of driver fatigue that can lead to unsafe driving, and identify when legal drive time limits are violated.

Table 28 shows the average number of hours worked by drivers for each company before and during COVID. The table shows that Uber drivers worked more hours per day

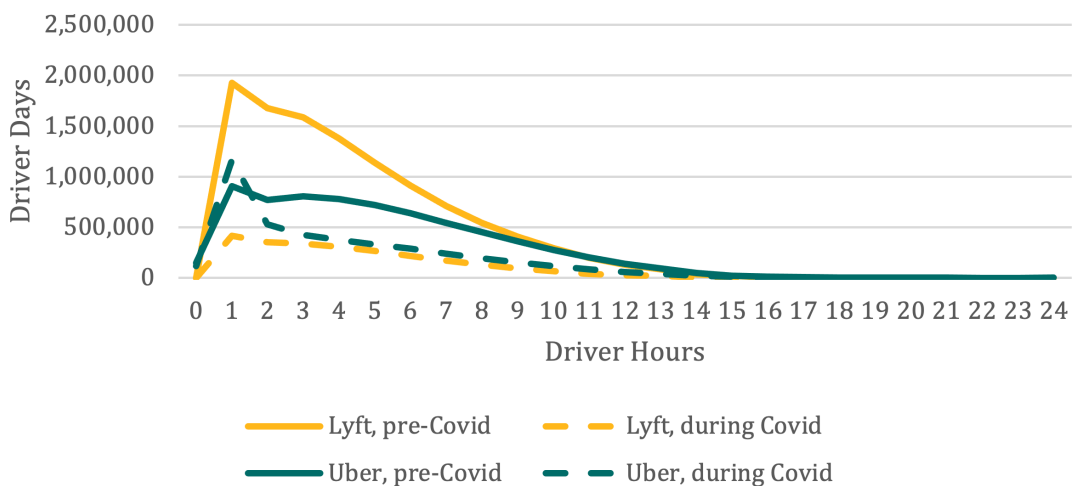
than Lyft drivers, both before and during COVID. Uber drivers increased their average daily driving hours during COVID by 14%, from 4.6 to 5.3, while Lyft’s average daily driver hours remained almost flat.

Table 28. Average Hours per Driver Day by Company, Before and During covid, from September 2019 to August 2020

	UBER	LYFT	TOTAL
Pre-COVID	4.6	3.8	4.2
COVID	5.3	3.9	4.7
Total	4.9	3.8	4.3

Figure 19 shows the distribution of driver days by the number of hours worked by each company’s driver, before and during COVID. As with the table above, it shows that Lyft reported more driver days and driver hours than Uber before COVID, and fewer driver days and driver hours during COVID. Drivers for both companies most frequently drove 1 hour per day, both before and during COVID, with longer days steadily less frequent. Uber’s driver hours during COVID dropped off steeply, unlike Uber’s pre-COVID hours or Lyft’s hours before or during COVID. Lyft’s report included 123,000 driver days with 0 hours, while Uber’s included no driver days with 0 hours. It is not clear what a driver day with 0 hours means. Both companies reported driver days with 10 or more hours, which will be discussed in more detail in the next section.

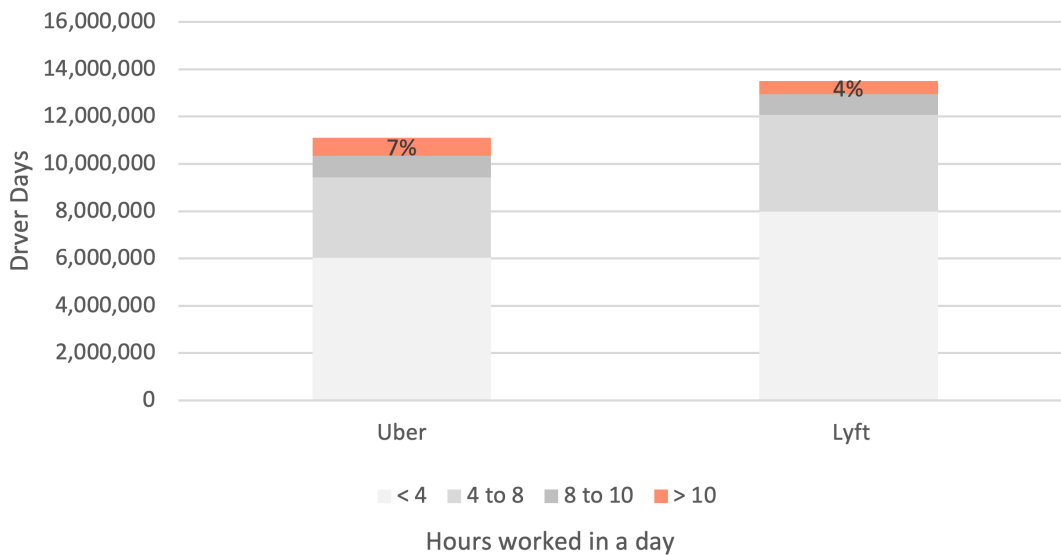
Figure 19. Distribution of Driver Days by Number of Hours Worked from September 2019 to August 2020



5.3. How often are legal drive-time limits exceeded?

California law limits drivers providing passenger transportation to “10 hours in any 24-hour period unless 8 consecutive hours off duty have elapsed.”¹ Figure 20 shows the share of driver days by number of hours driven for each company. The data may indicate that drivers are exceeding legal drive time limits. Before COVID, 8% of Uber’s driver days exceeded 10 hours and during COVID 6% exceeded 10 hours. Before and during the COVID 4% of Lyft’s driver days exceeded 10 hours. While this report alone cannot confirm that a violation has occurred due to the 8 hours off duty provision, the reports do not account for additional factors like drivers who may be in violation due to driving for both services, or whose shifts straddle 2 or more calendar days. No public enforcement actions have been taken regarding possible violations of California labor laws.

Figure 20. Driver Days by Hours Worked from September 2019 to August 2020



¹ California Vehicle Code §21702(a). https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=VEH&division=11.&title=&part=&chapter=3.&article=2.

CHAPTER 6

Environment

This section examines emissions from September 2019 to August 2020 in the 2020 Public Annual Reports. It estimates carbon dioxide (CO₂), a greenhouse gas that contributes to global climate change, and particulate matter of less than 2.5 microns (PM_{2.5}) which contributes to respiratory health issues.

The Clean Miles Standard and Incentives Program (Senate Bill No. 1014) directed the CPUC to implement “annual targets and goals, beginning in 2023, for the reduction [...] of emissions of greenhouse gases per passenger-mile driven on behalf of a transportation network company”. The CPUC has issued an Order Instituting Rulemaking to determine how the Clean Miles Standard and Incentives Program will be implemented. The CPUC’s rulemaking follows work led by the California Air Resources Board (CARB), which developed a baseline inventory of TNC emissions and proposed initial annual targets and goals.

6.1. How much GHG did TNCs emit?

Greenhouse gases produced by TNCs will be regulated by the CPUC starting in 2023. Greenhouse gases are a key contributor to global climate change. Only Uber's 2020 public TNC Annual Reports contain the data necessary to evaluate emissions (VMT and vehicle make, model, and year). Table 29 shows the estimated CO₂ emissions produced by Uber per period.

TNC service is classified into 3 periods: Period 1 when a driver is available and ready to accept a trip, Period 2 when a driver has accepted a trip and is on the way to pick up the passenger, and Period 3, when a driver is transporting a passenger from origin to destination. CARB's 2018 Base Year Inventory found that TNCs emit 48% more greenhouse gases on a per-passenger mile basis than trips taken in private vehicles, due in large part to driving without a passenger in Periods 1 and 2. The Transportation Authority estimated that Uber emitted 494,000 metric tons of CO₂ from September 2019 to August 2020, about 30% of which was produced in periods 1 and 2, when the vehicle is not transporting a passenger. Uber's total CO₂ emissions were similar to the CO₂ emitted by the 2020 Caldwell Fire in northern California which burned 81,000 acres.^{1,2} Lyft emissions cannot be estimated because they did not report mileage, vehicle make, model, or year.

Table 29. Estimated CO₂ Emitted by Uber by Period from September 2019 to August 2020

	PERIOD 1 WAITING FOR RIDE REQUEST	PERIOD 2 ON THE WAY TO PICKUP PASSENGER	PERIOD 3 TRANSPORTING PASSENGER	TOTAL
Total CO ₂	85,408	61,523	346,790	493,722
Share of CO ₂	17%	12%	70%	100%

6.2. How much particulate matter (PM 2.5) did TNCs emit? Where?

PM_{2.5} contributes to respiratory health issues. Only Uber reported the data necessary to evaluate PM_{2.5} emissions. Table 30 shows estimated PM_{2.5} emissions produced by Uber. Uber produced 2.65 metric tons of PM_{2.5}, about 30% of which was produced in Periods 1 and 2 when the vehicle is not transportation a passenger. Lyft's PM_{2.5}

¹ Emissions were estimated individually for each trip, using the vehicle make, model, and year, mileage by period, and emissions rates from fueleconomy.gov

² California Air Resources Board, Wildfire Emission Estimates for 2020. https://ww2.arb.ca.gov/sites/default/files/2021-07/Wildfire%20Emission%20Estimates%20for%202020%20_Final.pdf

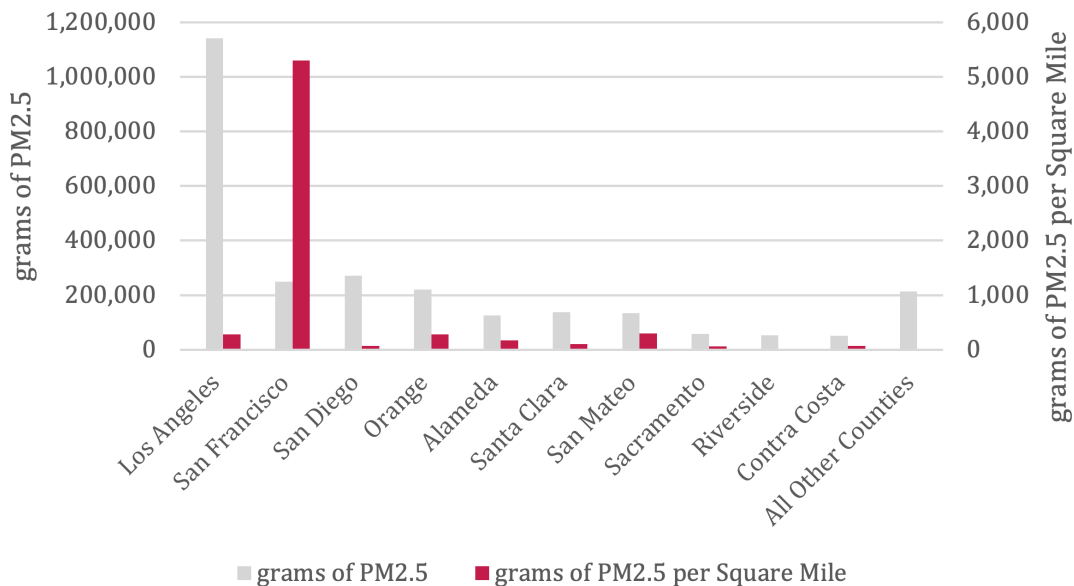
emissions cannot be estimated because they did not report mileage, vehicle make, model, or year.

Table 30. Estimated PM2.5 Emitted by Uber by Period from September 2019 to August 2020

	PERIOD 1 NO PASSENGER, WAITING FOR RIDE REQUEST	PERIOD 2 ON THE WAY TO PICKUP PASSENGER	PERIOD 3 TRANSPORTING PASSENGER	TOTAL
Total PM2.5	0.46	0.32	1.87	2.65
Share of PM2.5	17%	12%	71%	100%

Figure 21 shows where Uber emitted PM2.5 by county for the 10 counties with the most TNC trips. PM2.5 emissions were highly concentrated in San Francisco with over 5,000 grams of PM2.5 per square mile, approximated 340 times the concentration of PM2.5 emissions in the rest of the state. Uber’s estimated PM2.5 emissions in San Francisco are approximately 5% of the total PM2.5 emissions produced by all passenger vehicles and light duty trucks in San Francisco in 2019.¹

Figure 21. Estimated PM2.5 Emitted by Uber by County from September 2019 to August 2020



¹ CARB EMFAC2021 v1.0.2, PM2.5_TOTEX for LDA, LDT1, and LDT2 in San Francisco in 2019. <https://arb.ca.gov/emfac/emissions-inventory/1563da8e39cf549e9626c01386cf5ebabe087ff9>

CHAPTER 7

Accessibility

The TNC Access for All Act (Senate Bill No. 1376) directs the CPUC to “establish a program relating to accessibility for persons with disabilities, including wheelchair users who need a wheelchair-accessible vehicle (WAV)”. Under the program, TNCs collect a fee on each trip which is remitted to an Access Fund to be used to pay for “on-demand transportation [...] to meet the needs of persons with disabilities, including wheelchair users who need a WAV”. TNCs may request an offset, or be exempted from remitting the fee, if they demonstrate that they meet standards established by the CPUC.

The CPUC is authorized by the TNC Access for All Act to collect data to manage the program. Accessibility data is regularly reported by TNCs to the CPUC in two ways: in the form of “Advice Letters” filed by a company when they seek an offset or exemption for a specific county and quarter, and in the Annual Reports. Additional accessibility data is also filed on an ad-hoc basis at the direction of the CPUC. The Annual Reports include the number of requests for WAVs, the statewide number of fulfilled requests, and the percent of fulfilled requests by month in the Accessibility Report. This section compares 2020 Public Annual Reports data from September 2019 to August 2020 with Advice Letter data that was reported for the same period.

7.1. How many requests for WAVs were received? How many were accepted?

Table 31 shows the number of TNC WAV requests and completed WAV trips by each company. Uber provided nearly all TNC WAV service in the state, receiving 95% of the nearly 230,000 WAV requests and providing 94% of the nearly 108,000 completed WAV trips. Uber completed 47% of the trip requests it received and Lyft completed 53%. As noted in Chapter 3, there were between 218 million and 277 million total TNC trips, so the 108,000 completed WAV trips account for less than 0.05% of all trips.

Table 31. WAV Requests and Completed Trips from September 2019 to August 2020

	UBER	LYFT	TOTAL
WAV Requests	217,935	11,605	229,540
Completed WAV Trips	101,594	6,158	107,752
Completion Rate	47%	53%	47%

7.2. How much WAV service is being provided?

Table 32 shows the amount of WAV service measured by average monthly hours of WAV service and number of WAV vehicles, compared to the WAV trips provided. The service reported by each company is dramatically different from each other and suggests that the companies are not reporting data consistently. For example, Uber reports nearly 20,000 times the hours of WAV service than Lyft. The data also suggests highly improbable service. Lyft's data suggests that each vehicle provides approximately 19 seconds of service each month, compared to Uber's much more logical 73 hours per vehicle. On the other hand, Uber's data suggests they are providing 924 hours (nearly 38 days) of WAV vehicle hours for each trip they provide. Both companies report deploying far more WAVs than the actual number of WAV trips completed. Uber reports an average of 108,000 WAVs each month, about 13 vehicles for every WAV trip. Lyft reports an average of 79,000 WAVs each month, about 155 vehicles for every WAV trip. The lack of adequately defined or enforced data reporting requirements prevents a clear understanding of WAV service and undermines confidence that it is being regulated properly.

Table 32. Average Monthly WAV Service from September 2019 to August 2020

COMPANY	UBER	LYFT
Hours of WAV Service	7,818,750	419
Number of WAV Vehicles	107,542	79,471
WAV Trips	8,466	513
Hours of WAV Service per Vehicle	72.7	0.005
Hours of WAV Service per Trip	923.5	0.8
WAV Vehicle per Trip	12.7	154.9

7.3. Is the Annual Report WAV data consistent with data reported under the Access for All Act?

Both the Annual Reports and Advice Letters filed under the Access for All program contain data on the number of WAV requests. The Annual Reports include the total statewide WAV requests received by month, while the Advice Letters only contain data for selected counties and quarters in which a TNC is seeking an offset or exemption. While the data contained in the Annual Reports and the Advice letters will not match due to their different reporting parameters, they should be consistent and non-contradictory with each other.

Table 33 shows the amounts requested in offsets for the costs incurred in providing WAV service from October 2019 to June 2020, the period that the Advice Letters align with the TNC Annual Reports. Lyft was granted \$3 million in offsets, an average of \$772 for each completed WAV trip. Uber was granted \$6.2 million in offsets, an average of \$369 per trip. Lyft was awarded about twice the amount of offsets per completed WAV trip than was Uber.

Table 33. Offsets Requested and Approved, Compared to Completed WAV Trips from October 2019 to June 2020 in the Access for All Advice Letters

	ORIGINAL REQUESTED	FINAL REQUESTED	TOTAL APPROVED	COMPLETED TRIPS	OFFSETS / TRIP
Uber	\$6,706,249.37	\$6,150,320.55	\$6,150,320.55	16,689	\$368.53
Lyft	\$3,272,905.77	\$2,261,560.70	\$2,261,560.71	2,930	\$771.86

Tables 34 through 37 compare WAV data in the Annual Reports and Advice Letters. Because the Advice Letters are not filed for every county and quarter, the Advice Letter

totals should always be less than the Accessibility Report totals. These tables show that Uber's Annual Reports are consistent with and do not contradict their Advice Letters, but that Lyft's Annual Reports are inconsistent with the Advice Letters.

Table 34 compares Uber's WAV requests in the Annual Report and Advice Letters. Uber's Advice Letters contained 44% - 45% of the total WAV requests reported in the Annual Report.

Table 34. Comparison of Uber WAV Requests in the Annual Reports and Advice Letters from October 2019 to June 2020

QUARTER	ACCESSIBILITY REPORT	ADVICE LETTERS	SHARE OF ANNUAL REPORT TOTALS REPORTED IN ADVICE LETTERS
2019 Q4	82,089	35,902	44%
2020 Q1	65,053	28,952	45%
2020 Q2	23,047	10,386	45%

Table 35 compares Lyft's WAV requests in the Annual Report and Advice Letters. The WAV requests in Lyft's Advice Letters, submitted only for San Francisco and Los Angeles counties, exceeded the statewide totals of Lyft's Annual Report for 2 of 3 quarters, which should not be possible. Lyft's Annual Reports and Advice Letters reporting of WAV requests are inconsistent. This suggests the possibility that the Advice Letter data used as the basis for awarding Lyft \$3 million in offsets may not comply with the requirements of the Access for All Program.¹

Table 35. Comparison of Lyft WAV Requests in the Annual Reports and Advice Letters from October 2019 to June 2020

QUARTER	ACCESSIBILITY REPORT	ADVICE LETTERS	SHARE OF ANNUAL REPORT TOTALS REPORTED IN ADVICE LETTERS
2019 Q4	4,252	392	9%
2020 Q1	3,344	3,853	115%
2020 Q2	1,307	1,572	120%

¹ "We find that Lyft's Advice Letter submittals that included pre-scheduled WAV trip data failed to comply with the requirements of the Access for All Program. Lyft unilaterally devised its own interpretation and calculation of 'response time' to apply to pre-scheduled WAV trips. More significantly, by including negative response times in its Advice Letter submittals, Lyft likely lowered its total aggregate response time amounts for all WAV trips in a given quarter and geographic area. This calls into question Lyft's eligibility for offsets or exemptions after removal of the pre-scheduled WAV trips and the negative response time values." Ruling on Data Submission for Pre-Scheduled Trips, p. 16 - 17.

Table 36 compares Uber’s completed wav trips in the Annual Report and Advice Letters. Uber’s Advice Letters contained 16% - 32% of the total completed wav trips in the Annual Report.

Table 36. Comparison of Uber Completed wav Trips in the Annual Reports and Advice Letters from October 2019 to June 2020

QUARTER	ACCESSIBILITY REPORT	ADVICE LETTERS	SHARE OF ANNUAL REPORT TOTALS REPORTED IN ADVICE LETTERS
2019 Q4	38,119	6,189	16%
2020 Q1	32,706	6,044	18%
2020 Q2	14,032	4,456	32%

Table 37 compares Lyft’s completed wav trips in the Annual Report and Advice Letters. Lyft’s Advice Letters contained 17% - 100% of the total completed wav trips in the Annual Report.

Table 37. Comparison of Lyft Completed wav Trips in the Annual Reports and Advice Letters from October 2019 to June 2020

QUARTER	ACCESSIBILITY REPORT	ADVICE LETTERS	SHARE OF ANNUAL REPORT TOTALS REPORTED IN ADVICE LETTERS
2019 Q4	1,923	318	17%
2020 Q1	1,679	1,679	100%
2020 Q2	933	933	100%

7.4. How many accessibility complaints were received?

The CPUC has not standardized reporting requirements for accessibility complaints. In the absence of clear and consistent requirements, **each company decides for themselves** how they report accessibility complaints.

Table 38 compares the taxonomies Uber and Lyft use to report accessibility complaints and resolutions. Uber uses 4 codes to describe accessibility complaints, each describing a type of service denial. Lyft uses 6 codes to describe accessibility complaints. One of these codes is a combination of an alleged violation and a driver consequence, two are a combination of an alleged violation with a determination of the validity of the allegation,

two are simple categories of service denial allegations, and the final code is, ambiguously, “wheelchair_accessibility_policy”. Uber uses 5 codes to describe the resolution, each of which describes a determination of the validity of the alleged violation, but does not describe corrective actions taken against the driver. Lyft uses 3 codes to describe the resolution, each of which is describes a corrective action taken against the driver.

Table 38. Comparison of Accessibility Complaint and Resolution Taxonomies used by Uber and Lyft in the 2020 Public TNC Annual Reports

TYPE	UBER	LYFT
Complaint	<ul style="list-style-type: none"> • Assistive Device Denial • Emotional Support/Therapy Animal Denial • Protected Trait Denial • Service Animal Denial 	<ul style="list-style-type: none"> • alleged_service_animal__driver_offboarded • alleged_service_animal_confirmed • alleged_service_animal_false_positive • refused_service_animal • wheelchair_refusal • wheelchair_accessibility_policy
	<ul style="list-style-type: none"> • Unresponsive driver, waitlisted pending determination • Determined plausible service denial • Determined knowing service denial • Determined neither knowing, nor plausible service denial • Determined one plausible service denial, and one knowing or plausible service denial 	<ul style="list-style-type: none"> • Driver was permanently deactivated • Driver was temporarily suspended • provided with warning and/or education

While Uber and Lyft report complaints using different taxonomies, each identifies complaints that involve users of wheelchairs or other assistive devices and complaints that involve service animals. Table 39 shows the total complaints in these categories by company. Uber and Lyft collectively received 1,957 accessibility complaints, of which 1,743 (89%) were reported by Uber and 213 (11%) were reported by Lyft. Service denials to users of wheelchairs or other assistive devices totaled 191 complaints, service denials to people with service animals totaled 1,161, and other service denials totaled 604.

Table 39. Accessibility Complaints by Category and Company from September 2019 to August 2020

	UBER	LYFT	TOTAL
Wheelchair or assistive device	183	8	191
Service animal	956	205	1,161
Other	604		604
Total	1,743	213	1,956

The CPUC’s lack of standardized reporting requirements for the various types of accessibility complaints prevents a clear understanding of accessibility issues and hinders analysis and oversight.

CHAPTER 8





Conclusions

The 2020 public TNC Annual Reports reveal numerous issues related to basic compliance with data reporting requirements, and the integrity of the data itself. At the most basic level, Lyft's 2020 Public Annual Reports are incomplete according to the rules adopted by the CPUC: 8 of their 19 public reports are missing required data fields, and 64% of all Lyft's required public data items are missing. By contrast, Uber's 2020 Public Annual Reports contain all but one of the required public fields. This suggests that reporting rules are applied or enforced inconsistently.

The data contained within the 2020 TNC Public Annual Reports is often self-contradictory and internally inconsistent. For example, Uber's total number of trips differs by more than 9 million from one report to the next, while Lyft's differs by nearly 50 million trips. In some cases, the data submitted is erroneous or unreasonable: Lyft's reports indicate that it accepted 100% of trip requests received across vast swaths of California. While there is improvement in the consistency of some 2021 reports, the 2021 reports are more highly redacted, and their consistencies cannot be fully evaluated. These issues are exacerbated by, if not directly caused by, data reporting requirements that are, at times, unclear; lack of quality assurance or enforcement of quality standards; and application of confidentiality standards that are not consistent with the CPUC's orders.

The lack of accurate, timely and transparent data has left localities without sufficient information to support a basic understanding of TNC operations in their jurisdictions or their potential impacts. Timely and accurate data is fundamental to developing sensible public policy and to identify where it is appropriate to seek improved oversight. The pervasive data quality issues suggests the need for quality control, greater adherence to Commission direction regarding disclosure of data, and enforcement of reporting requirements.

TNCs operate almost exclusively in dense urban areas and during the busiest times of day, where they have been shown to exacerbate congestion and reduce transit ridership. As the reports show, there may be public safety risks, environmental harm, and issues of equitable access to TNC services. California cities, which have limited regulatory authority over TNCs, rely on the CPUC to manage impacts, enforce regulations, and provide relevant, timely, thorough, and quality data to support the effective development of informed public policy. Cities face similar regulatory reliance on CPUC regarding AV passenger services. CPUC's public AV reports are following a similar pattern to the public TNC reports of redacted data. Timely, thorough, quality data reporting is essential to effective research and policy-making for both TNC and AV ride-hail passenger services, and effective regulation is critical as these new services become more widely available.

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1455 Market Street, 22nd Floor,
San Francisco, CA 94103

TEL 415-522-4800

EMAIL info@sfcta.org

WEB www.sfcta.org



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