San Francisco Municipal Transportation

Best Practices Studies of Taxi Regulation

Managing Taxi Supply

(*DRAFT***)**

Hara Associates

Best Practices Studies of Taxi Regulation

Managing Taxi Supply

Draft

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San Francisco Municipal Transportation Agency

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Executive Summary

The San Francisco Municipal Transportation Agency (SFMTA) assumed responsibility for regulating San Francisco's taxis in 2009, as a result of a ballot initiative. The SFMTA is now undertaking a comprehensive review of its regulatory practice to improve the taxi industry's ability to serve the community and operate sustainably.

As with most cities, San Francisco limits the number of taxis it licenses. This places responsibility on the SFMTA to ensure there are sufficient taxis to serve the public, while also ensuring that taxi industry stakeholders have the opportunity to earn reasonable rates of return.[1]

This study reviews taxi supply and demand conditions in San Francisco, assesses whether it would be in the public interest to have more taxis, and recommends a regime for regulating the ongoing management of taxi numbers. It draws upon a number of data sources to make its recommendations. These include:

- Experience reported by San Francisco stakeholders;
- Structural analysis of San Francisco's taxi industry;
- Comparison to peer cities;
- On-street observations of taxis;
- Application of Hara Associates Taxi Demand model;
- Surveys of taxi users (results in separate volume *Taxi User Surveys*);
- A telephone survey of taxi drivers (results in a separate volume *Taxi Driver Survey*)

This study is the first in a series of studies of *Best Practices in Taxi Regulation* produced for the SFMTA by the team of Hara Associates and Corey Canapary & Galanis.

Useful terms are defined in Chapter 1. Structural issues in the industry and comparison to taxi regulation elsewhere are in Chapter 2. Chapter 3 summarizes the views expressed by San Francisco stakeholders. Chapter Four is a technical analysis of taxi demand and the number of taxis. *The full text of recommendations is in Chapter 5.*

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Structural Issues in the Industry

It is found that:

- There is a significant taxi shortage. In addition to failure of dispatch to the home, downtown passengers are often queuing for taxis at empty stands;
- The statement that color schemes are under a cost squeeze between capped gate fees and rising medallion fees is valid, and a product of the taxi shortage;
- Many drivers are paying excessive medallion lease fees and/or are forced to tip color scheme staff excessive amounts to secure a shift taxi;
- The fairness and service quality objectives of gate fee caps is being undermined;
- Examples from other cities show that limits on medallions ultimately must be revised; and that it is possible to manage significant expansion while protecting driver income and medallion values.

[1] The requirement to ensure the opportunity for fair and reasonable rates of return also follows from the regulation of taximeter rates by the SFMTA.

Two Sources of Taxi Shortage

San Francisco's taxi shortage is the product of two sources. The lesser source is that medallion numbers have not kept pace with demographic and economic changes in taxi demand since the last major adjustments completed in 2000. Population increases, the greater cost of owning private vehicles, and rising Bay Area commuter volume, suggest that taxi demand in core San Francisco markets has increased by around 23.2%, while medallion numbers have increased by only 14.9% over the same period.

The second source is the long-term systemic undersupply of taxis to neighborhoods outside the downtown core. The size of this shortage is evidenced by failure in the dispatch market where neither drivers nor customers have confidence in the ability of traditional dispatch to serve them. It is further supported by on-street observations and user surveys conducted by Hara Associates and Corey, Canapary & Galanis. San Francisco residents report a high degree of unreliability in service to their homes, and long average wait times even when a taxi does eventually show up. The result is suppressing not only taxi demand, but also associated complementary demand for public transit for commuting. It is also constraining the volume of business that San Franciscans give their dining, entertainment, and nightlife industries.

Challenge of Limousines and Shared Rides

The larger shortage is visibly exposed by the rapidly growing limousine and shared ride services. Blurring of the line between limousines and taxis is enabled by smartphone applications (apps) and related technologies. While there is a place for these services, they are not the right solution for a taxi shortage. There are public safety reasons why a more heavily regulated service called "taxis" is the norm around the world.

Greater monitoring of vehicles, driver training, and street inspection is necessary for an on-demand service where strangers pick up strangers, often in the dark. This is what taxis provide. Even the traditional striking paint jobs for taxis have a role in monitoring and enforcement, as compared to nondescript black cars. While initial limousine entrants such as Uber appear to maintain high standards in screening and supervising their drivers, it is only a matter of time before incidents and problems surface, especially among later entrants who may seek to compete on a price basis. We do not want to reach the stage where a San Franciscan inadvertently requests a ride through *kidnapme.org*.[2] Taxis are needed in sufficient numbers to ensure that San Franciscans always have the practical alternative of ordering or hailing a registered taxi with a licensed and trained driver at a regulated rate. When that choice properly exists, then alternative services can survive on their own merit.

The current proliferation of limousine and ride-share services is partly driven by the undersupply of taxis. Beyond taking up the unsupplied portions of taxi demand, these less regulated alternatives also threaten the commercial viability of core taxi markets, such as in the downtown. In the worst case, a complete loss of suburban markets combined with competition downtown could yield a collapse of industry volume and a collapse of associated medallion values. Contrary to simplistic analysis, the industry may require more medallions to defend medallion value, not fewer. An adequate number of taxis are needed to effectively serve markets and maintain rider confidence.

This assessment is based on the 1,585 taxis on the street at the time of our 2012 assessment. The 200 additional medallions authorized recently will compensate for changes in traditional demographic factors since 2000, but will not fully address the shortages evident from on-street observations, or the latent underserved market in the neighborhoods of San Francisco.

[2] This domain name was not in use at the time of writing.

600 to 800 More Medallions—But Not All at Once

Hara Associates finds that the potential market for taxis in San Francisco can support at least a 50% increase in medallions (approximately 800 more, or 600 above the 200 recently authorized). This is based on the pent-up demand revealed in surveys, and comparable per capita taxi supplies in other cities where the low private vehicle ownership rates are comparable to San Francisco.

A staged approach to expansion is recommended. It takes time for passengers to become confident in the availability of additional supply and adjust their habits. It also takes significant time for the industry to adapt. After additional vehicles and drivers are outfitted and trained, even experienced drivers will need additional time to adapt to a functioning and readily available dispatch market. Dispatch systems are more than dispatchers and software dispatching the closest taxi. Pre-positioning of taxis to take advantage of the daily rhythm of taxi demand in each neighborhood falls to the independent drivers. Skilled drivers are part of the intelligence of a dispatch system. Drivers, too, need to become confident in the reliability of a system where customers will wait for them because they trust the driver will indeed appear. Dispatch systems themselves must adapt to provide drivers with more information by locale so that necessary learning and strategic positioning occurs. San Francisco dispatch systems are often technically sophisticated, but many provide drivers with very little information, even treating the entire dispatch market as a single geographic zone.

At the same time, it is not clear how quickly taxi numbers can be increased. While the experience of other cities suggests years, we also see that bulk entrance to a market can allow new brands to expand business immediately. The success of Uber's service is partly attributable to its ability to meet expectations by drawing on the huge potential supply of licensed limousines across the State of California.

The logical alternative is to allow the industry to set its own pace of expansion, while at the same time protecting the stability of medallion values, and the underlying business that supports them. This schedule is recommended:

- For 2013: 120 medallions (in addition to completing the distribution of 200 authorized in 2012);
- For 2014: 200 additional medallions;
- For 2015 and later: quantity as governed by industry demand at the set transfer price.

The industry then determines the rate of uptake by the number of qualified drivers who find a business case for taking on a new medallion. As with retransfers of medallions at present, purchasers would be allowed to retransfer to eligible purchasers at the administered transfer price, less a 20% transfer fee. The net yield to the owner on transfer would be 80% of the price, paid by the new purchaser.

To encourage uptake of the medallions, and to provide for effective management of taxi supply in the long run, it is also recommended that the SFMTA undertake to medallion purchasers that it will not offer full medallions for a lesser price for a period of ten years. This communicates the SFMTA's long run commitment to stable industry profitability necessary to support the medallion value, and associated levels of driver income. It also provides assurance to those who might fear that the SFMTA would, in the future, offer medallions for a lower price once the market for the higher price had been exhausted. At present medallion lease rates, ten years is more than sufficient to recover the investment in a medallion.

The net result is a system with stable medallion prices, with taxi numbers governed by the industry's own assessment of profitability. The significant cost of medallions continues to protect the industry

from excess entry of new taxis during a recession. Excess entry during recessions is the principal historical policy reason why most large cities limit the number of taxis.

Transfer Price of $250,000

The recommended medallion transfer price is the $250,000 used in the recent Medallion Sales Pilot Project. This reverses a recent increase to $300,000. No medallions have yet been transferred at the higher price. The lower price is more consistent with putting more taxis into operation, and keeping gate fees to drivers affordable. In addition, it recognizes the complementarity between improved taxi service, increased public transit usage, and reduced ownership of private vehicles.

Protection of the Owner-Driver System and Respect for the Waiting List

It is recommended that priority for the issue of medallions go to taxi drivers, with those on the waiting list having the right of first refusal.

The combined result of these recommendations is to:

- Fulfill customer demand with reliable and timely service;
- Manage the pace of expansion to protect driver incomes and medallion values;
- Maintain the owner-driver orientation of the system;
- Treat those on the medallion waiting list fairly;
- Reduce the excess medallion lease fees and forced tipping of color scheme staff drivers currently experience;
- Minimize the regulatory cost of managing the system;
- Provide an ongoing process for automatically managing taxi numbers that is sensitive to changes in economic conditions and taxi demand.

Other Recommendations

Other recommendations are offered as desirable additions to the core proposal:

- *Direct leasing of medallions by the SFMTA to protect drivers from excess lease fees and reduce pressure to give involuntary tips to color scheme staff*. This measure was supported by the majority of drivers, with strongest support among non-medallion-owning drivers. Medallion drivers were split with the majority strongly opposed. Once the fleet has expanded to a mature size, direct leasing also provides an important means of allowing the industry to shrink and expand in response to changes in taxi demand. This flexibility also stabilizes income per taxi, driver income, and medallion value.

- *Issue part-time medallions to direct expanded supply to peak demand periods without overburdening off-peak demand.* These revenue leases would be limited to sixty hours operation per week;

- *Receive proposals from color schemes for 100 more ramp medallions as part of the 200 new medallions recommended for 2014*. Proposals would give color schemes direct control (and responsibility) for priority dispatch to wheelchair users. At the same time, the new ramp would address the request for a limited number of company medallions to assist good dispatch providers to reach efficient scale and escape the cost squeeze they are experiencing.

1 INTRODUCTION

The San Francisco Municipal Transportation Agency (SFMTA) assumed responsibility for regulation of San Francisco taxicabs in 2009, as a result of a ballot initiative. The SFMTA is now undertaking a comprehensive review of its regulatory practice to improve the taxi industry's ability to serve the community and operate sustainably.

As with most cities, San Francisco limits the number of taxis it licenses. This places responsibility on the SFMTA to ensure there are sufficient taxis to serve the public, while also ensuring that taxi industry stakeholders have the opportunity to earn reasonable rates of return.[3]

This study reviews taxi supply and demand conditions in San Francisco, assesses whether more taxis are in the public interest, and recommends a regime for regulating the ongoing management of taxi numbers.

While the taxi industry shares many common elements among cities, each city is unique. Multiple lines of evidence were explored to assess San Francisco's taxi industry. The review included

- Experience reported by San Francisco stakeholders;
- Structural analysis of San Francisco's industry;
- Comparison to other peer cities;
- On-street observations of taxis;
- Application of Hara Associates Taxi Demand model; and
- Surveys.

To ensure comprehensive outreach and understanding, surveys were conducted of taxi drivers, of San Francisco residents, and of visitors to San Francisco. Survey results and analysis are available in separate volumes, *Taxi User Surveys* and *Taxi Driver Survey*, under the series title *Best Practices Studies in Taxi Regulation*.

Additional studies will be delivered under this series. Subject areas will include

- Setting and maintaining meter rates and gate fees.
- License requirements and enforcement.
- Vehicle, driver, company, & color standards.
- Potential for improving service quality, including dispatch, accessible taxis and geographic coverage.
- Performance standards for industry and the regulator.
- Organization and administration of the regulator.

The number and issue of taxi permits is the focus of the present study. These are termed *medallions* in San Francisco, a term that is shared among many U.S. cities. The physical form of the medallion is a numbered metal plate displayed on the front dashboard of the taxi to indicate that the taxi has a legal right to operate.

[3] The requirement to ensure the opportunity for fair and reasonable rates of return also follows from the regulation of taxi meter rates by the SFMTA.

1.1 ORGANIZATION OF THE REPORT

This balance of this introduction introduces terminology used within the industry and by this report. Chapter Two analyses the San Francisco taxi industry and identifies key issues relevant to medallion numbers and issue. Chapter Three presents stakeholder views on medallion issues, as expressed to the study team during interviews, and through the survey of taxi drivers. Chapter Four directly addresses the question of how many taxis are needed by San Francisco, concluding with an estimated number. Chapter Five provides analysis recommendations on how the issue of medallions should be managed over time to ensure good service, while respecting the livelihoods of industry participants.

1.2 SOME IMPORTANT TERMS

Each city has its own terminology to describe the relationships among taxi drivers, taxi vehicles, and companies. Even within a given city, usage may vary. This report uses terms based on common San Francisco usage. An understanding of these terms will help clarify some of the issues of concern to drivers and other stakeholders:

- **A-Card.** This is the taxi driver permit issued by the SFMTA after a driver has completed required training and testing.
- **Medallion.** This is the license to operate a taxi vehicle. The majority of these are "Proposition-K" or "Prop-K" medallions issued after a 1978 ballot initiative that required a medallion be held by an active A-Card holder. Proposition K created a class of owner-drivers who controlled the medallions of the cars they drove. The medallion takes the form of a small metal plate that may be transferred from vehicle to vehicle. It is displayed on a clip mounted on the taxi dashboard. The term medallion is widely used in the industry, most famously, in New York City. There, however, medallions are metal disks attached by a bolt to the hood of the taxi, which limits their transferability from car to car. Medallion holding taxi drivers are a minority of all taxi drivers, since the taxi is required to operate many more hours than a single driver can drive. There are 1735 full time medallions compared to over 7,500 A-Card holding drivers.
- **Spares.** Taxi operators are permitted to have up to 20% more vehicles than medallions. The extra vehicles are termed spares. The spare vehicle is placed into legal operation by transferring a medallion to the spare. Historically this has been allowed only when the primary vehicle is being mechanically serviced, although recently the use of spares has been authorized to supply additional taxi vehicles during short periods of extremely high demand.
- **Color or Color Scheme.** All San Francisco taxis are required to associate with a color scheme (e.g., Yellow, Bay Cab). SFMTA regulations use the term *color scheme* to describe both the taxi company and the colors it has registered. A color scheme must use a dispatch service, but may either maintain its own dispatch service or contract that requirement out and share it jointly with other companies. A taxi dispatch may maintain the brand identity of the colors when passengers call. In practice, smaller companies sharing a dispatch service may end up answering one another's calls when customer service requires it.
- **Gas and gate.** This is the arrangement where a driver pays a color scheme a *gate fee* when taking a taxi on a shift basis. The fee includes the taxi, the medallion, insurance, and everything except fuel. The driver receives a full tank and refills it at the end of his or her shift. Thus, the driver pays "gas and gates". Gate fees vary by the desirably of the shift (e.g., Tuesday morning versus Friday night). The average fee over all shifts is regulated by the SFMTA.
- **Affiliate Leases.** Medallion holders do not have to give their medallions to a color scheme to manage. They may choose to manage it themselves, and pay an affiliation fee to a color scheme to receive dispatch services and use the company colors.

2 INDUSTRY STRUCTURE AND ISSSUES

This chapter reviews the current state and structure of the taxi industry in San Francisco, and compares medallion practices to other jurisdictions. Issues discussed include:

- Taxi shortages and failure in the taxi dispatch market;
- Implications of growing shared ride services (e.g. Lyft, SideCar), and limousines dispatched by smart phone applications (e.g., Uber);
- Cost squeeze threatening the viability of some companies;
- Excess tipping by drivers, paid to taxi company staff;
- Medallion transfer, revenue, and the aging driver workforce;
- Lessons learned from comparison to other jurisdictions.

Knowledge of several industry terms listed in Chapter One will assist the reader in understanding these issues.

2.1 A QUICK SKETCH: TAXIS IN SAN FRANCISCO

As of 2012, there were 1,585 taxis operating San Francisco, plus another 200 authorized and in the process of reaching the streets in fall 2012 and being released in stages since then.[4]Taxi drivers number more than 7,500.

San Francisco is an owner-driver oriented system. Most of the medallions are held by taxi drivers who must remain active to retain their license. This is a significant advantage to these drivers, who may gain more than $2500 per month through saved medallion lease fees, and fees they may collect by allowing other drivers to use their medallions. Under current market conditions, medallions are in virtually continuous use, many more hours than a single driver could drive. The monthly earnings of a medallion are such that there is no shortage of takers at the $250,000 price set by the SFMTA in past medallion transfers.[5]

High medallion values and medallion lease rates are not unusual among large cities – they follow from the limitation on the number of medallions practiced by most cities. Limits on medallions has its source in the special vulnerability of the industry to excess entry during economic downturns. Most cities imposed limits during the Great Depression of the 1930's. The alternative – no-limits has a mixed history. Experiments in de-regulation of taxi numbers during the 1970's were largely failures, resulting in unexpected higher prices and declines in customer service.[6]

What places San Francisco in more select group is that it is an owner-driver system, where the bulk of taxi medallions are held by working drivers rather than by taxi companies or investors. This is a result of a 1978 ballot initiative, Proposition K. In addition to Proposition K medallions, there are a limited number of other permit types. These include:

- Some 252 pre-K permits held by corporations and individuals. This number declines as individual holders expire or surrender their medallions.

[4] At the time of writing 150 of the 200 medallions had been distributed, bringing the total number of full time taxis to 1,735 once all of them are active on the street.

[5] The SFMTA has recently enabled a higher transfer price of $300,000.

[6] See for example, Roger F. Teal and Mary Berglund. The impacts of taxicab deregulation in the USA. *Journal of Transport Economics and Policy* .Vol. 21, No. 1 (Jan., 1987), pp. 37-56

- 50 part-time single operator permits limited to 90 hours of operation per week.
- The up-to 200 company permits issued on three-year fixed terms to color scheme companies based on assessed good performance criteria.

Until 2010, a driver with a post-K medallion was not allowed to sell or transfer the medallion. When they retired or passed on, the medallion went to the next qualified driver on the waiting list was established as a result of Proposition K. This arrangement put pressure on medallion-holding drivers to continue driving past the age that they might otherwise choose to retire, and created some tension for those on the waiting list. Those on the top of the waiting list are close in age to those presently driving.

The SFMTA has now established a medallion transfer program where drivers age 60 or older, or who becomes disabled and unable to drive, may transfer their medallion to another qualified driver and receive 80% of the administered transfer price to a maximum of $200,000. The remaining 20% goes to the SFMTA, less a percentage that goes to a Driver Fund.[7] In this, San Francisco joins other cities who charge significant transfer fees, and cities like Boston and New York, who auction medallions outright. Active drivers on the waiting list have right of first refusal on the purchase of these medallions. Once purchased, the new medallion owner has the freedom to re-transfer to other qualified drivers, again at a 20% transfer fee. As medallion transfers occur over time, more driver held medallions will become the more freely transferable kind.

The San Francisco system also seeks to protect drivers who do not have medallions from excessive fees that might otherwise be charged for medallion leases. Regulations set a cap on the average shift rate that can be charged to drivers for the package of car, dispatch, and medallion.

Owner-driver systems are generally thought to have benefits to customers as well as to the portion of drivers who receive medallions. Owner-drivers have a longer term attachment to the industry, resulting in an experienced core of drivers who know the city better, take pride in their profession and, on average, are thought to provide better service.

2.2 TAXI SHORTAGE: CUSTOMERS ARE NOT BEING SERVED

The most immediate issue for San Francisco is that taxi customers are not being served, either in the street-hail market or through dispatch. On-street observations, detailed in Chapter 4, found that extended periods where customers were queuing at empty taxi stands, rather than the expected arrangement where taxis wait for customers. This is unusual in that central stands, especially downtown, are usually well served in a city. Taxi shortages first manifest themselves as fast moving lines at these stands, where taxis can get customers quickly. The fast throughput also signals there is little incentive for drivers to drive empty to a dispatch call, or to pre-position themselves to serve outlying neighborhoods. When a shortage advances to the point where centrally located stands are systematically short of taxis, it is severe. The direct observations are confirmed by the stories related by the hospitality, entertainment, and downtown business communities.

Poor dispatch service was confirmed by the survey of San Francisco residents. Residents who had taken a taxi in the last six months were asked how long it typically took a dispatched taxi to arrive at their home. This measure is sometimes used as a performance standard in the industry. For example, the City of Los Angeles monitors all dispatch taxi performance and achieves 80% to 85% arrival within 15 minutes, depending on the geographic area.

[7] Currently 5 percentage points go to the Drivers Fund.

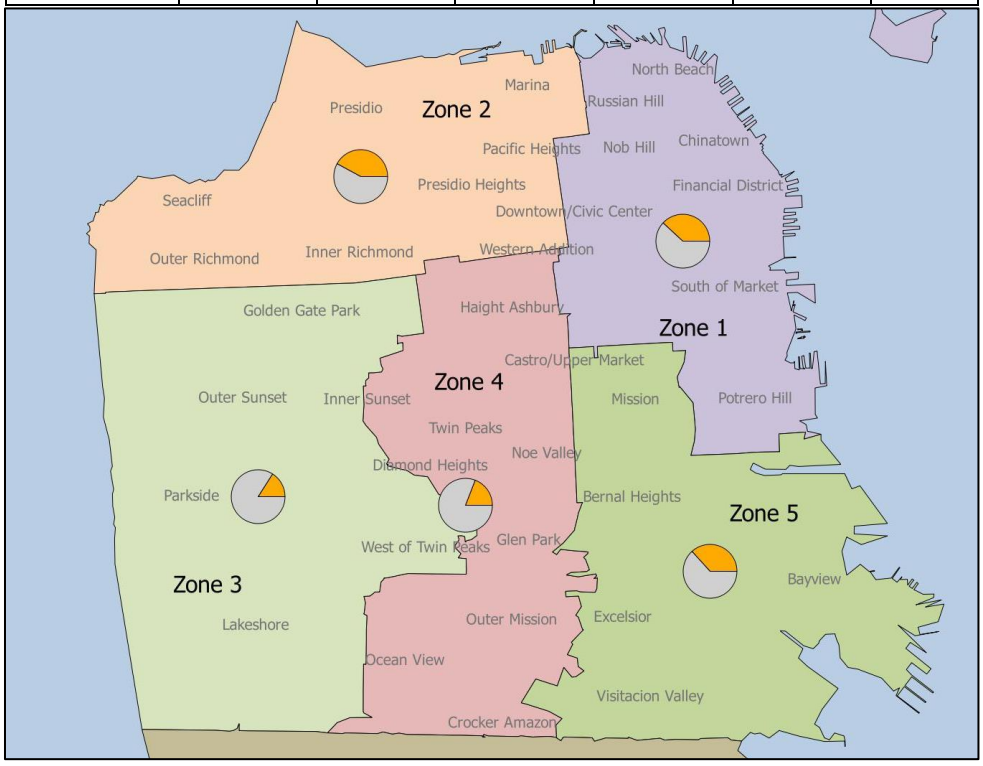
Among San Francisco's *daytime* weekday users of taxis, only 56% of residents experience 15-minute service. For 15% of respondents, a taxi typically takes more than 30 minutes or fails to arrive at all.

Reported performance is much worse on weekends. Only 33% experience 15-minute service, while 27% experience a wait of more than 30 minutes or failure to arrive at all.

Service was worst in neighborhoods in the South of the city (Zones 3, 4, and 5 in Figure 2.1). On weekends, only 17% of Zone 3 and only 19% of Zone 4 report experiencing 15-minute service. Zone 5 rates are better only because it includes the Mission area. The balance of Zone 5 reported poor experience.

Figure 2.1: Dispatch Service to the Home by Zone On Weekends

Frequency	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Total
Experience 15 minute Service	38%	42%	16%	19%	37%	32%
More than 30 minutes or no-show	26%	29%	26%	22%	37%	28%



The result of poor service is suppressed taxi demand. More people would use more taxis if they were reliably available. More than one quarter (27%) of those who work outside the home indicated they would take taxis to work more often if they were reliably available within 15 minutes. Similarly, 44% of all residents would increase leisure use of taxis in general, while 41% would increase their use of taxis for going out at night, specifically, if they were able to get a cab within 15 minutes.

The strength of feeling on poor service is supported by the noticeable number of vehicle-owning residents who would consider giving up one of their vehicles if taxis service was better. While most

would not change their habits, 14% of vehicle-owners agreed that "If taxi service was better, I would consider giving up one or more of my cars", including 8% who strongly agreed. Since vehicle ownership is a product of many factors, the strength of this response is another indication of unfulfilled taxi demand.

In addition to not serving customers directly, the taxi shortage is:

- Holding back business in the restaurant and entertainment sectors of San Francisco.
- Indirectly reducing public transit demand.
- Preventing some residents from reducing their vehicle ownership.

How can there be empty taxis in a shortage?

During stakeholder interviews, many drivers questioned whether there could be a taxi shortage. They observed that significant portions of their day were spent empty looking for fares.

The presence of slack periods, does not mean there is not a shortage. Customer demand is not a constant. There are peak and off-peak times. Under normal circumstances, we expect the number of taxis to be sufficient to meet demand during an average peak period, omitting extremes. This ensures that customers can usually count on being able to obtain a taxi at any time of day during the week other than known peak times, such as bar closing, without excessive delay.

In a well-designed system, taxis wait for customers, rather than customers waiting for taxis. We expect that during average peak periods, an efficient system will average a few more taxis than customers to absorb random variations in demand. Since taxi shifts cover peak and off-peak hours, adequate capacity in peaks means that we expect to see excess taxis in off-peak hours, even in an efficient system.

Even at peak, there can be high vacancy rates among taxis, depending on the profile of a particular city. For example, in a morning rush hour there may be a large demand for taxis going downtown, but low demand for taxis leaving downtown. Many taxis will be empty after arriving downtown and have to run empty back to wherever customers are to be found.

Thus, it is quite possible to have a shortage of taxis at the same time as having taxi drivers observe that they are underutilized for long periods of the day.

2.3 FAILURE IN THE DISPATCH MARKET

The poor service in the dispatch market is a long-documented issue. Studies by the former Taxi Commission found high levels of no-shows and poor performance in a number of years. For example, in 2005, one study found that out of 636 dispatch test calls only 73% resulted in a taxi being dispatched and 26% of the calls resulted in a no-show. Only 47% of calls resulted in a taxi showing up.[8] It appears that there were still serious problems in the dispatch market.

Not the fault of the Dispatch System

Many stakeholders note that San Francisco's dispatch system functions poorly. They note the difficulty dispatchers have finding and delivering drivers to the door. When drivers do commit to the dispatch system, they may arrive at the door to find the customer already departed, either for a street–hail or because the customer called multiple companies. Customers behave this way because drivers too have a

[8]Taxi Commission, City and County of San Francisco. *Public Convenience and Necessity Report*. February, 2006.

natural tendency to take an immediate street-hail while travelling to a dispatch call. With both behaviors present, it is difficult for dispatchers to police, with or without high tech equipment. Strategic behavior on both sides, rational on each, results in market failure.

This market failure is not a cultural artifact, it is a result of a taxi shortage. For drivers, taking dispatch doesn't pay when there is a significant risk of "no-gos" and it is too easy to get calls another way. From there, strategic behavior begins to grow.

The underlying software and hardware capacity of the larger San Francisco taxi companies is quite good. They have software and screens with real-time GPS showing the positions of the taxis. Yet it is not uncommon for dispatchers to simply seek the closest car to the home of a customer and seek to persuade one of those close by to take the call. Automated systems assist by flashing the opportunity to the nearest taxi, hoping the driver will both accept and live with the commitment.

While this may seem an obvious approach, it is not the way it is done in many other cities. The approach of dispatching the closest car takes the initial position of the taxi as a random event. In well-functioning dispatch system, experienced drivers are part of the intelligence of the system. Dispatch is divided into geographic zones where the driver can book. Systems deliver information about customer flow in each zone to drivers so that experienced ones can be near the customer *before* the customer calls. However, there is no point to having such a system if taxis are in so short supply that few drivers have incentive to book onto the dispatch system.

The low state of development of taxi dispatch in San Francisco is not from a lack of competence by companies or drivers. Not do companies lack the required sophistication in their equipment. It is a result of the shortage of taxi supply that disinterests participation in dispatch by all parties.

2.4 IS UBER THE SOLUTION?

The taxi shortage is visibly exposed by the challenge of rapidly growing limousine services and shared ride services.[9] The blurring line between limousines and taxis is enabled by smartphone applications and related technologies. *While there may be a place for these services, they are not the right solution for a taxi shortage. There are public safety reasons why a more heavily regulated service called "taxis" is the norm around the world.*

Greater monitoring of vehicles, driver training, and street inspection is necessary for an on-demand service where strangers pick up strangers, often in the dark. This what a taxi is. Even the traditional striking paint jobs have a role in monitoring and enforcement, as compared to non-descript black cars. While initial limousine entrants such as Uber appear to maintain high standards in their screening and supervision of drivers, it is only a matter of time before incidents and issues emerge, especially among later entrants who may compete more on a price basis. We do not want to reach the stage where a San Francisco resident or visitor unintentionally requests a ride through *kidnapme.biz*.[10]

Taxis are needed in sufficient numbers to ensure that San Franciscan's always have the practical alternative of ordering or hailing a registered taxi with a licensed and trained driver at a regulated rate. When that choice properly exists, then alternative services can survive on their own merit.

[9] The term shared-ride is a bit misleading. While it is intended to convey the idea the idea that a private individual is offering to pick-up a passenger and include them in their intended travel, in practice it also includes drivers whose trips are motivated by the presence of paying passengers. The latter are "sharing" their ride in the same way as a taxi driver shares their ride with a passenger.

[10] *Kidnapme.biz* was not a functioning domain name at the time of writing.

We note that one shared ride service, SideCar, has argued that its users feel safer than in a taxi. In a shared January 2013 survey of their riders on its web site, SideCar found that 71% of its clients feel safer in a SideCar provider than in a taxi.[11] Leaving aside the bias of selecting from customers who had already chosen SideCar, what is remarkable that is that 29% of them *felt safer in at taxi.* That is a large proportion of the SideCar ridership who would prefer another choice. Further, the proportions might change radically in the event of one bad story making the news.

Many take a limousine because they want someone to come to their door

Taxis are supposed to be available to come to your door. Many residents appear to be taking limousines because taxis do not reliably do so in San Francisco. When asked to rate the reasons why they preferred to use limousines, limousine users gave a the strongest agreement to "because the limousine is more likely to come to your home" (90% agreed). This outranked vehicle quality and driver quality by a substantial margin (see *Taxi User Survey* for details), indicating that it is the reliability of an Uber limousine, not the luxury, that is absorbing taxi demand.

Threat to a viable taxi industry

The current proliferation of limousine and ride-share services is partly driven by the undersupply of taxis. Beyond taking up the unsupplied portions of taxi demand, these less-regulated alternatives also threaten the commercial viability of the core taxi markets, such as in the downtown. In the worst case, a complete loss of the outer neighborhood markets combined with competition downtown could yield a collapse of taxi customer volume and a collapse of associated medallion values. Contrary to simplistic analysis, the industry may require more medallions to defend medallion value, not fewer. An adequate number of taxis are needed to effectively serve markets and maintain rider confidence in the taxi industry.

Do extra fees solve the dispatch issue?

One reason that shared ride services and limousines can fill the void in the dispatch market is because their numbers are not limited by regulation as are taxis. However, another reason is the ability to use credit cards for advance fees, and higher fees. The deposit of advance fees solves the problem of no-shows on both sides – the passenger has paid a non-refundable deposit to be there when the vehicle arrives, and the driver wants to go because of the higher fee and the confidence that the customer will be there.

The effectiveness of this system is such that, according to interviews with taxi drivers, Uber and other smartphone apps are making significant inroads in dispatching taxis.

The effectiveness of such fees will be explored in the later report on rates and fee practice. We note that in the context of limited taxi supply, this form of solution merely results in those with more cash bidding away the limited supply from the less affluent. In addition, the practice undermines the point of a fixed meter rate as a protection for customers.

2.5 COST SQUEEZE ON COMPANIES AND DUAL-PRICE MEDALLION MARKET

A complaint raised by most of the San Francisco taxi companies interviewed was the squeeze on their profitability. In the case of smaller companies who had invested in improved dispatch systems, there was the claim that they might be put out of business.

[11] Paul, Sunil. *San Francisco Feels Sager with SideCar*. January 29, 2012. <http://blog.side.cr/2013/01/29/san-francisco-feels-safer-with-sidecar/> retrieved on March 18, 2012.

There is substance to this claim, although the story is less obvious than it might appear. Key points raised by companies are that

A. The SFMTA sets a cap on what the companies can collect for their services in in gate fees. So they cannot charge more.
B. Because the SFMTA is not enforcing the cap in gate fees on medallion holders who manage their own medallions and simply pay affiliate fees for dispatch services, there are an increasing number of medallions who go the *affiliate* route.
C. The uncapped rates charged by affiliate medallions yield higher revenue, making those medallions holders want more from any company wishing to lease their medallion.
D. Companies who wish to lease medallions to operate more taxis are forced to pay these higher medallion lease fees ($ thousands more per month), but cannot raise their regulated gate fees to recover the cost. *Thus, the squeeze between rising costs and capped rates.*
E. Smaller companies with large investments in new equipment are particularly hard it. They need to expand to achieve the scale to justify the cost – but are faced with bidding for new medallions at the higher rates.
F. To make matters worse, low-overhead companies that provide little service can charge the same gate fees, and have more room to bid away medallions that stick within the gas and gate capped system. *Thus providing good dispatch service and vehicles is negatively rewarded.*

Driver interviews and the driver survey confirm the dual-price market for medallion leases. On a monthly basis, medallions were reported to lease for between $2,000 and $3000 per month within the gas and gates system, or for $5,000 to $6,000 per month as affiliate leases.

The existence of the dual-price market does not by itself entirely validate the cost squeeze argument made by companies. Affiliation fees for dispatch services are not regulated. There is nothing stopping a company from charging more for better value delivered to a medallion holder operating a taxi. It is normal in most cities for affiliation fees to vary between companies by service provided. A company wishing to expand with good dispatch service and a shared high standard does not have to lease medallions at any price – in theory, it can make its business through providing good service and charging accordingly.

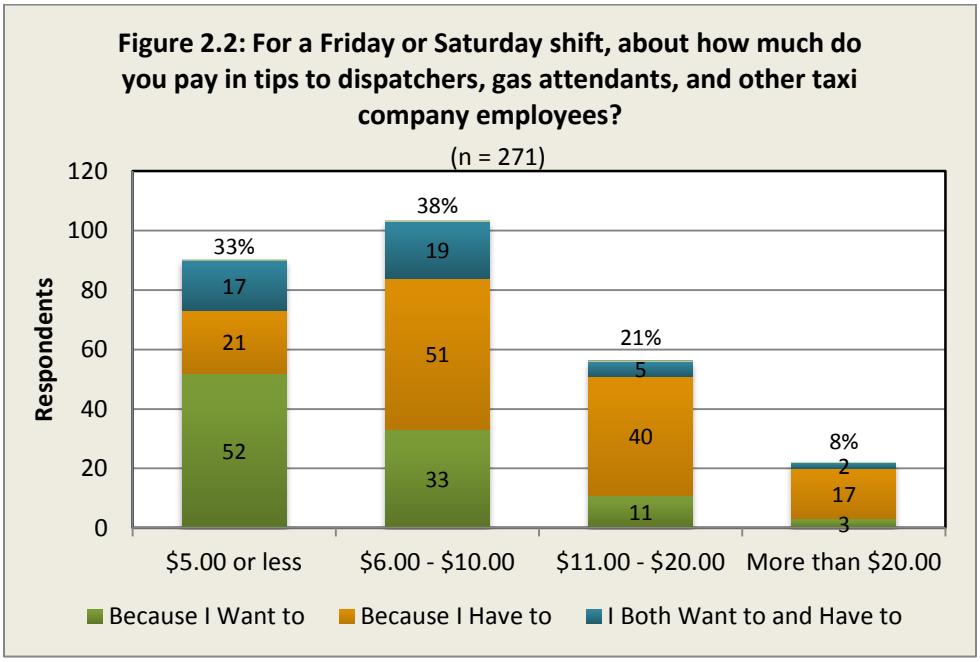
Unfortunately, this strategy does not work well in the current context of San Francisco's taxi shortage. With the street-hail market so busy, it is difficult to sell the value of better dispatch service to a medallion holder. To market better taxi dispatch to customers, it is also better to market at scale – and without the available scale of new taxis there is not a sufficient fleet to answer the calls if the promise of good service was believed by all. Uber's success comes not only from innovation, but from being able to readily meet expanding demand by taking advantage of the State of California's unlimited limousine licensing regime. A further, and ironic, handicap is that many medallion drivers are committed to the fairness of the gas-and-gate system. Their solidarity with non-medallion drivers was evident in interviews and in the driver survey. Without price motivation on the medallion side, it is also difficult to attract new medallions to a company wishing to expand its fleet with better dispatch.

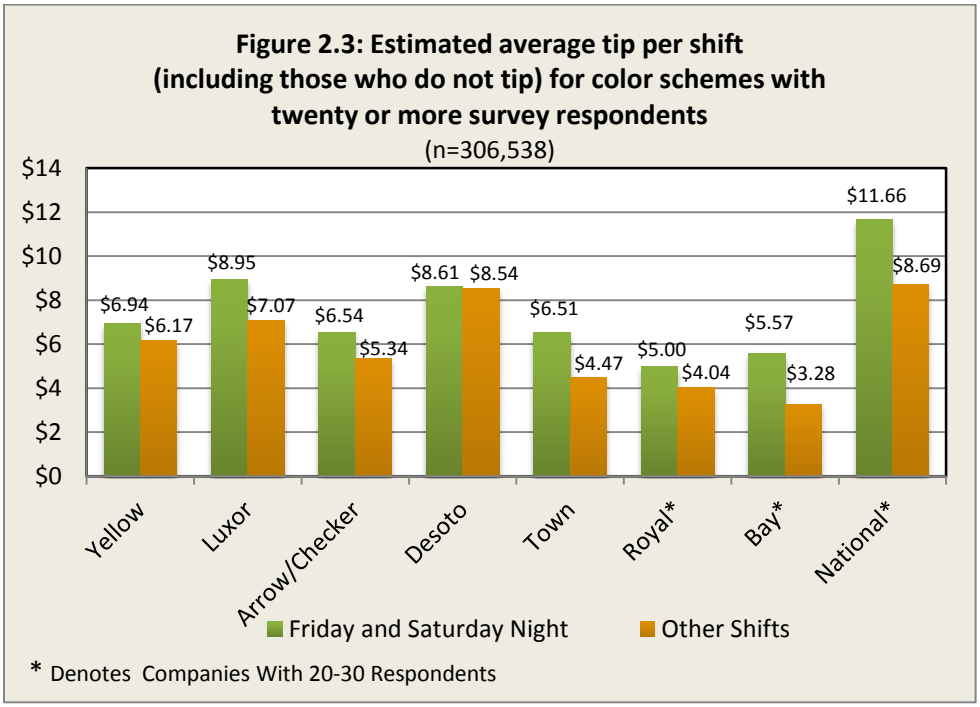
In short, the cost squeeze reported by companies is largely real, and innovation in providing better dispatch service is being blocked by the shortage of taxis.

Companies also allege that the cost squeeze is forcing them to join the Dark Side, running affiliate taxis that bypass gate fee limits, and potentially running parallel limousine services to offload their excess taxi dispatch calls. These are credible concerns.

2.6 TIPPING SQUEEZE ON DRIVERS

Drivers, especially those without medallions, face a parallel problem. Those who take their taxi on a daily shift basis (gas-and-gate), often find they have to tip the dispatcher, the gas attendant, and/or the cashier. For some, not tipping has consequences in the form of delayed issue of the vehicle, or perhaps no vehicle at all. The payment of such gratuities is forbidden by regulation, but it happens anyways.





This form of tipping undermines the objectives of capping gate fees to keep the cost of taxis at reasonable levels for working drivers. Even at the $7 per shift that some drivers view as normal, this adds up to a considerable amount over the year. Tipping to obtain the desirable Friday or Saturday night can be much higher. In the driver survey, more than a fifth of drivers reported tipping between $11 and $20, and 8% reported tipping more than $20 (Figure 2.2). By comparison, the regulated average

gate fee for a shift is $96.50, or $104 for hybrid car*. Despite the institutionalization of tipping, many drivers view their payments as involuntary.*

Driver tipping is an issue within the industry. Some companies make a point of trying to eliminate it with varying degrees of success. Figure 2.3 shows average tipping by shift for all drivers, including those who do not tip, for companies with more than 20 respondents in the survey.

2.7 COMPARISON TO OTHER CITIES

Five cities were selected to be comparable to San Francisco in terms geography, population, size of transit system, and level of tourism. They were:

- **Boston.** Boston has a comparable small land area and population to San Francisco, and is the middle of a larger urban conglomerate. It is also a leader in technology adoption and performance reporting, and auctions medallions.
- **Seattle.** Seattle has comparable land area as well as matching in other areas. It also has a long history of reform and is currently a limited medallion regime where taxi numbers are managed.
- **San Diego.** In addition to being a good match in other respects, San Diego shares the state of California legislative regime, including state regulation of limousines. It is a closer peer than Los Angeles – which operates a relatively unique taxi franchise system.
- **Miami.** Miami shares the small land area of San Francisco, although its taxi regulatory regime occurs at the county level. While the city population is smaller, Miami-Dade is a larger urban conglomerate and a center for visitors. Miami-Dade has a long history of regulatory reform and recently underwent a governance review.
- **New Orleans.** Similarities in restricted area, tourism levels, and coastal. Has also undertaken recent research work and review itself.

Medallion practices are summarized in Table 2.1. Detailed experience is provided in the Appendix C. Comparison with these cities was supplemented by broader comparison with other cities known to be world leaders or interesting examples in taxi regulation.

Medallion limits must be adjusted over time

As noted earlier, most large cities limit the number of medallions. Most U.S. cities imposed limits following excessive entry of taxicabs into the market in the Great Depression of the 1930's. The peer sample includes two cities who had experimented with deregulation and no limits in the late 1970's, San Diego and Seattle. Both re-instituted medallion limited regimes.

Where fixed limits exist, they must eventually be changed to match civic growth. Twenty years ago, these cities all had fixed caps on the number of taxicab licenses, with no effective mechanism to adjust that total. In the case of San Diego and Seattle, there were moratoriums in the aftermath of failed attempts at deregulation. Boston's cap of 1525 had been in the State legislation since 1930. Although Miami-Dade had simple formula in its regulations targeting 1 taxicab per 1,000 population, it had not adjusted the numbers following the 1990 census. With its rapid growth, by 2004, more than 400 new permits should have be authorized. With the economy still struggling after the September 2001 attack, the formula was dropped. As an *ad hoc* measure, 75 new licenses were approved, including the launch of a WAT program, while a process to develop a new formula was begun, which is ongoing.

The Miami experience also indicates a risk of formulas – they may be enacted but not maintained. Neglect or economic circumstance may delay issue of new medallions, causing medallion prices to rise.

Once the medallion prices are higher, there is greater resistance to catching up with a formula, and they can fall into disuse.

At the same time, fully discretionary systems can encounter similar issues. Traditional public convenience and necessity regimes place the burden on new applicants to prove there is a need for more taxis. Incumbents may intervene to resist, creating a significant hurdle for new comers. In the case of New Orleans, the regulator found it had to take initiative itself.

Figure 1: San Francisco and Its Peers

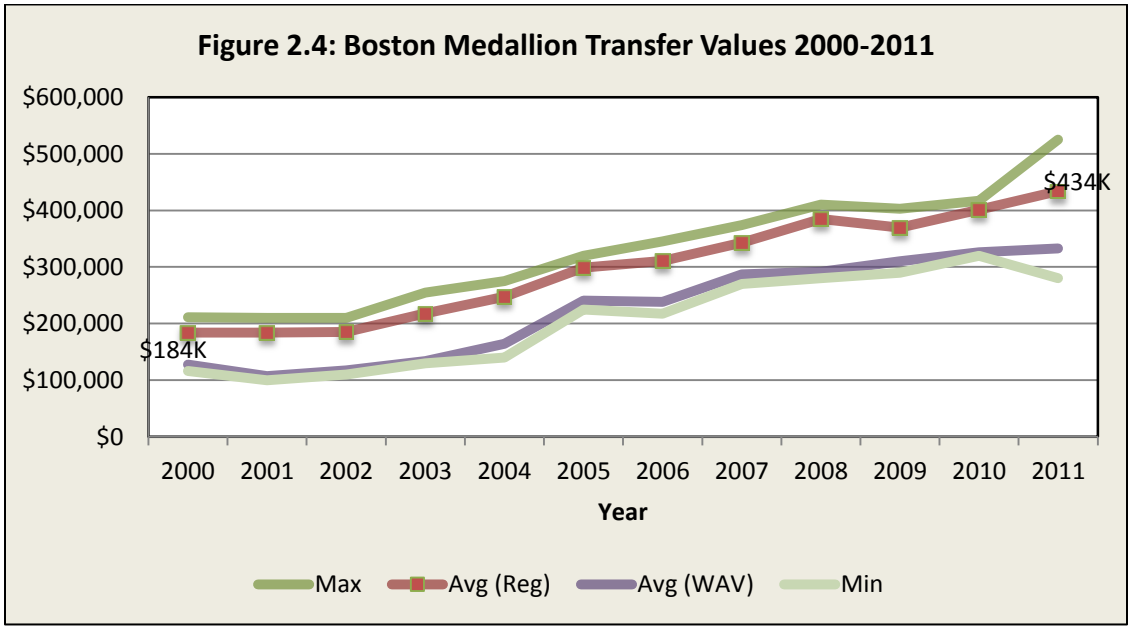
Jurisdiction (2011 Population Estimate)	**Number of Taxis**	**Method of Determining # of Medallions**	**Method of Issuing Medallions**	**Regulated Medallion Lease Rate?**
City and County of San Francisco (Pop. 813K)	1,585 (+200 in process)	Fixed number adjusted by hearing based on supply, demand, and public interest.	Primary method is to active drivers on waiting list, for an administered price ($300K). Retransfer permitted to other active drivers. Recent 200 were issued to good performing companies on a 3 year term.	$96.50 per shift for medallion & vehicle. $7.50 surcharge for fuel-efficient taxis
City of Boston (Pop. 625K)	1,825	Discretion of the police commissioner.	Auction to any purchaser. Medallions are transferable on open market.	Yes $77 per shift $18 surcharge for fuel-efficient taxis Or $700/week
Miami-Dade County (Pop. 2,555K)	2,042	Per capita population formula until 2004.Now by decision of Board of County Commissioners until new formula in place.	Lottery to experienced drivers and veterans at $25K price.Transferable after 5 years on open market. Recent experiment with auctions, at yield of $410K+.	No
City of New Orleans and Orleans Parish (Pop. 361K)	1,450	Public convenience and necessity hearings with burden on applicant, but 105 recently issued at regulator's initiative.	CPNCs are issued to both drivers and companies. They cannot be transferred.	No
MTS taxi jurisdiction in San Diego County (Pop. 1,779K)	1,051	Formula based on expected trips per taxi. Applied every three years.	Lottery. 40% to drivers, 60% in blocks to established permit holders. Transferable after 5 years.	No
City of Seattle (Pop. 617K)	688	Formula based on data electronically reported by companies: response time, operating hours, etc.	New medallions primarily for wheel chair accessible. Lottery to restricted group of best qualified drivers and/or by request for proposal. Medallions may be transferred after 5 years.	Yes $85 per shift $15 surcharge for fuel-efficient taxis

Medallion Values Can Recover from Large Expansion

The taxi market in a city is not a single market. There are different kinds of potential customer trips, at different parts of the city, at different times of day. For example, in San Francisco, there is a strong distinction between the downtown core and surrounding areas, and between where tourist demand originates and where commuter demand originates.

As conservatism limits medallion growth, the ability to serve some market segments drops off. These trips find other means of transport, and these segments cease to be a large part of the taxi market served. When this happens, there is a potential demand that is unrealized, and potential for expansion that could help to generate an ideal per-taxi revenue that supports medallion value.

Within the selected peers, Boston is an interesting example. After many decades limiting the number of medallions at 1,525, Boston authorized an additional 300 medallions, an approximate 20% increase. The first forty of these were issued quickly to wheelchair accessible vehicles, and the remaining 260 were auctioned off over five years, from 1999 to 2003. Despite a significant increase in medallion numbers, medallion prices soon increased above their pre-1999 levels. Historical evidence suggests that Boston medallions were worth $32,000 in 1983[12] and $95,000 in 1995[13]. Transfer records beginning in 2000 show average medallion prices starting at $184K and rising to $434K by 2011. This increase occurred as the medallion expansion took place, and despite the general slowdown in travel and tourism caused by the September 11 attacks.[14]



The experience of Boston after the introduction of a large number of new medallions is not unique. A similar story played out in Toronto. After an industry review in 1998, Toronto resolved to issue 1,313 non-transferrable, non-assignable, and non-leasable single operator permits, called “Ambassador

[12]Frankena, Mark W., and Pautler, Paul A., *An Economic Analysis of Taxicab Regulation,* Federal Trade Commission Bureau of Economics Staff Report, May 1984, available at http://www.ftc.gov/be/econrpt/233832.pdf retrieved 24 August 2012.

[13]Government of the District of Columbia, “Taxi Medallion Systems”, Memorandum from Fitzroy Lee, Deputy Chief Financial Officer, to Neil O. Albert, City Administrator, January 4, 2010, available at http://cfo.dc.gov/cfo/lib/cfo/taxicab_medallion_memo_jan4.pdf retrieved 24 August 2012.

[14]Boston Police Department

Plates," which they issued from 1999 to 2005. This represented an increase of 38% of taxis at peak (less at other times due to the single operator requirement). Medallion values fell initially from approximately $63K to $41K in 2000, but swiftly recovered to above $63K in 2002. Medallion value continued to grow, with dips related to recessions, to values of above $200K today.[15]

Price Stability an Alternative to Quantity Limits

The Australian state of Victoria is currently considering a unique alternative approach to managing the number of taxi medallions. It recently concluded a comprehensive Taxi Industry Inquiry. The Inquiry suggested that, instead of setting a specified number of taxis, leases for medallions should be offered at a fixed rate to any qualified individual. Fees would be paid at the beginning of each year and the license could be returned at any point. As a result, the burden of controlling taxi numbers would shift from the regulator to the industry, while an overabundance of cabs would be prevented by the significant cost of a lease ($20,000 annually for a Melbourne taxi license).[16]

The advantage of this proposal is it's automatic nature. When any private industry operator sees that the demand has increased to the point that it is attractive to take on another taxi at $20,000 per year, they are free to do so. Numbers expand (and contract) with the taxi demand experienced by industry players. There is also no responsibility taken for the medallion price – older medallions would be worth whatever the $20,000 per year they could earn made them worth. Nothing constrained medallion holders to charge just the $20,000, but it would not be feasible to charge more, given that any lessee has an alternative supply from the regulator at that price. From a revenue perspective, revenue from new leases would go to the public purse, while revenue to existing medallions continues to go to those medallion holders.

There has been significant industry resistance to this proposal. In addition to being a major change in mind-set, the proposed $20,000 per year price was significantly below what medallions were commanding in the open market prior to the report. Thus, the proposal was implicitly to expand the number of taxis to a level commensurate with the lower lease cost, with a large negative impact on the capital value of existing medallion holders. The Inquiry report addresses this impact explicitly.

One reason this measure is a potential option for San Francisco is that the price for medallions in San Francisco is already set at an administered level. Thus, it is possible to consider a similar approach that uses current medallion values, and to also achieve the goal of stabilizing medallion values at that price. This option is discussed further in Chapter 5.

Method of Issue

The encouragement of owner-drivers is a San Francisco objective that is shared by other jurisdictions, but not all. Until recently, Miami awarded medallions to top-ranking drivers by lottery. San Diego issues medallions by lottery to drivers who meet experience requirements, and Seattle also uses a lottery among best qualified drivers. *None of the peers uses a waiting list.* Instead, when awarding to drivers, seniority and other driver qualifications are used as an initial screen, with lottery used to break the tie.

The disadvantages of a waiting list are those already experienced by San Francisco. It fills up quickly, since it is often a list to get something valuable for free or at a reduced price. Even if restricted to active drivers, the list will be too long for those at the bottom to have any reasonable expectation of getting a medallion. The number of drivers in a large city usually far exceed the number of medallions. As years

[15] Toronto Taxicab Industry Review, *Preliminary Report.* September, 2012.
[16] Victorian Taxi Industry Inquiry, *Customers First: Safety, Service, Choice.* September 2012.

pass, new participants in the industry are locked out of the process, since the waiting list is already unacceptably long. Those who failed to list themselves for lack of understanding, also find themselves locked out when age and experience qualifies them, and gives them a better understanding of what they missed.

The SFMTA closed the waiting list in December, 2009. In 2012, the number of applicants on the waiting list was administratively reduced from over 2,800 to about 1,450 applicants by eliminating names of individuals who did not hold A-Cards. It is estimated that one half to two thirds of all applicants on the waiting list will prove ineligible to receive a medallion because they are not active taxi drivers. Current arrangements give the top 200 qualified applicants on the waiting list a priority right of refusal of medallions at half of the full transfer price. All other medallion applicants will be offered medallions at full price in the order of their place on the waiting list. When the waiting list is exhausted, driver seniority will become the principal basis for medallion distribution.

With increasing fiscal pressures on all levels of government, there is also increasing pressure for regulatory agencies to capture some of the high value that has accrued to medallions. New York famously auctions its yellow cab medallions, for prices that have exceeded $1 million. It is now locked in a legal battle to extend this system to raise more revenue. Within the selected peers, Miami first began to charge $25,000 for newly issued medallions, and recently experimented with auctions raising more than $400K per medallion. Boston has a well-established auction process yielding more than $400K per medallion, as noted above. San Diego's regulator considered this possibility, but found it contrary to broader policy to restrict fees to cost-recovery.

3 STAKEHOLDER VIEWS

This chapter reports the views of San Francisco stakeholders in the taxi industry, as expressed to the study team in interviews, and via the Taxi Driver Survey. Full analysis and results of the Taxi Driver Survey is a available in a separate volume. Views expressed in this chapter are not necessarily those of Hara Associates, and may cover topics outside the scope of this study. The chapter is intended to provide context for the issues and as information for decision makers. Comments relevant to the mandate of this study are incorporated in the analysis and recommendations in other chapters.

Interviews were conducted in person, in the summer and fall of 2012. A partial list of respondents is provided in Appendix A. The identity of some driver respondents has been protected, including participants in group driver interviews held in the fall of 2012.

Views related to medallion numbers and issue are summarized by topic below. *Stakeholder views on other topics will appear in future reports in this series related to those topics.*

3.1 NUMBER OF TAXIS

Backstories

Many respondents positioned their views in a historical context. One common story was of Mayor Willie Brown being unable to get a cab in the mid-90s and deciding right then to put another 500 on the street. Other narratives included:

> There were 839 cabs before 1977. When [the old] Yellow went bankrupt, that took 500 off the street, briefly dropping the number to under 400. The new Yellow Co-op purchased 250 and another 100 went to another company. Some had been sold just prior to the bankruptcy, others afterwards. By 1984, there still were only 711. In 1984, another 100 were put on for the Democratic Convention; eventually that became permanent. A ballot initiative raised that to 911 in 1993.
>
> There was a huge demand during the dotcom boom. An initiative to increase the number failed because people felt this would only benefit the companies, and people in San Francisco like small business; they like the owner-operator idea. They agreed, however, to a release of 500 in 2000, only to be hit with 9/11.

Some focus on what this has meant for drivers. One experienced driver claimed that “there’s been no possibility of being a professional driver since 1978, when there were 839 cabs in the city.” Others picked up the tale:

> Back in 1969, you just needed $300 for a medallion—you could buy two, even four. There was a limited market then. In the mid-70s, there was a 40/60 commission system. Companies provided holidays, health care, but then drivers didn’t turn on the meter. Later, in a mere six months, the price of medallions went up from $20,000 to $40,000, pricing out most drivers. Then came “the list”. Anyone could get on it. At first it wasn’t apparent that having non-drivers hold medallions was a problem, but within a few years it was. Proposition K [2003] required that medallion holders be drivers, established the gas and gate system, and effectively killed the medallion market. By then, however, there were a variety of permit types floating around, individual

> permits, pre-K medallions, company permits, medallion holders who had never driven, full-time drivers who'd been on the waiting list to get a medallion so long they were ready to retire.
>
> The current Taxi Director recalls: "There was one applicant who received his medallion from the Taxi Commission in February of 2009, and died of old age in October of the same year."

All agree that having had seven ballot initiatives on taxis has created a complex situation for the industry, and a confusing one for the public. They agree, too, that "If you could wipe the slate clean, there might be better ways to organize things." But they are aware of the current context, and share as a bottom line the need for "a system that doesn't make things so open that it's unsafe, unregulated, but, where the market can bear more activity, we should be trying as a community to satisfy it."

It is over the interpretation of what the numbers and changes have meant that stakeholders differ. Drivers—medallion holders or not— and even some large company representatives, say that after 9/11 there was a glut of cabs. "It took three years to recover," says one. "In 30 years of driving it was the worst stretch. Drivers literally were fighting because there was not enough business." But another is dismissive, maintaining that the release just prior to 9/11 took three months to absorb, "80% of trips are local," he said, "not dependent on tourism." For many, the lesson of the post-9/11 period is that MTA must "announce the number of medallions to be released per year, spread the release over the course of the year, monitor their effect, and adjust as needed." Others take an if-you-build-it-they will-come approach, claiming that when there are more cabs, more people take them.

When interviews turned to what should happen in the future, stakeholders were even more deeply divided.

Current Need

Non-industry actors who are directly affected by it—hoteliers, restauranteurs, convention organizers, as well as ordinary taxi users—are blunt about the immediate need for more taxis.

Typical comments included:

> The [insufficient] number of cabs is definitely a problem, especially on weekend nights and during morning rush hour, and to and from the neighborhoods
>
> There aren't enough taxis at peak—you can wait 45 minutes or more—or in inclement weather, or during big conventions.
>
> There aren't enough taxis. They're not well distributed, they're nonresponsive to calls, and there is bad service in the neighborhoods. Visitors to San Francisco spend up to an hour waiting for a taxi instead of spending money. The number of limos indicates a vacuum. But Uber isn't a solution to the taxi shortage; it's not for people in poorly served areas.
>
> The reason we have bandit cabs and drunk driving is that we do not have enough taxis. It is crucial to our economy. It is crucial to the tourism business. It is crucial to safety and security. The taxi shortage is that much worse for the elderly and those needing accessible taxis—and it's harder for disabled to wait. Too many accessible cabs hang out at the airport. Availability is a major issue for paratransit users. While there probably are enough ramp taxis, too many of them hang out at the airport. As well, not everyone with a disability actually needs a ramp taxi, and so wind up facing the same shortages as other citizens.

> The demand is there for more.
>
> Availability is the main, priority issue. There are never enough cabs.
>
> Are there enough taxis? No. Everyone knows that.
>
> You don't have to be a consultant to figure out there aren't enough cabs.

Many industry insiders share these views, and also tend to be more specific about the numbers needed:

> We need more cabs to improve service. I've been in the business for 30 years and have a feeling for what is needed: 150 cabs will not harm drivers' business. It might reduce the number of pirates, or at least—along with law enforcement—make it more difficult for them.
>
> We're two years behind. SFMTA should establish a staff position for someone to issue one medallion a week. But right now, they should hire temps to put out a bigger bunch right now, between one- and two-hundred.
>
> As a resident, there clearly are not enough taxis. I can't get one at home (Presidio), or at the office (near City Hall). We shouldn't flood the system, though. Add 50 to 100 medallions per year for the next five or six years.

Company owners were the most explicit of all. In their view, the numbers that can be absorbed ranged from 500 to 1000. Some felt as many as 350 could be absorbed immediately. Most cautioned that medallion value has to be protected and suggested spreading their release over several years. Specific suggestions for variations on the way medallions should be released are discussed further down. Here, it is important to point out that there are a limited but vocal number of industry insiders—mainly drivers and the owners of small to mid-sized companies— who have the opposite view:

> There are peak time shortages, but overall, there are enough taxis.
>
> The need for more taxis is phony.
>
> We do not need more medallions. Supply and demand don't match up here, but that's true everywhere.
>
> There are enough cabs now, but they're being used inefficiently. There's a great opportunity for more dispatch. Fix dispatch, then see if we need more taxis.
>
> More taxis will just mean a bigger airport and downtown glut.
>
> The problem isn't the number of cabs, but the quality of service.
>
> There are enough taxis now. The problem is that drivers are independent contractors. Companies cannot exercise control, so they can't improve service.
>
> More cabs won't solve the problem if they're not in the right place and working efficiently—it's no good to just have more guys waiting at the airport.

For the most part those with experience in the industry—including even some of the individuals quoted above—take a more nuanced, rather than a pure black and white view of the taxi situation. "There

probably aren't enough cabs," acknowledged one driver, "but if dispatch were up to snuff, we might not need so many . . .probably 100, 500 at most, but that includes getting rid of the unregulated town cars." Said another, "The first choice is always more cabs. If companies could handle all their calls, the call wouldn't roll over, customers would be served, and there would be fewer complaints."

More than one stakeholder elaborated on dispatch problems. A long time dispatcher maintained that:

> Phones go down or back up at the busiest times. Customers get a busy signal and call another company. The data base is terrible. Cross-references to street maps are wrong. The GPS is often wrong. The system is programmed to fail. The stats are bloated, all to make a case for more cabs.

Almost everyone noted that there is a problem at peak times, and that for many reasons, San Francisco may have longer peak times than most cities. Comments along the lines of, "Demand varies, but the industry is structured so that supply is constant," were common. As one person noted, "There are a third too many cabs out on Sunday mornings, but two-thirds of what is needed on Friday nights". Her suggestion was to use some of the City's own fleet of 1500 or so vehicles, say 300-500, as cabs during peak times.

Many find the idea of peak time permits (or medallions) appealing. Said the owner of one mid-sized company, "Demand is uneven. Single Operator Permits won't solve the problem. They're a dumb idea; you can't reliably monitor how they get used. Peak medallions, however, would be easy to control and would meet the need for more cars at busy times. You could use a different shape or color medallion. We could engage the medallion owner or a cab about 12-13 days per month." But as one driver cautioned, "Do not arbitrarily put a whole lot of cabs on the street to meet peak demand. Remember, you have to put drivers in the cabs." While another pointed out that caution is needed about peak time permits as "those are the best times to drive."

In addition to suggesting time-based medallions, a representative of a computer company involved with the industry suggested targeting the problem of really poor service in some areas by issuing geography-based medallions." With today's technology, all manner of specifically-designed fixes are feasible," he said.

The question of how to determine how many more cabs can be absorbed was glossed over by some, but was the focus for others. The size of the shortage is estimated by most to be between 100 and 500. Several noted that adding 100 extra cars in the form of spare vehicles authorized for short-term use (spring, 2012) for the US Open and Gay Pride was an interesting and useful experiment in adjusting to demand. Representatives from the hotel business claimed it made a big difference. A dispatcher noted that the evening shifts during the experiment were snapped up, but no one wanted days. However, the owner of a large fleet maintained that even with the extra permits, his company could not get out all the calls that came in.

Some are under the impression that a formula should determine the number. "Having a basis for determining the number of taxis needed is imperative," said one public sector stakeholder. While a driver suggested that "the number of taxis should include a formula related to driver revenue. Before you decide the number of licenses, you need to factor in other issues influencing driver income (e.g., meter rate up, gate rate down, etc.)."

Some are wary of a formula because, among other reasons, they believe that better service will increase demand, but they do not think it possible to know by how much. Reference to the market determining

the right number was made by several stakeholders, including one who added, "The number of medallions should be increased by a vote, not a formula."

Others believe there are alternatives to both intuition and algorithmic formulas. Said one driver:

> We're never going to know how many cabs we need until we use our cabs better. We have booms and slow periods; there is a tremendous need for cabs at 3 p.m. at medical clinics, at hospitals, which takes you out the suburbs where you have to come back without a fare. There are structural and professional problems that have to be resolved. Otherwise there will just be more guys on the street who aren't earning a good living. We haven't tried the single operator permits or the peak time permits yet, but there is interest. As a first step, it would be good to see how those work out before flooding the street with new medallions.

An experienced paratransit professional stressed the need to work with the industry to determine the real need for taxis. "People think of the industry as being up to playing games, but it is different here. There is a real service focus—companies, drivers, medallion holders. We should really listen to the industry for this reason. Understanding where trip denials are occurring is necessary. I would do a lot of surveys. I expect there would be trends. You also have to reach out to those who won't use computers. And you need broader community input."

Whatever the method, there is evidence of frustration. Said the owner of one of the city's larger fleets, "We definitely need more—at least 100 more cars. We can't meet the demand for service. Our Yelp! rating keeps dropping. The numbers are supposed to be assessed every two years, but that hasn't happened. I'd like an annual review. I've been screaming about it for at least seven years."

Another point of contention, covered at greater length below, but worth noting here, is the dichotomy between company owners, a number of whom want permits to go to companies—specifically to full-service companies—and drivers, most of whom place a high value on self-employment and therefore insist permits should go to individuals. Some suggested a split, with medallions (regular, peak load, or single operator) going to drivers, while others would be released as permits to companies.

Finally, two points were raised that could affect evaluating how many more taxis might be needed. Both touch on the fact of taxis being an aspect of public transit. One was the suggestion that were there more transit lanes (in which cabs are permitted), their capacity to travel more quickly would be equivalent to adding more taxis. The second was the suggestion that in some underserved areas where bus routes are not warranted by the number of potential users, there may be an opportunity for some taxis traveling a prearranged route for a fixed price.

In summary, the need for more cabs is generally acknowledged—enthusiastically by some, less so by others. Many feel that there should not be a wholesale dumping of full-time new cabs until some of the industry's inefficiencies, such as dispatch, are solved, and until other avenues, such as peak time permits, are investigated. Several stakeholders pointed out that the quality of drivers has a critical impact on the quality of service. Drivers who are courteous, knowledgeable, and experienced can do more shifts and do them more efficiently; one estimate put the number of additional fares per shift as high as 20 to 25%. And the best way of ensuring experienced drivers, this observer continued, is to ensure people have a good workplace environment: fair shifts, decent treatment, and reasons to see being a San Francisco taxi driver as a career. Meanwhile, add 100-200 medallions, see how well they are absorbed, and evaluate the whole situation before putting out more.

3.2 MANAGING THE WAITING LIST

All stakeholders agree that the list presents a thorny moral dilemma. Most recognize that whatever is decided about the future of those on the medallion waiting list will result in a fairly large number of unhappy people. Proposals for achieving the best (albeit inevitably flawed) possible outcome abound. The comments below illustrate both the concern for fairness and the range of potential actions:

> The biggest problem was having free medallions. (driver)
>
> Back in 1978, all medallions were transferrable. Proposition K chopped everyone off at the legs. I don't want the guys on the list to have that happen, but if there is a better system, it should be implemented. Maybe take care of some and then cut bait. (a company manager)
>
> Finish the list. No one group should have things all their own way. The city exists for the benefit of all the people of San Francisco. Put the decision on the ballot. (owner of a small company)
>
> The list has to be addressed. Either eliminate it or let the people on it buy or otherwise get a medallion. Get rid of the dual system. Then provide incentives to well-run fleets: give drivers benefits—retirement, health. (owner of a mid-size company)
>
> Issue half to list; half to companies with good performance. (owner mid-size company)
>
> Letting those not on the list get medallions was a mistake, but now it's a fact of life. Most of those on the list have been on it for over a decade; they succeeded by seniority. (driver)
>
> I don't like the idea of arbitrarily giving the top 100 people on the list medallions. (driver)
>
> You can't just dump the list. Medallions should go only to drivers. People should get medallions based on seniority, not based on purchase; you shouldn't have to buy the job. (driver)
>
> Respect the current list. (dispatcher)
>
> First exhaust the existing list. Most people want to get medallions into the hands of the people at the top of the list; give them a medallion. Then go to a sell model for the rest of the list, perhaps with discount based on time on the list. A Senior Operating Permit[17] could be part of the equation. Keep medallions in the hands of drivers, but the standards should be higher than what is needed simply to get an A-Card. (owner of a mid-size company)
>
> Keep the list for individuals. The lion's share of medallions should go to people on the list—they generally are good drivers, which means good service. But do consider leasing medallions to companies with a good performance record. (dispatcher)
>
> Discount the list so that those on it longest pay least for a medallion. The range would go from getting the medallion free, as in the past, to paying just below the current $250,000 price. Those at the very bottom, who got on just before the list was closed, might get back the fee they paid with interest. (driver)
>
> Medallions suck the value out of the system. (supervisor)

[17] The correct term would be "single operator permit". Because they were allocated by seniority they are often referred to as "senior operating permits".

The driver survey tells a similar story. As Figures 3.1 and 3.2 show, many drivers would prefer a seniority-based system of medallion disbursement, but almost all drivers are united in feeling that the current list should be respected .

Figure 3.1: New medallions should go those who are currently on the official waiting list.
(n = 613)

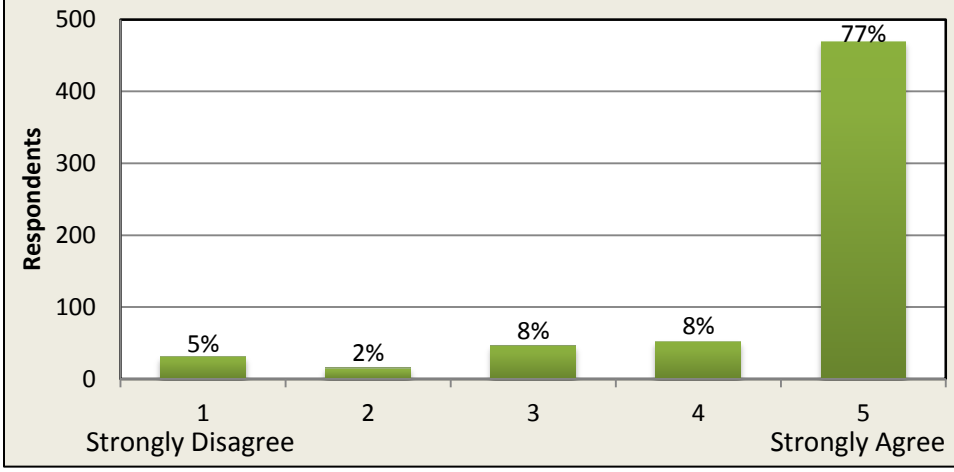
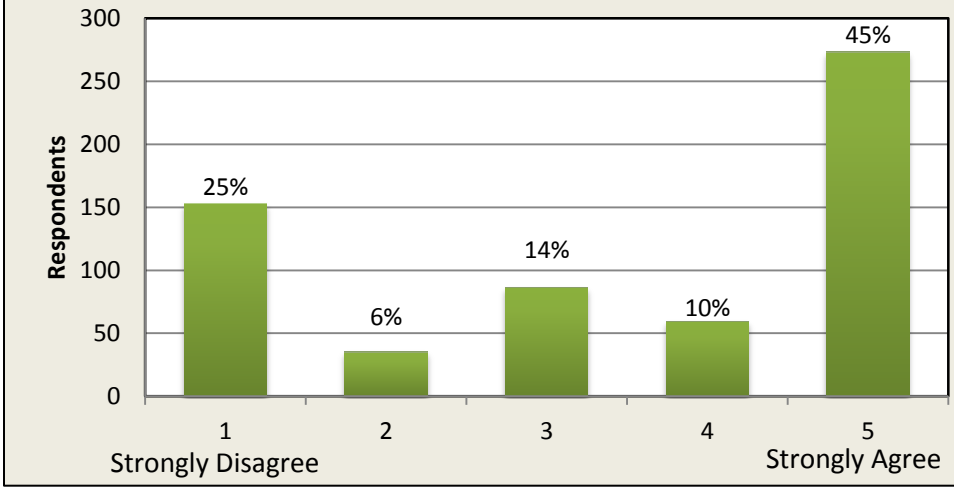


Figure 3.2: Medallions should be awarded by driver seniority, rather than having to go on a waiting list.
(n = 606)



3.3 MEDALLION TYPES AND ISSUE

Positions on medallions included difficult and divisive questions:

> How many medallions are to be issued and at what rate? (See discussion of taxi numbers above.)

Are there to be different types—single operator permits, peak time permits, senior operator permits[18], geographically-based permits, company permits—and how are they to be defined and regulated?

How are medallions to be issued? Should all, some, or no permits go to drivers? To companies? To anyone who can pay? Should there be criteria for their issuance—for drivers? For companies?

Should medallions be sold or leased? In either case, how should they be priced? Through the open market? By the regulator? Should pre-K permits revert to the City? Or be sold? At what point can permits now being issued (including Pilot Program[19] permits) be sold? To whom and by what means, that is, how will drivers exit the profession?

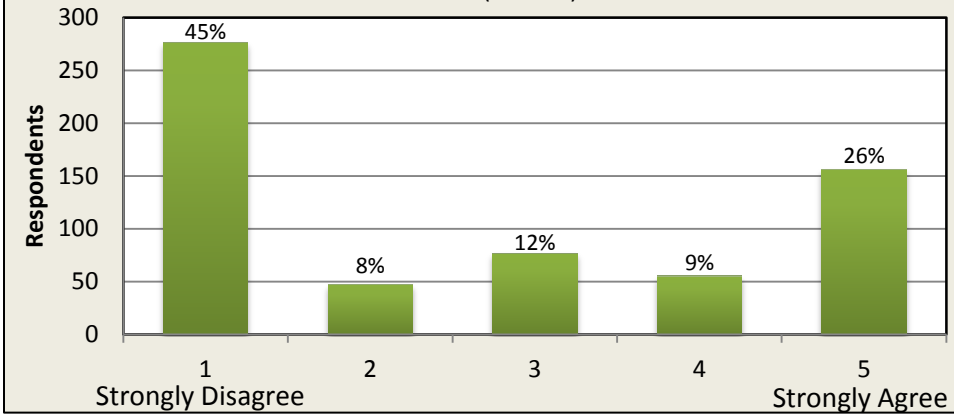
Stakeholders addressed all these questions with vigor. Many also had concerns about what the regulator is doing and will do in the future with the various fees being collected on the transfer of permits. "Fees to regulators have tripled in past few years," stated one company manager, "SFMTA has taken in $20 million from selling permits, but nothing has gone back into industry. They've even raised fees on medallion renewals, color schemes. If they're taking a percentage, they should put some into the industry, into enforcement. Sell medallions; use the money to have a better service."

The discussion below focuses primarily on the last two sets of questions, but as will be seen, stakeholder responses often included reference to issues contained in the first two.

Not surprisingly, most drivers are adamant that medallions "go to drivers, not to companies," while as another put it, "It's healthy to have drivers have a stake in the business." Another outspokenly stated, "If I'm an independent operator I should be able to run my own business. Single operator cabs do that. I don't like having a company as a buffer; they're in the leasing industry. They're the political muscle. They get the hour-long meeting with the mayor."

This is echoed in the driver survey. Figure 3.3, shows that the majority of drivers are opposed to issuing even a small portion of medallions to companies.

Figure 3.3: A small portion of medallions should go to companies who provide better service to drivers and customers.
(n = 610)

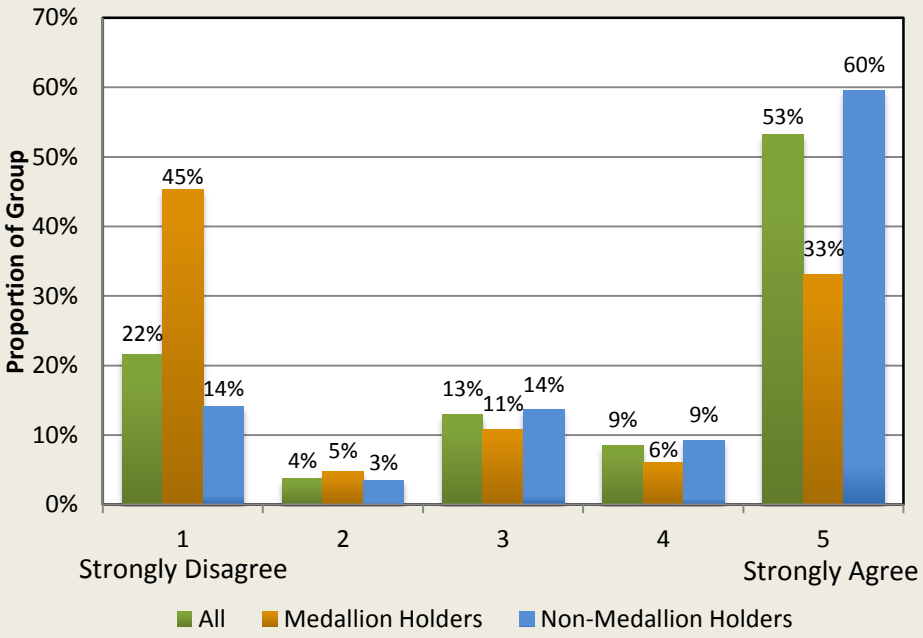


[18] See previous note on senior operating permits.
[19] Medallions transferred under the Taxi Medallion Sales Pilot Program.

Like the company manager quoted above, some drivers questioned the SFMTA's role as a medallion vendor. "I don't like the idea of MTA being both the regulator and the seller," said one. "I think they'll release them, not based on the need for more medallions, but based on their budget. If they are going to sell them, then a higher portion of what they are taking in should go to the drivers' fund. Money the MTA takes out of the industry should go back into the industry."

Despite reservations about the potential actions of the MTA if given the power to directly lease or sell medallions, many drivers would like the option to directly obtain their medallion from the regulator. Figure 3.4 shows strong support for the concept, with a significant minority also strongly opposed. Overall 62% were in favor of direct leasing from the SFMTA at a fixed price, including 53% who strongly agreed (rating agreement five out five). There was not much middle ground in response to this statement, with 22% strongly disagreeing (rating agreement one out five).

Figure 3.4: Drivers without medallions should have the choice to lease medallions directly from the SFMTA at a fixed price.
(n = 611; 148 medallion, 463 non-medallion)



In contrast to the drivers' views, at least two fleet owners are adamant that only companies get medallions. "You can't take permits back from individuals, but companies can rise and fall with business needs," said one. The other believes company medallions "would foster employer/employee relations free of gate fee controls. Drivers would be employees." However, most, company stakeholders (owners, managers, dispatchers), assume medallions will go to drivers, but may also want there to be corporate or company permits as there once were. "The individual owner model is a good one," said the manager of a large fleet, "buying is better after three or four years on a waiting list. But then, when you get the permit, where do you go? There should be a stipulation on the permit that you have to go with a full service company—which has to be defined."

Another company owner suggested the outline of such a definition:

> With respect to their drivers, companies must be able to provide proof of vehicle purchase, a liability policy, workman's compensation, a driver roster and schedule, and show receipts for driver expenses. With respect to the company itself, requirements should include having a minimum of half of drivers on gate fees, minimum service standards (say, 750 fares in a 24-hour period), an actual place of business, the capacity to provide mechanical service (onsite or off), computerized dispatch including online booking, and the ability to meet waybill standards. In other words, all medallions should have an established standard of service; everyone should compete ona level playing field. Companies could pay more ($400,000-450,000) for medallions than drivers (for now $250,000 rising to $350,000-400,000). The City will make lots of money issuing medallions; they make nothing on Uber. Such standards would foster professionalism, strengthen the culture, and support drivers.

Other company-favored arrangements that were suggested included having different classes of permits—individual permits for working drivers, and what used to be called company permits for fleets. "What is a company?" asked a manager. "Currently, companies rent medallions, and then turn around and rent them to other drivers. That's a recipe for dumb drivers and dumb companies. If you're a taxi business, you shouldn't just be brokering medallions. With fleet permits, you're back in the cab business."

Lease or Sell?

On top of the discomfort some expressed over the MTA being both a regulator and a retailer, there was an even more forceful reaction to the idea of the agency leasing medallions. "Does SFMTA become a de facto taxi business?" snorted one fleet owner. "Or are they the regulator? If they're leasing medallions, they are, in effect, an operator." Nonetheless, leasing has its advocates, but there is a trade-off for their support—that the funds raised be used for health, retirement, and other driver benefits.

Selling medallions, therefore, is the preferred means of transferring them, whether the vendor is an existing medallion holder or the SFMTA. In its simplest terms, a common suggestion is that "Individuals be able to sell permits after five years; buyers should have to have five years experience driving." Others quibble with the number of years, "Five years!" exclaimed a fleet owner, "do you have to have a Ph.D. in driving?" The rationale for easily transferring permits was put succinctly by several stakeholders:

> There should be no barrier to transferring medallions. It builds equity for drivers, and helps retiring drivers. The industry needs fresh blood, younger people. It should be open to anyone with specified qualifications. (dispatcher)
>
> We need a system where people who are 35-40 can buy and build equity. (driver)
>
> Medallions should be bought and sold. If they're highly restricted, the city or the company should be paying health and retirement. An open auction would be fine. People want to be medallion owners, not medallion "holders." (dispatcher)
>
> I'm for transferability. If SFMTA takes a cut, they should put it back into the industry. (company manager)
>
> Have an open auction system with a minimum bid price. Qualify the bidders. (company owner)

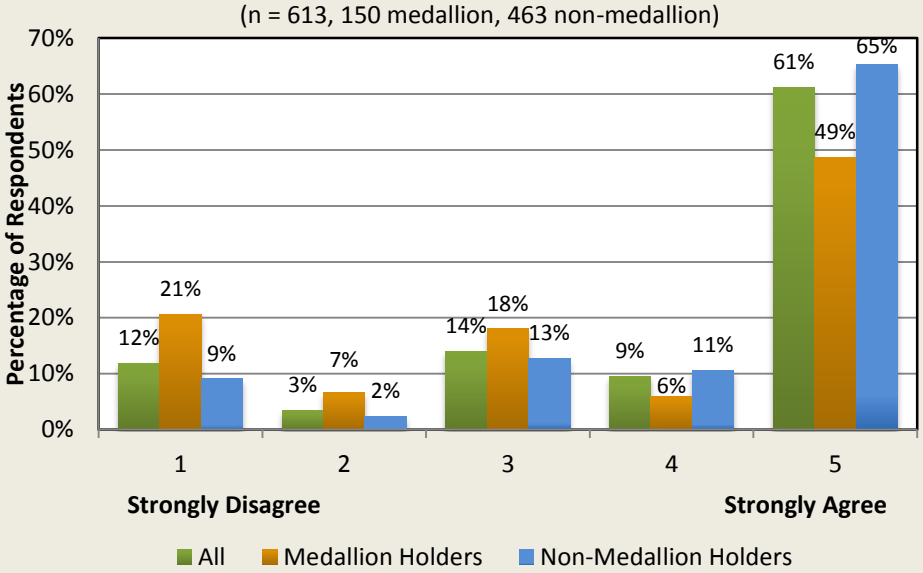
A representative of one of the financial institutions qualified to lend for the the Medallion Sales Pilot Program laid out some of the terms considered necessary and reasonable:

> Why shouldn't people be able to sell their medallions? Sell to younger drivers. Even Pilot Program holders should be able to sell at age 60. What purchasers need is a standardized agreement for their subsequent leasing, that is, for the contracts between color schemes and non-medallion owning drivers. The Pilot Program has generated millions for the city, and it has provided opportunity for all who have purchased them, and it has increased service levels, which is also good.

Again, fairness is seen as a prerequisite. People want terms and conditions that are clearly spelled out put on both the sale and purchasing of medallions, of whatever type. The vast majority feel that only drivers should be eligible to buy medallions. In addition, announcing numbers in advance, spreading out releases of new medallions, and evaluating their impact is viewed as necessary. Pre-K, corporate and ramp medallions should not be sold, said many. A paratransit provider suggested that, "Somewhere in the process, obtaining a ramp medallion has come to be seen as providing a stepping stone to obtaining a regular medallion. That is a problem, especially since many [ramp medallion holders] do the minimum required [number of wheelchair pick ups]." This industry stakeholder was also wary of attaching age restrictions to buying or selling medallions, concerned that it might be determined to be discriminatory.

From the driver survey, Figure 3.5 shows, many drivers are adamant that medallion prices continue to be controlled so as to put them within the reach of current drivers. Even medallion owners, who stand to benefit from unrestricted prices, support such controls in large numbers. The importance of equity to the driver community cannot be stressed enough.

Figure 3.5: If Medallions are sold between drivers, the price should be limited to make it affordable.
(n = 613, 150 medallion, 463 non-medallion)



Numerous stakeholders expressed an interest in experimenting with additional permit types, whether sold or leased. For example, drivers on the list who are too old to pay off the current ($250,000) cost of purchasing a permit might be eligible for a "senior operator permit" that would give them some income benefits over and in addition to their driving income, even if they are fairly close to retirement. There may be opportunities for special event permits, such as the ones released for the use of 'mechanical spare' vehicles in the US Open and Gay Pride to be used more regularly. It would put spares to good use, suggested some.

Several made a pitch for single operator permits that are genuinely single operator—"sharable permits are problematic," maintained one driver, "80 hours is not really a single operator. People shouldn't drive more than 12 hours a day." Another stakeholder pointed out that the limited time such permit holders would be able to drive means that type of permit could not be valued at $250,000. Maybe half, maybe less, since the cost of a vehicle and insurance would be the same as for other drivers. Still, as an app developer pointed out, technological innovation may enable a variety of permit types and arrangements to become viable, including those that are location/zone- and time-specific. A stakeholder from the hospitality industry suggested a form of congestion pricing for peak periods. "I'd rather know that if I'm in a rush, I could jump to a higher level of service if I want to," he said. Any of these alternative types of permits could go to companies or to new classes of permit holders.

Finally, in connection with issuing and transferring medallions and alternative permit types, a representative of the hospitality industry with extensive experience in the taxi industry neatly summed up what others stated less succinctly, that it "might be possible to let everyone who can drive safely drive, but a mechanism for meaningfully disciplining bad actors is essential. Otherwise, there will be a spiral of deteriorating service."

3.4 TIPPING PRESSURE ON DRIVERS AND COST SQUEEZE FOR COLOR SCHEMES

Aside from the central question of whether or not there were enough taxis on the streets, both drivers and color scheme personnel identified significant problems with the structure of the current medallion regime. Tipping and the largely unregulated affiliate lease market subject non-medallion holding drivers and companies to substantial cost squeezes, threatening the livelihoods of both.

Tipping (by drivers to color scheme staff)

There are two widely opposing views on tipping: (1) that it is a normal part of doing business in an industry where tipping is part of the culture; (2) that it is highway robbery, "protection money," a form of abuse. Most have a more begrudgingly accepting view of the practice, but the extremes are present among drivers, owners, and others in the business.

There also are two very different views of how tipping is exacted, or of when it is expected. Those who view it as a normal part of doing business claim to give tips almost cheerfully to show appreciation for good service. On the other extreme are those who maintain that getting a car or a good fare is dependent on tipping. For them it is at best "good politics," and at worst, bribery.

A standard accepted tip is reported as being $5 to the dispatcher, plus $1 or $2 each for the gas attendant and the cashier. The amounts and practices reported, even from drivers or employees at the same companies vary, with some at Company Y claiming they see nothing untoward happening, but "over at company X, you really have to fork over," while someone from company X says the same of company Y. One driver claimed that on Friday nights, tips to dispatchers can rise to $20 or more. Another pointed out that the guy at the window has a lot of discretion, but that it's his job to give you a car, "So why should he get a tip?" Others feel that "these guys on a fixed salary deserve a break" and hence, a tip. One driver stated flatly that he never pays tips, but qualified the statement to say that of course he gives $5 in and out to the dispatcher and a couple of dollars to each the gas attendant and the cashier.

Most of the stories told of exorbitant amounts of money passing hands took place in the past. Company owners maintain they tell both drivers and staff that tipping is allowed, but stress that it is a tip, not a bribe. "Still," said the owner of a mid-size company, "things happen."

The driver survey suggests that tipping is prevalent in San Francisco (see survey figures in Chapter 2

Medallion Leases and Affiliates

A number of stakeholders recalled that a decade ago, medallion holders received from about $1500 to $2200 per month from companies to lease their medallions. For 2012, the figures cited ranged from a low of $2200 per month to as much as $6000. Most company representatives said they were paying around $2500, although some medallion holders claimed to be getting somewhat more or less from these same companies. These are the companies that, according to interviewees across the board maintain cars in good shape, have a radio dispatch, and adopt current technology fairly readily.

Repeatedly, however, it was stated that companies offering fewer services pay at the higher end. "The big three companies," said one person associated with the paratransit community, "are experiencing unfair competition from smaller outfits. The larger companies have upgraded their services, but drivers leave if medallion holders are paid more at companies that don't offer equivalent service." This person went on to compare the taxi situation to that in retail and restaurants, where low overhead pop-ups are, well, popping up. The owners and senior managers of larger and/or full service companies stated repeatedly that the situation is making it hard—if not impossible—for them to compete. Because of this, say the larger company representatives, gas and gate has dropped from about 80% of their business to around 60% as medallion holders look to lease their medallions at companies offering the highest returns, which are the companies that do not provide full service.[20]

This led several to suggest that lease rates be regulated, especially from long-time drivers:

> The City doesn't know what medallion holders are being paid. (Driver)
>
> In 2000, medallion holders got $1500 per month; now it's about $3000. There should be a cap. (Driver)
>
> You can't pay more than about $2500 and service the neighborhoods or run or belong to a dispatch service. (Driver)
>
> There should be a standard agreement for medallion leases. Most new medallion holders don't necessarily know how to negotiate an agreement, or even that they can. (Representative of financial institution involved in financing Pilot Program)

The three largest companies briefly mentioned what they charge medallion holders who lease them their medallions when they drive. One charges $75, with part going to a pool shift credit. Another charges an unspecified monthly fee. The third stated that owner operators pay $500 per month for the color scheme and dispatch, and that some 40% of medallion holders go this route. At this company, it was also stated that in 2000, about 80% of their vehicles operated as gas and gate, while now only about 60% do so. "Why the shift?" asked the owner rhetorically. "Because what is happening now," he explained, "is that medallion holders are giving their medallion to someone who will pay more [than $3500 per month] because they are not full service companies. Someone else altogether drives. Traditionally, affiliate arrangements were with owner operators. Now medallion owners are approached by others—by brokers— who may not even be companies at all, and offered way over standard gas and gate rates, but claim the arrangement is gas and gate. These brokers then approach companies to use the medallions they have obtained." He estimated that 30% of medallions are being handled this way.

[20] In part to address the dilution of limited revenue among taxi companies, the SFMTA Board of Directors recently approved a moratorium on the issuance of any new color scheme or dispatch company permits.

Another large company stated that it had had 200 medallions on gas and gate, but that now it is down to 95.

The driver survey corroborates the idea that many affiliate cars are masquerading as gas and gate vehicles. Despite the known proportion of affiliate vehicles being much larger, only 8% of non-medallion holders reported a driving arrangement where they did not pay gas and gate.

The amounts cited for non-medallion holders to lease a medallion were between $5000, and $6000 per month. One driver with a 15-year sublease on a medallion said he used to pay $2500 per month and is now paying $5100, which covers insurance, colors, and Workers Compensation. He buys the car and hires a second driver. For him, this is more lucrative than a standard gas and gate arrangement. He also claimed that one company that offers medallion holders $3300, charges non-medallion holders $5500 and also makes the driver buy a salvaged car from them for about $25,000. Some who cite rates such as these feel they are exorbitant; others find them reasonable. Another driver suggested MTA lease medallions to drivers and set $5900 to $6400 as a fair rate.

Medallion and color scheme relationships have become complex. Observations included:

> Gate fees are too low, our operating costs are higher. We're being squeezed. Medallion holders are escaping the gas and gate by switching to an affiliate system. Affiliate leasing means the companies don't see the cars and are forced to pay competitive fees for medallions. (Owner large company)
>
> MTA was thinking of leasing medallions to drivers, but this would lead to brokers taking over. Drivers don't necessarily know how to lease out a vehicle, how to run a business. If everyone is leasing out medallions, it becomes like 500 separate companies. Gas and gate is a better model. There could be a requirement that medallion holders use full service companies. Direct leasing would still, of course, go to third party brokers. (Owner large company)
>
> Our company pays medallion holders $2500, but other organizations offer $4000. These brokers are not legitimate. They are operating illegally and have no overhead. It's hard to keep medallion owners [with the company] because most prefer not to drive and are happier to have an under-the-table relationship with a broker. (Employee large company)
>
> In this company, every cab is a shift cab. Gas and gate feels fine. We don't do any affiliates. It's a lot of uninsured risk. Medallion holders don't necessarily know who's getting their car on other shifts. I'm not looking for every last buck. Every medallion holder here gets the same $2400 per month. With affiliates, medallion holders are being paid up to $3500 for their medallions, which are then being leased for $5-6000 per month. Affiliates are being used to get around caps. There's a lack of enforcement on gate control and it's driving the loss of shift cabs at some of the big companies. At X company, they turn medallions over to someone who works for them. He charges whatever he wants and kicks money back to the company. In effect, he's running a color scheme without a license. (Owner small company)
>
> Affiliate leases go through brokers. Big color scheme companies basically are brokers anyway. A medallion holder goes to the company and either buys the color and uses the car themselves[21], or they give the company the medallion and the company operates it on their behalf. With

[21] This arrangement requires all non-medallion holding drivers assigned to that medallion number to drive an inferior "spare" vehicle instead of the primary vehicle assigned to medallion. Under this arrangement, the primary vehicle is reserved for the exclusive use of the medallion holder, in violation of regulations.

brokers, when someone wants to make more money, they don't go to a company, they use it as a cover; they find someone who will run the car and deal with the drivers. There are all kinds of shenanigans. The guy who runs that kind of deal doesn't pay the overhead costs companies have, so they can pay medallion holders more than the companies can. Brokerage is the big problem for the industry. (Owner small company)

Brokers are everywhere. They operate within X and Y [large companies]. I'm not sure this is a big problem, but I think these guys need to be held responsible for what they do. (Owner small company)

Drivers make a lot of money. I can't compete against these medallion holders. Company X works with them. (Owner large company)

Long term leases and affiliates should be regulated (Professional associated with paratransit)

4 HOW MANY TAXIS?

Does San Francisco have enough taxis? This chapter combines on-street data collection with other evidence to answer the question. Also addressed is whether there are taxi shortages in outlying neighborhoods, or in peak periods such as rush hour, or on weekends.

Multiple sources of evidence are reviewed. These include:

- **Experience reported by San Francisco stakeholders**. Consultation with stakeholders, reported in the previous chapter, captures the local history and conditions that influence analysis. Stakeholders include the industry itself (drivers, dispatchers, company owners, etc.), plus users, and city agencies. Those speaking for users were drawn from many sources, including the hospitality and entertainment industries, and airport employees.
- **Structural analysis of changes in the San Francisco vehicle-for-hire industry.** Recent changes in conditions include the advent of shared ride services (e.g., Lyft) and smart-app dispatched limousines (e.g., Uber).
- **Comparison to peer cities.** San Francisco is compared to other cities regarding its current per capita taxi supply, per capita private vehicle ownership, and conditions within the their respective taxi industries.
- **Application of Hara Associates' Taxi Demand Model.** This model estimates the relative increase in taxi demand from a given point in history using a series of variables that have survived econometric testing for their relevance. Variables range from employment to commuter ratios to the proportion of low-income earners in the population. The model generates a central estimate, plus a confidence interval in the form of a high and low estimate that is 80% likely to contain the best answer.
- **On-street observations.** The study team timed taxis waiting at public stands around the city, at the airport, and at various times of day and night. Surpluses of taxis reveal themselves through excess taxis waiting. Shortages of taxis reveal themselves through no taxis and customers waiting.
- **Surveys of San Francisco residents, visitors, and taxi drivers.** Surveys of residents and visitors to San Francisco, presented in previous chapters, report user experience on taxi availability and response times. Surveys of drivers help detail the supply side experience.
- **Historical surveys of taxi service.** There have been a number of informative studies and data collection exercises concerning San Francisco's taxi industry over the years, including quantitative tests of the effectiveness of taxi dispatch.

Evidence from each source is reviewed in turn. This is followed by an integrated analysis with recommendations.

4.1 CLARIFYING THE QUESTION: WHAT IS A SHORTAGE OF TAXIS?

There is more than one way to interpret the question: *Are there too few taxis?* The broadest interpretation is to ask whether there is *any* alternative arrangement that would improve the taxi system and involve either more or fewer licensed taxis than there are now. This analysis would include assessing the effects of possible changes in regulations and meter rates to complement a change in taxi numbers.

Under this broad interpretation, it is highly relevant that rights to San Francisco taxi medallions have found willing buyers at the administered price of $250,000,and command monthly payments of $2500 to $6000 even when neither vehicle nor insurance is included. *It can be shown that whenever taxi medallions command significant market value, there is always an alternative combination of more taxis and lower meter rates that will provide improved service to customers, while maintaining adequate returns to the industry.*[22]However, such a combination would reduce or eliminate medallion values, with significant disruption to current stakeholders in the industry. Owner-drivers would see their incomes fall and a cherished asset disappear in value.[23]There is also the risk of short-term disruption to incomes of drivers who do not own their own medallions, although this would pass as medallion leases and/or color scheme fees were renegotiated.

The second and more usual way of interpreting the question is: *How many taxis does a city need to maximize efficiency, if other aspects of the system (including meter rates) remain the same?* If there are too few taxis for a given meter rate, then customers will be waiting excessive times and the shortage will cause potential customers to find other means of transport or not take their intended trips (at a loss to the customers and drivers). In this case, the system can be improved by adding more taxis.

Similarly, if there are too many taxis for a given meter rate, then taxis will wait unnecessarily long between fares. This will manifest in long taxi line-ups in the airport taxi stands and bullpen; and excess waiting time between fares for taxis booked onto a color scheme's dispatch system. Excess waiting time means wasted driver time, wasted fuel, and increased vehicle depreciation. In this case, it may be possible to improve a system's efficiency incrementally by reducing the number of taxis.[24]

This study addresses the second interpretation of the question. It offers an opinion as to whether there are enough taxis, *for the given regulatory structure and meter rates*.

4.2 CAN YOU EVER HAVE ENOUGH TAXIS? PEAK, OFF-PEAK, AND AVERAGE PEAK

In simplest terms, there are too many taxis when the supply of taxis exceeds customer demand. However, customer demand is not a constant. There are peak and off-peak times. For example, no city has enough taxis to meet demand at the moment that bars close on a weekend night. Severe weather also produces shortages of taxis, even when a city may otherwise be oversupplied. Under normal circumstances, we expect the number of taxis to be sufficient to meet demand during an average peak period, omitting extremes. This ensures that customers can usually count on being able to obtain a taxi at any time of day during the week other than known peak times, such as bar closing, without excessive delay.

In a well-designed system, taxis wait for customers, rather than customers waiting for taxis. We expect that during average peak periods, an efficient system will average a few more taxis than customers to

[22] The willingness of buyers to pay for medallions is an indication that the net rate of return to a taxi exceeds costs, including the costs of the revenue share necessary to attract drivers to operate the vehicle. For revenues per taxi to have reached this level, the medallion freeze must be achieving an artificial restriction in supply below optimal levels maximizing service to the customer while providing just and reasonable returns to the industry.

[23] The medallion is the property of the City of San Francisco. However, drivers who have been issued a medallion, and are able to earn money from it when it used by other drivers, and view it as an asset.

[24] In this case, the net gain in efficiency would result in an increase in driver income, provided the San Francisco caps on gate fees and medallion leasing was effectively enforced. Without effective enforcement, the driver income gain would be lost to the owners of medallions (most of whom are senior drivers) as medallion lease fees and/or relevant color scheme fees were increased.

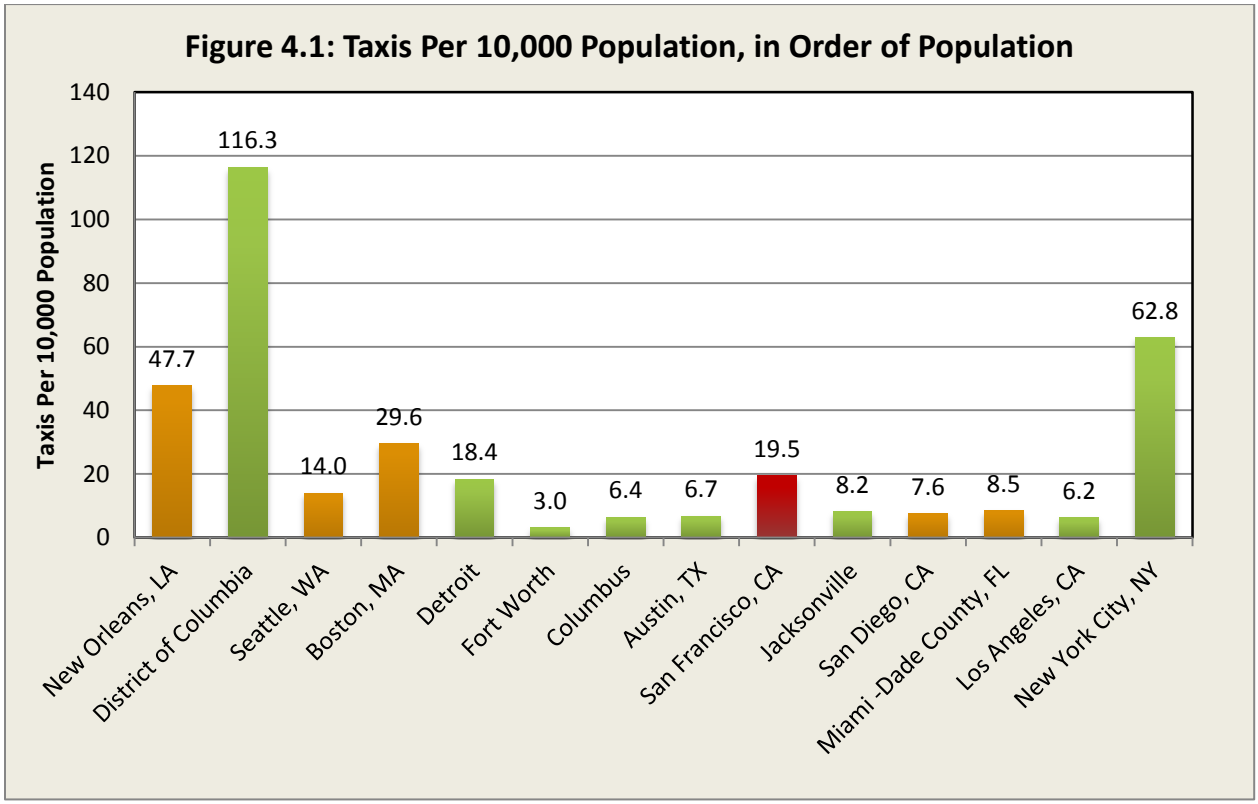
absorb random variations in demand. Since taxi shifts cover peak and off-peak hours, adequate capacity in peaks means that we expect to see excess taxis in off-peak hours, even in an efficient system.

Even at peak, there can be high vacancy rates among taxis, depending on the profile of a particular city. For example, in a morning rush hour there may be a large demand for taxis going downtown, but low demand for taxis leaving downtown. Many taxis will be empty after arriving downtown and have to run empty back to wherever customers are to be found.

Thus, it is quite possible to have a shortage of taxis at the same time as having taxi drivers observe that they are underutilized for long periods of the day. When this is happening, one response is to consider alternative medallions that restrict taxi operation to certain times, or certain neighborhoods. Solutions are analyzed in the next chapter. This chapter focusses on assessing the current situation: are there enough taxis in San Francisco?

4.3 COMPARISON WITH OTHER CITIES: TAXIS PER CAPITA

In 2012, San Francisco had 1587 taxis.[25] This amounts to 19.5 taxis per 10,000 people[26]. Figure 4.1 compares San Francisco to other US cities of comparable population (700,000 to 900,000), and others that provide perspective on the feasible range of taxis per capita. New York and Washington DC are included as examples that show the l levels of taxis per capita that are possible. New York's number includes black cars and limousines that serve the dispatch market, since New York's yellow cabs serve only street-hail. Los Angeles is included both because it is also in California, and its proximity. Included as well are the five cities selected as peer cities (marked in orange)



[25] 150 three-year company operated permits were not issued until the end of the year
[26] Based on US Census Bureau estimates for 2011.

The difference in per capita taxis between cities is quite wide – there is no "normal". Numbers vary according to both history and geography.

The market value of taxi medallions, or their corresponding lease rates, also helps interpret taxi numbers. Higher medallion values indicate a tighter supply relative to a city's requirement. The three highest per capita cities each have low medallion value. Although New York is famous for the high medallion value of its yellow cabs, the dispatch market has no set limits for vehicles for hire, resulting in high numbers and negligible value for black car operating permits. Washington DC does not limit the number of taxis[27], and has an even higher per capita supply. New Orleans limits taxis but has a fairly low medallion value of between $39,000 and $67,000[28]. At the other end of the spectrum, Miami-Dade medallions were auctioned for more than $410,000 in 2012.

Another factor to consider is bandit (illegal) taxis. This is a problem in some large US cities where unlicensed taxis work within low-income areas. When bandits have a large area of operation, this puts downward pressure on the number of lawfully licensed taxis per capita.

4.4 HARA ASSOCIATES' TAXI DEMAND MODEL

To better account for the factors other than population that drive taxi demand differences between cities, Hara Associates uses its Taxi Demand Model. It is a proprietary regression based model that estimates the relative increase in taxi demand from a given point in history using a series of variables that have survived econometric testing for their relevance. Variables range from employment to commuter ratios to the proportion of low-income earners in the population. The model generates a central estimate, plus a confidence interval in the form of a high and low estimate that is 80% likely to contain the best answer.

The percentages below indicate the estimated average percentage change in taxi demand from a 1% change in each variable accounted for by the model:

- Population. (1% increase in demand from a 1% increase in population).
- Low income population. (0.3% increase for every 1% increase in the percentage of the population that is low income).
- Cost to consumers (1.4% decrease in demand for every 1% increase in inflation adjusted meter rates).
- Proportion of commuters working in the city but living outside, to city population. (0.3% increase in demand for every 1% increase in the ratio of commuters entering San Francisco from outside the city to the resident population of the city).
- Cost of private vehicle ownership. (3.8% increase in taxi demand for every 1% increase in the local cost of owning and operating a personal vehicle).

As a statistical model, the resulting estimates include both a best estimate and a high-low range within which 90% of cities with San Francisco's characteristics are expected to fall.

[27] In 2010 a temporary freeze on independent taxis was put in place.
[28] Transfer values in 2011. New Orleans is currently engaged in issuing new medallions.

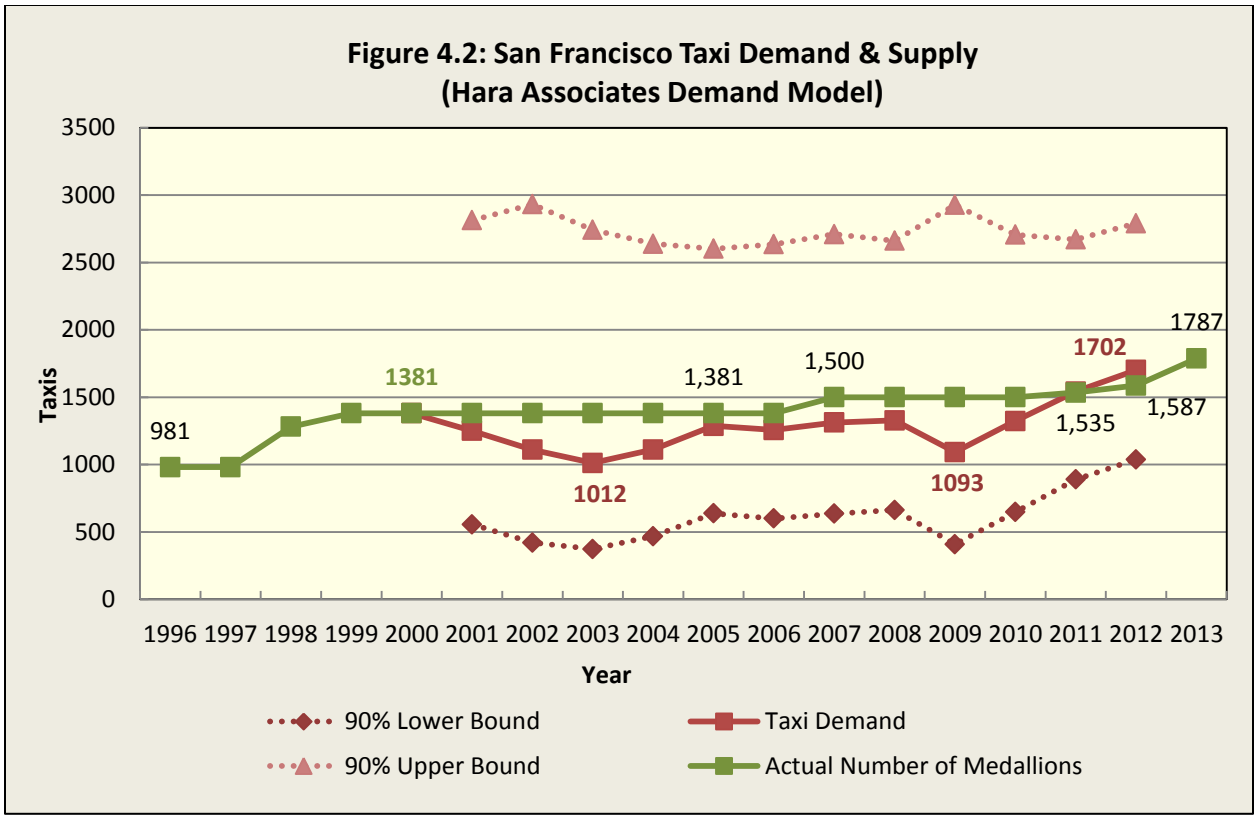


Figure 4.2 applies the demand model to San Francisco. The green line shows medallions issued since 1996. It was in 1996 that the last major adjustment to numbers was initiated (as recalled clearly by stakeholders in the previous chapter). The expansion ended in 2000, with a 60% increase to 1,381 taxis. Smaller adjustments followed in subsequent years.

Taking 2000 has a historical base year; the red line shows the relative change in taxi demand over subsequent years, as estimated by the Demand Model. Taxi demand fell in the years immediately following 2000 when the dot-com speculative bubble collapsed. Commuter volume from the surrounding Bay Area into San Francisco declined, along with the city population itself, and the alternative of operating a private vehicle became cheaper. Demand bottomed in 2003 and recovered until 2008, when the most recent recession occurred. Since then demand has recovered strongly, despite an increase in meter rates, as the cost of private vehicle ownership rose (notably fuel prices) and commuter volume to jobs within San Francisco resurged.

Between 2000 and 2012 relative demand increased by 23.2%, suggesting an estimated 1,702 taxis would be needed to restore supply conditions that existed in the year 2000. However, actual taxi numbers increased only 14.9% to 1,587.

This suggests that at least 100 more taxis were required to restore supply conditions of year 2000. However, the SFMTA authorized 200 more medallions at this time, whose full release should occur in 2013. If taxi demand continues to increase in line with recent trends, the number of taxis currently authorized will be enough to restore taxi supply conditions that were present in year 2000.

4.5 INADEQUACY OF DISPATCH TAXI SERVICE IN SAN FRANCISCO

The demand model indicates how many taxis are required to restore service to year 2000 levels. However, was that level of service acceptable? How does it compare to today's dispatch experience?

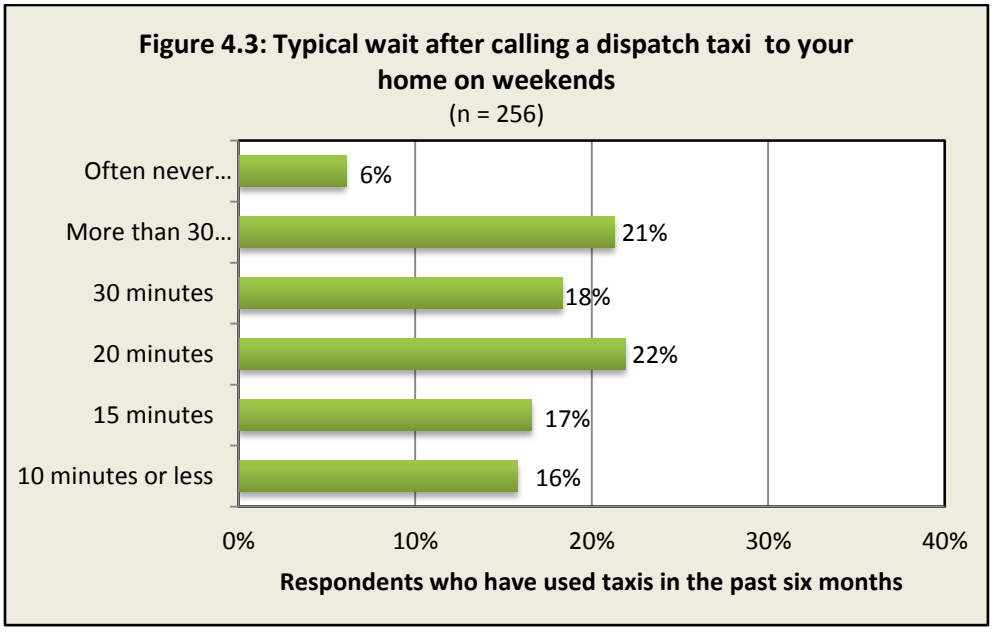
In 2000, the police department's taxi detail conducted a survey of dispatch service in San Francisco. 588 calls were made of which 170 (29%) were not answered, 20 (3.4%) were answered but told that no cabs were available, and 161 (27%) were accepted but the dispatched taxi never showed up.[29]

The 2000 survey was conducted after the large 60% expansion in the number of taxi medallions—the bulk of which occurred between 1996 and 1999.

A further study in 2005, by Q2 Research Group, found the situation had not improved. 636 dispatch calls were made, but only 73% resulted in a taxi being dispatched and 26% of the calls resulted in a no-show. Only 47% of calls resulted in a taxi showing up.[30] It appears that there were still serious problems in the dispatch market.

There has been a thread of discussion in San Francisco that links this failure to taxi companies employing poor dispatch technology. However, as discussed in earlier chapters, poor investment in dispatch service follows from the lack of supply of taxis to satisfy demand, rather being a principal cause. There is no incentive to attracting customer calls you cannot satisfy because drivers are intercepted on the street by willing customers. Taxi companies in San Francisco are not particularly less competent than in other cities, and the ineffectiveness of historical controls on gate fees has also provided a profit motive for better service, were adequate taxi supply available to satisfy it. No-shows by drivers and multiple calls by customers are symptoms of market collapse through insufficient supply, not a technological failure.

The long-standing record of poor dispatch service going back to before 2000 suggests that restoring year 2000 conditions will not be sufficient to provide the level of taxi service that meets potential demand and provides the level of service that San Francisco residents want.



[29]San Francisco Planning and Urban Research Association.*Making Taxi Service Work in San Francisco*.November, 2011.
[30]Taxi Commission, City and County of San Francisco.*Public Convenience and Necessity Report*.February, 2006.

User Survey 2012: Evidence of Suppressed Taxi Demand

The current study surveyed users directly for their experience with San Francisco taxis. As detailed in the earlier chapter, poor dispatch service was again confirmed. In addition, San Francisco residents strongly indicated that they would take more taxis if they could reliably obtain 15-minute service by dispatch. Fifteen-minutes is a common standard for good dispatch service. For example, Los Angeles monitors dispatch times and maintains a standard of 80% to 85% arrival within fifteen minutes, depending on the geographic area.

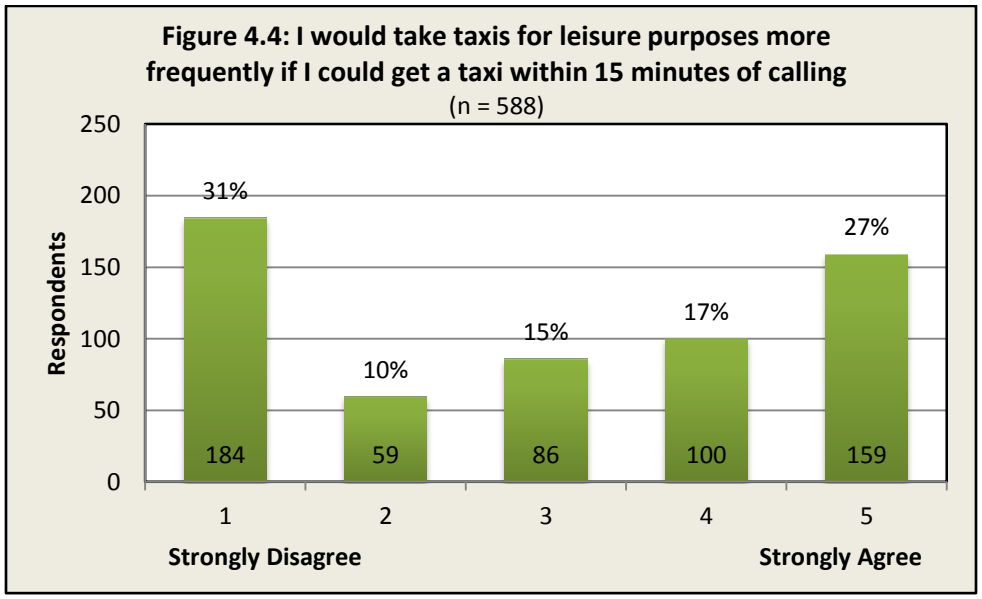
San Francisco residents were asked about their experience with dispatch wait times over the past six months. As detailed in the separate volume Taxi user Survey, Among San Francisco's *daytime* weekday users of taxis, only 56% of residents experience 15-minute service. For 15% of respondents, a taxi typically takes more than 30 minutes or fails to arrive at all.

Reported performance is much worse on weekends. Only 33% experience 15-minute service, while 27% experience a wait of more than 30 minutes or failure to arrive at all. Residents in the southern neighborhoods of the city were particularly poorly served (see previous chapter).

The lack of reliable dispatch service causes consumers to avoid using taxi services both for dispatch, and for return trips. As reported earlier, responses by residents indicated that, if 15-minute dispatch service was available:

- 44% of residents would take taxis for leisure purposes more frequently.
- 41% would specifically increase late night entertainment use of taxis.
- 27% would take taxis to work more frequently.

Adding to the credibility of these numbers is the strength of feeling expressed. For each question residents were asked to rate their agreement with the statement using a score of one to five, with five showing strongest agreement. Of those who agreed, the majority tended to rate their agreement at the full five out five. In Figure 4.4, those strongly agreed are a more than a quarter of the respondents, far outnumbering the additional 17% who moderately agreed.



A significant minority of residents also felt they would make more fundamental changes to their lifestyle and taxi use if they could rely on 15-minute service. When asked whether they would give up their car if taxi service was reliably available 80% said no, but 13% of households with at least one vehicle agreed they would. In particular, 8% of those with at least one vehicle in the household *strongly* agreed they would. This in turn reflects a suppressed potential taxi demand that could continue to increase once individuals adapted their lifestyles to reliable taxi supply and service.

Growth in Alternative Service Demand Driven by Taxi Shortage

Residents are doing more than expressing their latent demand for taxis in surveys, they are being driven to actively seek alternatives in shared ride services (e.g., Lyft) and smartphone dispatched limousines (e.g., Uber). As of the 2012 survey, market share by dispatched limousines was still small, 83% of residents had not used them. However, of those who did, the bulk was customers of new services, notably Uber. Among those who use taxis at least weekly, 37% also are limousine users, including 12% who use limousines at least weekly. This suggests that the growing limousine market in San Francisco is competing with taxis for the same frequent users.

The strongest reason residents gave for using limousines was that the limousine is more likely to come to your home. A full 90% agreed, including 70% who strongly agreed. Dependability in coming to your home is where respondents were highly dissatisfied with taxis. Other questions related to limousines also received agreement , such as whether limos are easier to call (75% agreed), and smartphone accessibility (75%). By comparison, vehicle quality and driver quality were given as reasons for using limousines by only 42% and 47% of respondents respectively.

4.6 STREET OBSERVATIONS

As a further check on taxi market conditions, Hara Associates and Corey Canapary & Galanis visited taxi stands at selected times of day and night. At each stand, the length of time a taxi must wait for a fare was timed. Excessive waiting time indicates an oversupply. Since taxis are free to allocate themselves between stands throughout the city, or to take dispatch calls, the waiting time at one stand is indicative of supply conditions throughout the city.

Note that what is measured is the time *taxis* spend waiting for customers, not the time *customers* wait for a taxi. In general, it is taxis that should wait for customers, not customers for taxis. When a customer walks up to a taxi stand, we expect a taxi to be there already. When a customer phones for a taxi, we expect a taxi to be already available for dispatch. In a healthy system, measuring the *customer waiting time* between a call and the arrival of a taxi focuses on the narrower issue of the efficiency of color dispatch systems. The broader issue of thin supply of taxis is revealed when there is no cushion of waiting taxis to absorb fluctuations in customer demand. Thus, the focus in this analysis is on the reserve supply of taxis, as measured by the time taxis wait for customers (either at a stand or through dispatch).

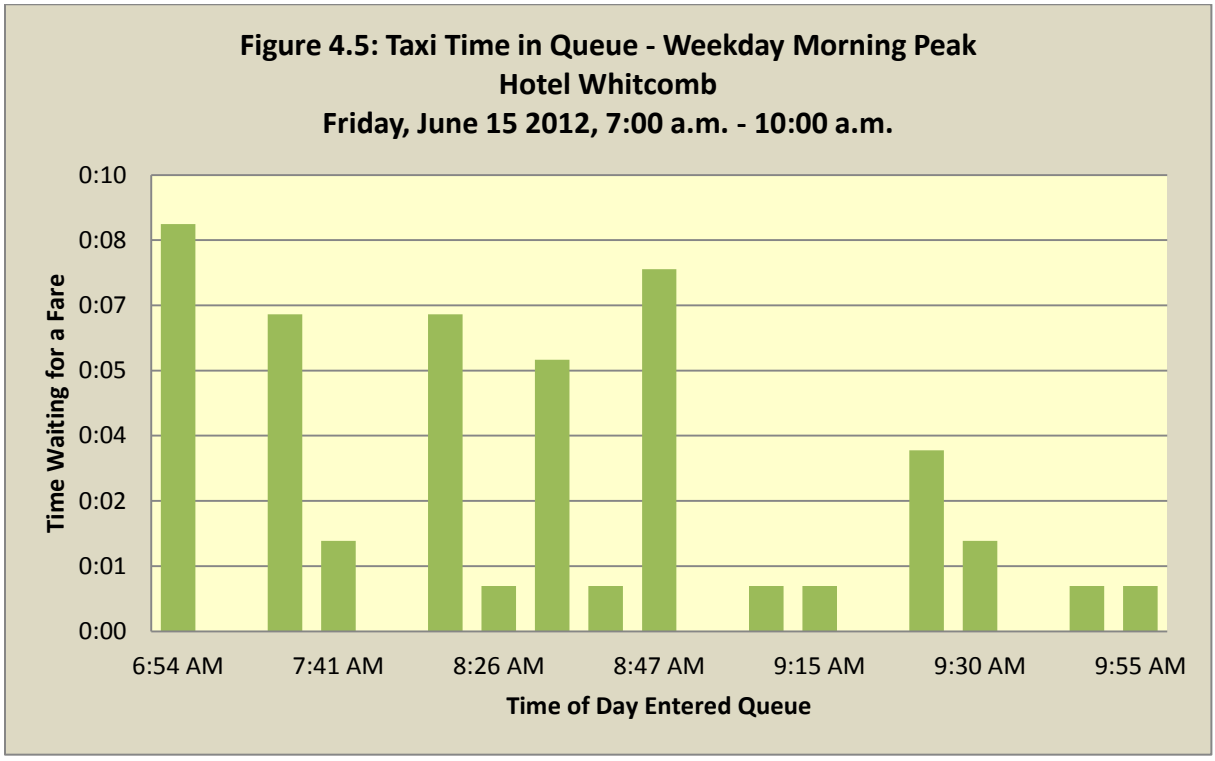
The study team placed observers at 19 locations throughout San Francisco, at various times of day and week. Locations included hotel cabstands, the airport holding areas, AT&T Park after a game against the Dodgers (attendance 42,245)[31], the San Francisco Caltrain Station, and other formal and informal stands throughout the city.

[31] Baseball-Reference.com <http://www.baseball-reference.com/boxes/SFN/SFN201206270.shtml> ,Retrieved March 20, 2013.

A general pattern of shortage was noted, even in the downtown core. At busy periods, customers were waiting for taxis at empty stands, rather than taxis waiting for customers. This is a sign of a significant shortage. When taxis can get customers quickly and predictably at known locations like stands, there is little incentive to book onto a dispatch system where one must travel empty to get to the caller.

Weekday morning peak (7 a.m.—10 a.m.)

The supply of taxis during the morning rush hour was observed to be tight. Figure 4.5 shows the Hotel Whitcomb during a weekday morning peak. With some variation, many taxis using this small stand were able to secure fares in less than a minute. The longest wait by a taxi was eight minutes. *Not shown in the graph are the 22 times customers were observed waiting for taxis at an empty stand, and the three potential passengers who actually left the stand after waiting for some time.* The Whitcomb was the worst case observed, but confirms stories related by hotel managers during stakeholder consultations.



The Caltrain station offers another example of taxi shortages during the weekday morning peak. The larger volume of passengers that can be predicted by taxi drivers also provides a more consistent picture. Some drivers arrived early and waited as long as 25 minutes, but their wait times quickly settled down to between two and fifteen minutes, averaging less than five minutes (Figure 4.6). Again, if taxis can predictably get fares at the Caltrain that fast, there is little incentive for them to use dispatch or position themselves in outlying neighborhoods. Note also the extensive time window of the short-wait period – it runs up to 10 in the morning, instead of longer waits ramping up 9 a.m. as might be observed in other cities.

Weekday Early Evening Peak (3 p.m.—7 p.m.)

Stand counts during the early evening painted a picture of even tighter taxi supply. Most of the hotels observed started to exhibit substantial backlogs of patrons waiting for a taxi after 5:30 p.m., and in many cases, such as at the Westin St. Francis, potential passengers had to wait 10 or more minutes for a taxi to arrive (Figure 4.7).

Figure 4.6: Taxi Time in Queue - Weekday Morning Peak
Caltrain Station
Tuesday, June 19 2012, 7:00 a.m. - 10:00 a.m.

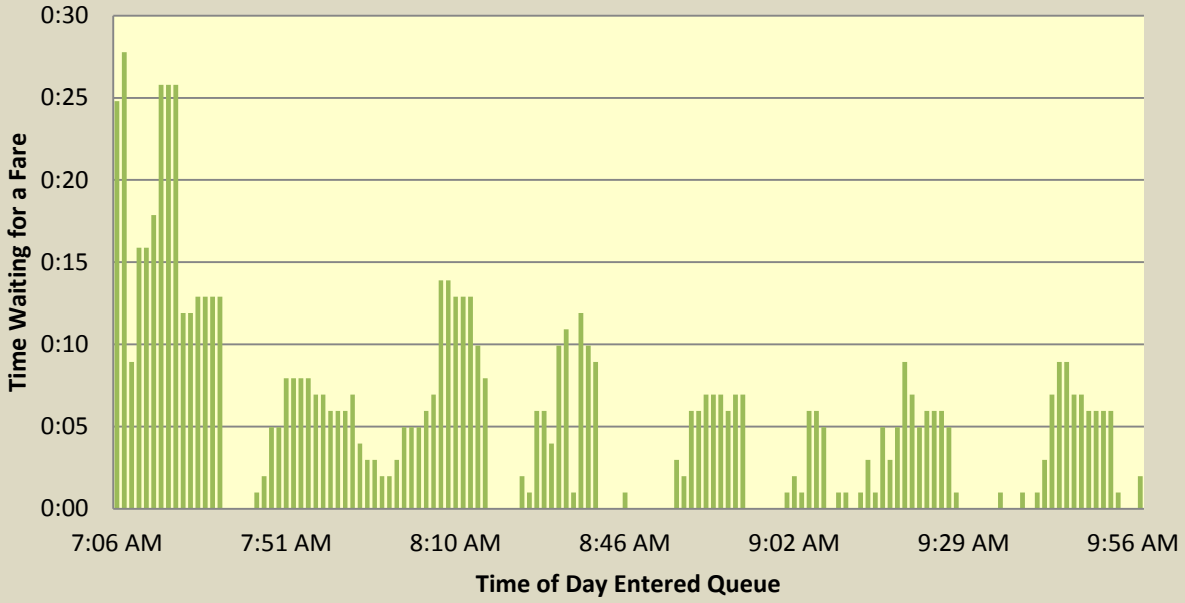
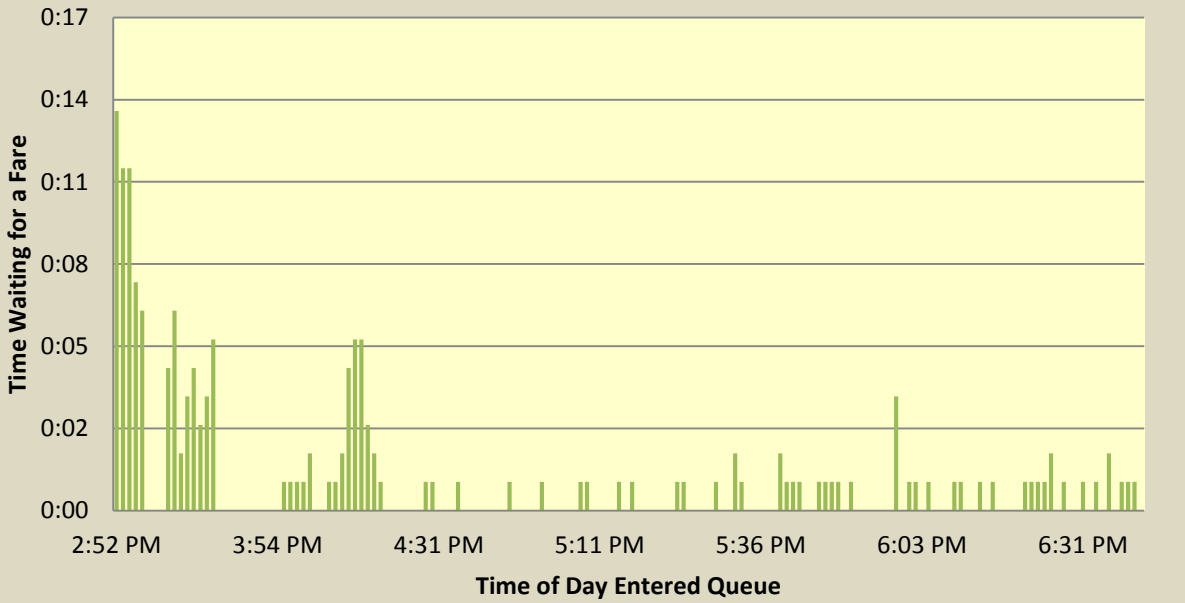
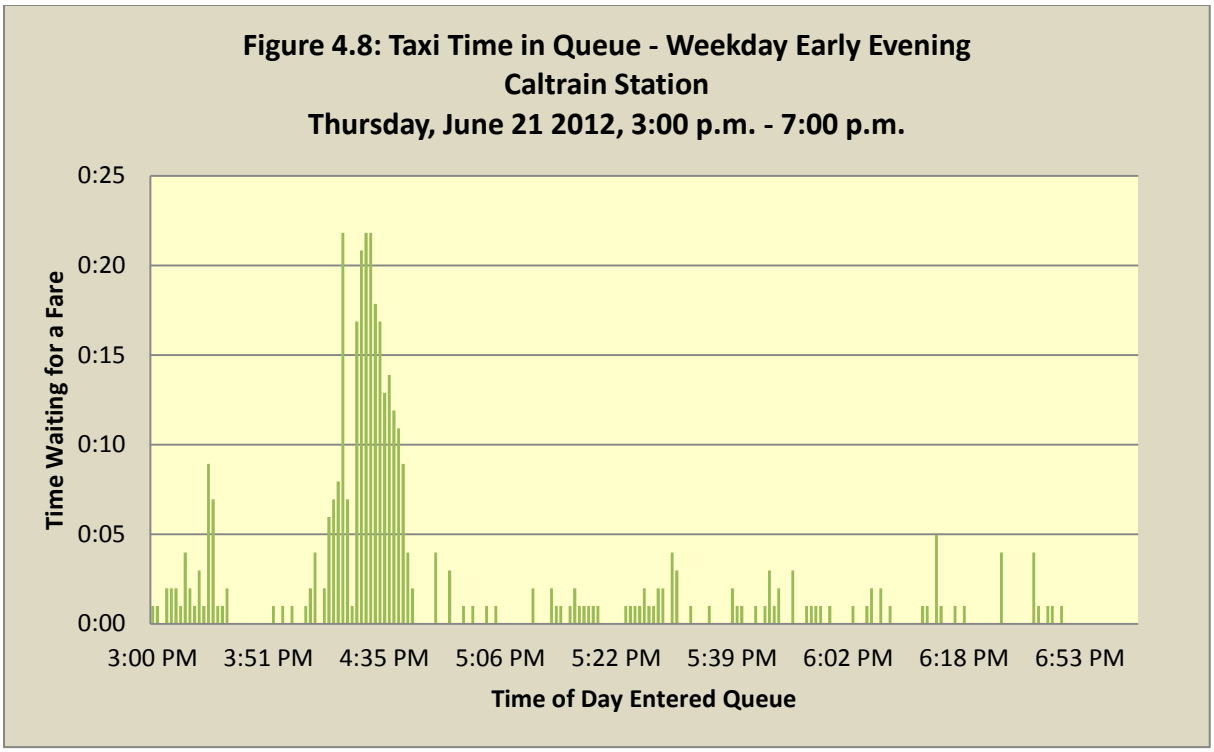


Figure 4.7: Taxi Time in Queue - Weekday Early Evening
Westin St. Francis
Thursday, June 14 2012, 3:00 p.m. - 7:00 p.m.

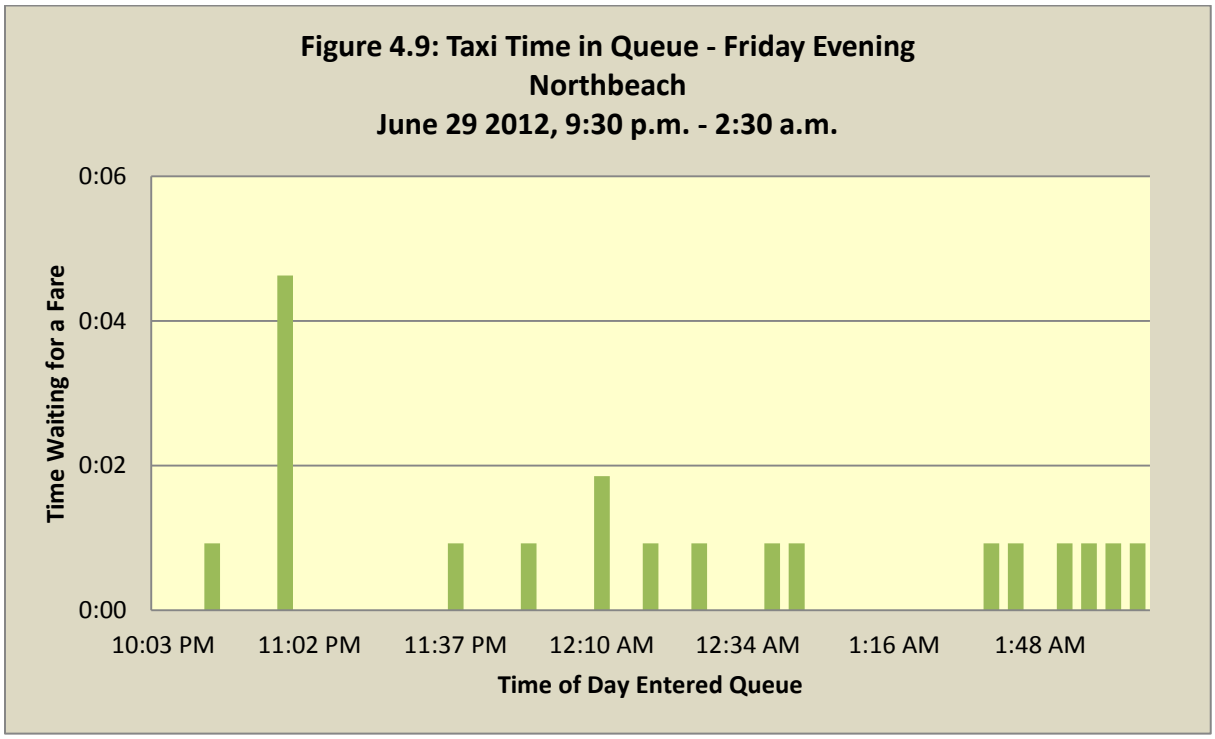


The Caltrain station also showed substantial taxi shortages. Supply at the station was routinely thin. Significant backlogs of passengers appeared between 3:45 and 4:00, as well as after 6:00 p.m. During these periods, there were often 10 or more people waiting for taxis at the stand.



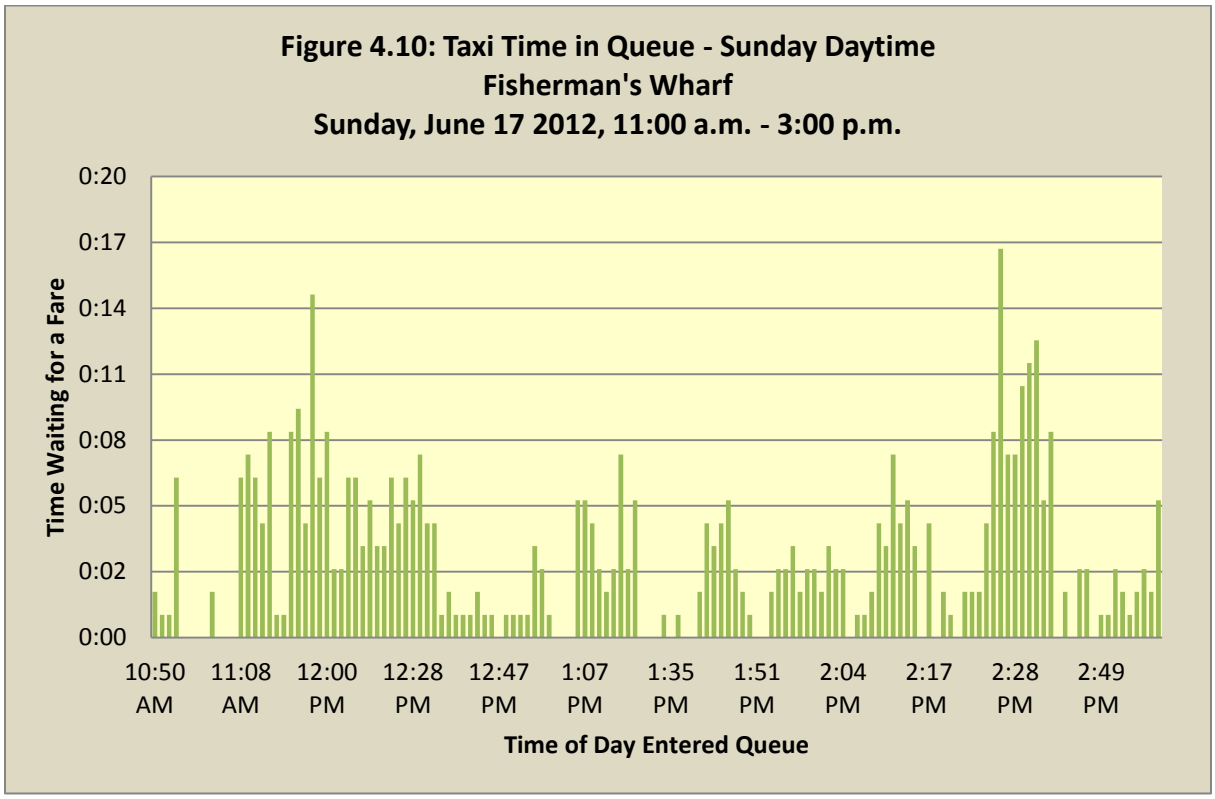
Friday and Saturday Night

Stakeholder interviews identified Friday and Saturday nights as the periods of greatest shortage. On-street observations confirm this. On a Friday between the hours of 10 p.m. and 2:30 a.m., we observed 64 taxi pickups on Broadway Street from Kearny to Romolo. Demand was extremely high and continued to grow throughout the night. Taxi supply could not keep up. Between 2 a.m. and 2:30 a.m. only five pickups were observed, leaving more than 12 potential passengers waiting for taxis at the end of the observation period.



Sunday Daytime

Sunday daytime might be expected to be a relatively slack period. If there were a surplus of cabs in the city, we would expect them to congregate at formal stands like Fisherman's Wharf. However, we found that, while the stand at Fisherman's Wharf was often full, its turnover was quick. The average dwell time was three and a half minutes (Figure 4.10). Additionally, the stand often emptied completely, resulting in 12 instances of customers waiting for taxis. This too confirmed the experience related by hotel operators.



San Francisco International Airport

Passenger volume at San Francisco International Airport (SFO) has been growing rapidly, placing additional pressure on the limited taxi supply. Enplanements and deplanements have grown from 35.4 million in 2007 to 44.5 million in 2012, an increase of 26% in five years.[32]

Observers monitored the San Francisco International Airport (SFO) taxi staging areas on Monday the 23rd of July from 7:30 p.m. to 11:30 p.m., as well as Saturday the 28th from 11:20 a.m. to 2:30 p.m.. These days and times were suggested by the SFO Ground Transportation Unit as representative of the busiest and slowest days respectively (holiday travel periods excluded).

Airports are usually a city's largest holding area for reserve taxi supply. New, inexperienced drivers find the airport an easy-to-navigate source of trips, and all drivers find the longer trips from the airport financially attractive. Depending on the city and the experience of the taxi drivers in the fleet, taxis may queue for hours waiting for airport fares even when supply is tight elsewhere in the city.

[32]From SFO website http://www.flysfo.com/web/page/about/news/pressres/stats-2012.html.

Figure 4.11: Taxi Time in Queue - Weekday Evening Peak
San Francisco Airport
Monday, July 23 2012, 7:30 p.m. - 11:30 p.m.

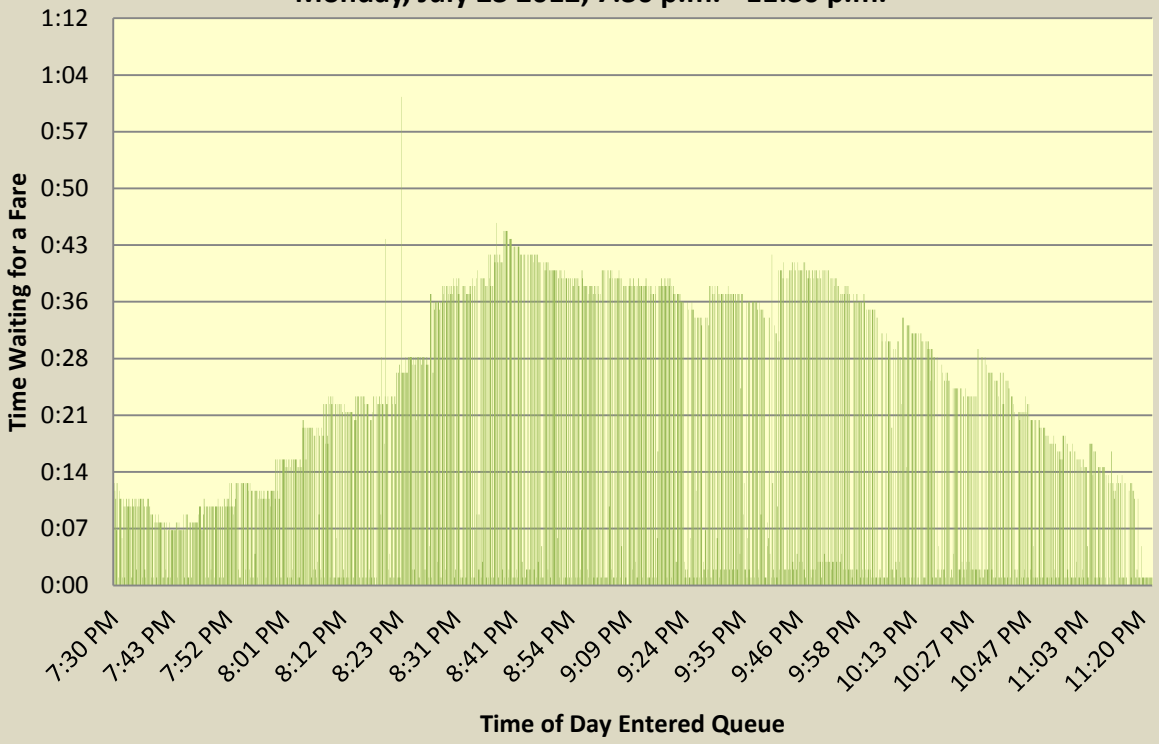
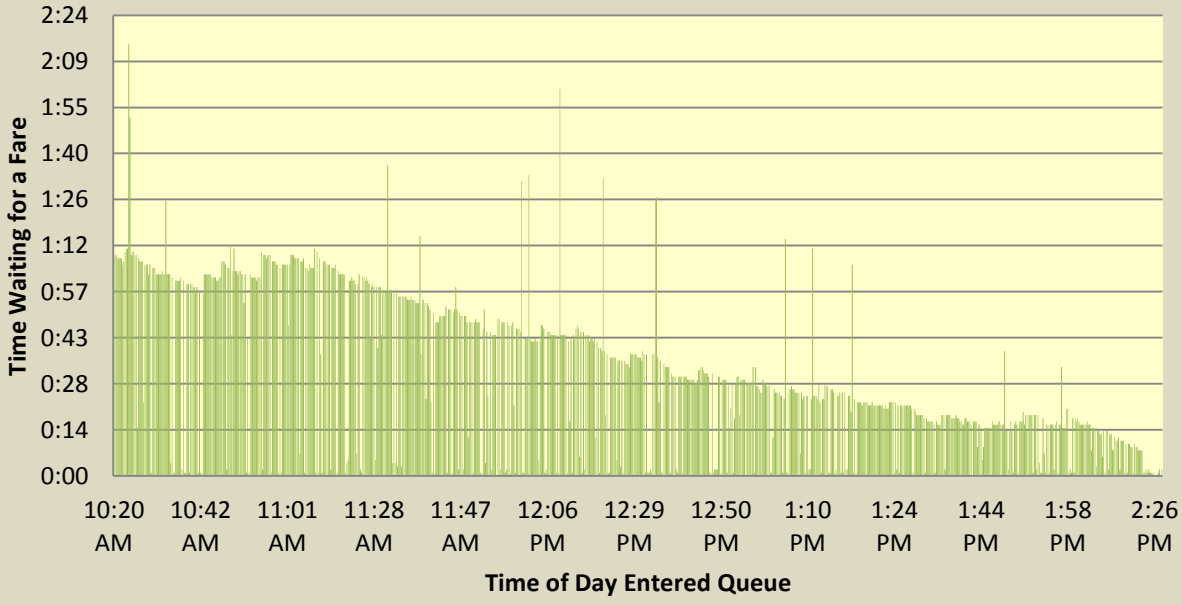


Figure 4.12: Taxi Time in Queue - Weekend Daytime Off-Peak
San Francisco Airport
Saturday, July 28 2012, 10:20 a.m. - 2:30 p.m.



During the peak period at SFO, wait times varied from a high of 45 minutes less than 10 minutes[33] (Figure 4.11). Observing a less-than 15-minute wait in an airport taxi queue is unusual and indicates high demand and a tightness in taxi supply in other areas of the city, especially when occurring early in the evening as shown.

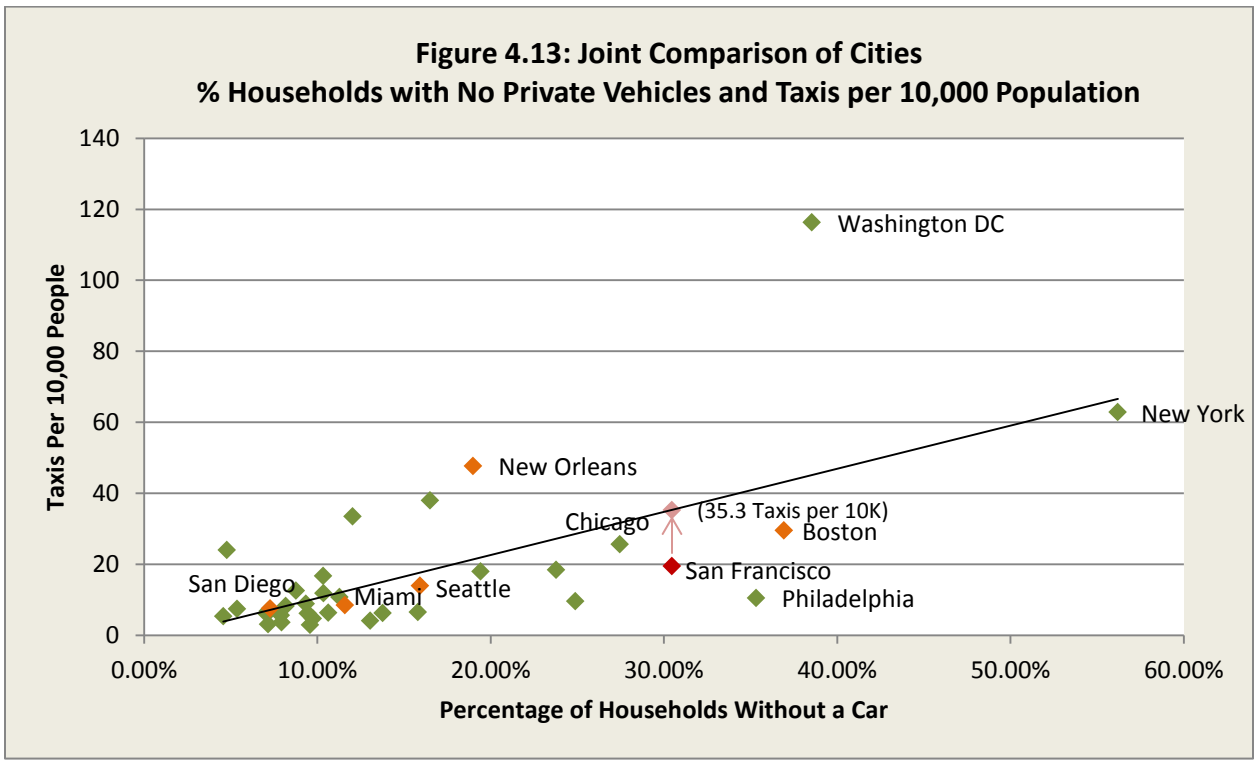
The off-peak period had lower throughput, but waiting time in queue was very similar to the peak in range (Figure 4.12). Again the short wait for an airport trip, as little as fifteen minutes or less, suggests tight taxi supply elsewhere in the city even at off peak.

In summary, on-street observations confirm a severe shortage of taxis in San Francisco, with customers systematically waiting for taxis, rather than taxis waiting for customers. Drivers can predict these shortages, but do not respond to them because they are equally busy elsewhere.

4.7 ACCOUNTING FOR HOUSEHOLDS WITHOUT PRIVATE VEHICLES

Given that the shortage of taxis goes beyond catching up to year 2000 conditions – how many taxis does San Francisco need?

An important way that San Francisco differs from many other cities is the high number of households who do not have a private vehicle. Figure 4.13 is a scatter diagram comparing San Francisco to 36 other cities available in the International Association of Transportation Regulators (IATR) database and supplemented by Hara Associates records. The vertical axis shows taxis per 10,000 population. The horizontal axis shows the percentage of households without a private vehicle, as of the 2010 US Census. The list of cities and data is provided in Table 4.1.



[33] Excluding taxis who, under airport rules, could bypass the queue when they received a short trip from the airport. These taxis produces breaks in the diagram that are separate from the systematic fast moving periods. Longer times that break the pattern occur when drivers take a washroom or meal break.

Table 4.1
Taxis Per 10,000 Population and Households Without Private Vehicles

Jurisdiction	Population*	Taxis Per 10,000 Population*	Percentage of Households Without Private Vehicles*
Atlanta, GA	420,003	57.1	16.5%
Austin, TX	790,390	6.7	7.1%
Boston, MA	617,594	29.6	36.9%
Broward County, FL	1,748,066	3.6	7.9%
Chicago, IL	2,695,598	25.6	27.5%
Cleveland, OH	396,815	9.6	24.9%
District of Columbia	601,723	116.3	38.5%
Fairfax County, VA	1,081,726	5.3	4.6%
Houston, TX	2,099,451	11.8	10.4%
King County, WA	1,931,249	2.9	9.6%
Los Angeles, CA	3,792,621	6.2	13.8%
Miami -Dade County, FL	2,496,435	8.5	11.6%
Minneapolis, MN	382,578	18.0	19.4%
Nashville-Davidson County, TN	626,681	5.6	7.9%
New Orleans, LA	343,829	47.7	19.0%
New York City, NY	8,175,113	62.8	56.2%
Philadelphia, PA	1,526,006	10.5	35.3%
Portland, OR	586,776	6.5	15.8%
Redondo Beach, CA	66,748	24.0	4.8%
Sacramento, CA	466,488	10.7	11.3%
San Diego, CA	1,616,813	7.6	7.3%
San Francisco, CA	812,826*	19.5	30.5%
Santa Monica, CA	89,736	33.4	12.0%
Seattle, WA	608,660	14.0	15.9%
Las Vegas	1,921,269	12.5	8.8%
Charlotte	919,628	6.0	7.1%
Columbus	787,033	6.4	10.6%
Dallas	1,197,816	16.7	10.3%
Detroit	713,777	18.4	23.8%
Fort Worth	741,206	3.0	7.2%
Indianapolis	903,393	8.9	9.3%
Jacksonville	843,263	8.2	8.2%
Memphis	646,889	4.0	13.0%
Phoenix	6,392,017	4.7	9.7%
San Antonio	1,327,407	6.2	9.4%
San Jose	945,942	7.4	5.4%

**Taxi numbers come from each city's regulator, population is based on the 2010 census, and the percentage of households without vehicles is based on the 2011 American Community Survey.

Almost one third (30.5%) of San Francisco households do not own a vehicle (the red diamond). Only four cities in the data set exceed this level: Philadelphia, Boston, Washington DC, and New York, which appear to the right of San Francisco in the figure.

On average, the number of taxis per capita increases the greater the number of households without private vehicles. The relationship[34] is shown by the line rising upwards to the right. Were San Francisco to increase the number of taxis to the level suggested by the average relationship, it would move from 19.5 taxis per 10,000 population to 35.3 per 10,000 population, an increase of more than 80%. In numerical terms, this would be an increase from 1,585 taxis to 2,870.

The above is arguably an overestimate, since some of the cities with a much higher taxis per capita also have much lower medallion values than San Francisco's administered price of $250,000. Lower medallion values indicate a looser taxi supply for the given demand. New Orleans medallions exchanged for $67,000 in 2011, the most recent sale before changes to its procedures. Washington DC values are negligible as an open entry city, and for similar reasons, a dispatch black car permit in New York also has negligible value.

If San Francisco is to preserve stable medallion values at around current levels, then expansion in per capita taxis to the level of Boston is likely sustainable. Boston's per capita is 29.6 taxis per 10,000 population. Increasing the number to that level would indicate a roughly 50% increase in supply, or approximately 800 more taxis than the 1,585 in service in 2012. We note that Boston has even more households without vehicles than San Francisco. However, San Franciscans' ability to choose not to own a vehicle has been constrained by the lack of taxis. Survey responses indicate that more households would give up their cars were taxi service reliable. We also note that Boston's taxi medallions have most recently transferred at between $400,000 and $525,000—indicating a taxi supply that is still relatively constrained.

Similarly, Chicago has 25.6 taxis per 10,000 population and a percentage of households without vehicles that at 27.5% is only slightly smaller than San Francisco's.[35] With this higher number of taxis, and with control of gate fees similar to San Francisco, Chicago still sustains medallion values in excess of $300,000. Chicago appears on Figure 4.13 just to the left of San Francisco.

4.8 FUTURE CRUISE SHIP DEMAND

Additional taxi demand likely will arise owing to San Francisco's new cruise ship terminal, slated to be operational in 2014. Already, Princess Cruises has based the 2,600 passenger Grand Princess in San Francisco year-round.

Cruise ships place significant challenges on a city's taxi supply. A 2001 study in the City of Vancouver found that 25-30% of passengers disembarking large cruise ships were looking for a taxi.[36] Scheduling is such that passengers debark at the same time creating sudden peaks in taxi demand. As cruise ships have become larger, these peaks have become more intense. Assuming two passengers per cabin, a single vessel of the Grand Princess's size requires at least 325 taxis every time it arrives. While embarkment usually occurs during the slow periods in the middle of the day, debarkment primarily takes place during the morning rush hour[37], stretching an already thin and particularly critical supply of taxis.

[34] A regression line: (Taxis per 10,000 population) = 121.6 × (%Households with no vehicle) - 1.77.
[35] Population as of the 2010 Census.
[36] The Motor Carrier Commission of British Columbia.*An Examination of the Taxi Supply in the Lower Mainland*. October 2011.
[37] Port of San Francisco.*2013 Cruise Schedule*.

4.9 HOW MANY TAXIS FOR SAN FRANCISCO? TWO KINDS OF TAXI SHORTAGES

Reviewing the different data sources,it is clear that San Francisco has a severe shortage of taxis.

- On street observations show the street-hail and stand business is very busy, to the point where people routinely queue for taxis at stands during peak periods, rather than taxis queuing for customers. The result has starved the dispatch market of taxis, resulting in very poor service. San Francisco residents report long waits, and unreliable arrival of taxis.
- In interviews, drivers report that customers have often disappeared when they arrive. Taxi companies find it unrewarding to develop their dispatch markets with better service, because there is a shortage of taxis willing to leave the busy hail market long enough to go to someone's home.
- Surveys show potential passengers have sought other solutions such as owning private vehicles, and increasingly, by using shared ride services and limousines dispatched by smartphone apps. The latter have their place, but do not provide the level of safety and supervision that people want and expect from the more regulated taxi regime.
- Taxi medallion growth has not kept pace with growth in demand factors since the year 2000. Growing population, increased commuter population from the wider Bay Area, and increases in the cost of vehicle ownership have driven taxi demand to increase an estimated 23.2%, versus a 14.9% increase in medallions issued up to 2012.
- Longer-term civic records show the taxi dispatch market failure has been systemic since before 2000.
- Cities with similarly low levels of vehicle ownership tend to have higher numbers of taxis per capita.

In summary, there is a taxi shortage that has two causes:

1. Taxi numbers have not kept pace with increases in taxi demand since 2000, particularly in the post-2008 economic recovery.
2. There has been a continuing systemic shortage of taxis since before 2000, revealed in the long record of poor dispatch service and no-shows.

The recent response of SFMTA to provide medallions for 200 more taxis, is likely enough to restore conditions to year 2000 levels, but will leave the greater demand unanswered. It also will not be enough to address the unquantified impact of an aging population, the increased censure for drinking and driving, and the increasing desire of individuals to reduce their car ownership for environmental and financial reasons, and future challenges such as the new cruise ship terminal.

Finding: *San Francisco requires more than a moderate increase in the number of taxis. Given the proportion of San Francisco households without vehicles, and the high taxi shortage evidenced on San Francisco streets at present, it is likely that San Francisco needs and can sustain an increase in taxi medallions of at least 50% over 2012 levels. This is roughly 800 more medallions. Including the 200 already authorized by the SFMTA, this would bring the fleet to 2,385. This level is line with peer cities with similar low levels of private vehicle ownership, and would be sustainable while supporting a continued medallion value at present $250K administered price.*

An increase of this magnitude requires careful management over time to preserve industry stability, protect driver incomes, and allow passengers to adapt their habits to an increasingly reliable taxi supply.

The next chapter makes recommendations on how taxi medallion numbers can be expanded while preserving stability for driver incomes and medallion values.

5 ANALYSIS AND RECOMMENDATIONS

The previous chapter found a substantial shortage of taxis in San Francisco. This chapter provides analysis and recommendation on:

- Timing of new medallion issue;
- Method of issue;
- Recommended transfer/issue price for medallions;
- Improvements to the number of wheelchair accessible taxi medallions.

5.1 CRITERIA FOR A GOOD SOLUTION

5.1.1 Why It Takes Time

Given time, the city needs and can support at least 800 more taxis (600 plus the 200 already authorized in fall, 2012). More taxis are needed to:

- Eliminate the immediate shortages downtown;
- Extend effective dispatch service to the whole of the city;
- Remove an impediment to the growth of San Francisco's restaurant and entertainment sector;
- Free individuals to choose to own and use private vehicles less, and a combination of other complementary modes more (taxi, public transit, bikes, etc.).

Time for the passenger

Neither the industry nor passengers can absorb that increase in supply immediately. From a customer perspective, it takes time to change habits. There is a readily available initial market of people who are currently using shared rides and limousines but would prefer to use taxis for their economy and greater regulatory oversight. Current taxi users in the survey also indicated that they would use taxis more were they available. However, changing commuting habits, and coming to trust taxi reliability, will take time. Placing 600 to 800 more taxis on the street now would result in more business immediately, but also in substantial idle time and lower incomes for all taxis. Off-peak activity would be quite poor.

Time for the industry

Time is also needed from an industry supply perspective. Of the 200 medallions leases authorized by the SFMTA in the fall of 2012, 150 have been distributed to companies. It has taken some months for these companies to put vehicles and drivers on the street. The delay is not only for equipping and insuring vehicles. An additional challenge is recruiting and moving enough new drivers through the training and licensing system.

Nor is having a sufficient volume of new drivers enough. There is a tendency for new drivers to begin by doing the obvious: cycle through the airport and hotel queues. Even in cities where there is a large pool of drivers experienced with a good dispatch system, it takes time for new drivers to learn how to use it to their advantage. The challenge is not only technical, it also involves learning where and when to be for customer demand. Analysis of GPS records in other cities shows that high income taxi drivers are the

ones who stay away from obvious areas, and develop unique strategies for niche locations that follow the tempo of the city.[38] Such strategies also require company systems that provide drivers with customer turnover information by geographic zone. As discussed in Chapter 2, the current failure of the dispatch market means companies have not fully developed this capacity, although many have a strong technological base from which to work. Companies need time to adapt as well. Thus, putting 600 to 800 more taxis on the street immediately, even if possible, would result in many taxis ending up in excessively long airport taxi queues, and overflowing hotel stand queues.

Time for the regulator

The regulator also needs time. Most obviously, given the issues above, the regulator might not find enough takers for 600 more taxis at $250,000 or $300,000 each. A reasonable and predicable framework is needed to assure purchasers of stable income per taxi as the service expands.

In parallel with the industry, the SFMTA also needs time to do its part in taxi driver training, testing, and licensing, and to prepare for the larger enforcement and administration burden of a bigger fleet.

5.1.2 Criteria for a Good Solution

Ideally, we would like manage medallion issuance so that:

- Customer demand is fulfilled with reliable and timely service;
- The pace of expansion protects driver incomes and medallion values;
- The owner-driver orientation of the system is maintained;
- Those on the waiting list are treated fairly;
- Fees charged to non-medallion drivers for medallion access remain fair;
- Regulatory cost of managing the system is minimized;
- There is an ongoing process for easily and transparently managing taxi numbers that is sensitive to changes in economic conditions and taxi demand.

Some of these criteria require comment.

To begin, expanding medallion numbers and preserving medallion value are compatible objectives. When taxi numbers are truly in short supply, there is unrealized potential demand in market segments that are not being served. For example, Boston and Toronto both experienced significant additions to their taxi supply, only to find that medallion values quickly recovered (See Chapter 2). Once customers adapt to the new availability, revenue per taxi recovers to levels that support the higher values.

Arguably, the expansion may even raise taxi efficiency and reduce downtime, since the peak demand in each market segment does not exactly coincide. The net result is shorter slack periods, and less running empty on return trips from outlying neighborhoods.

We take it as a given that there is value to San Francisco in preserving the owner-driver orientation of the system. San Franciscans have voted for this approach more than once, and it is widely understood that the higher driver incomes mean lower driver turnover, a more experienced driver workforce, and better service.

[38] See for example: Liu, Liang, Clio Andris, Assaf Biderman, and Carlo Ratti. "Revealing Taxi Driver's Mobility Intelligence through His Trace." Movement-Aware Applications for Sustainable Mobility: Technologies and Approaches. IGI Global, 2010. 105-120. Web. 30 Jul. 2012. doi:10.4018/978-1-61520-769-5.ch007

San Francisco's current cap on gate fees also reflects a concern for incomes earned by the majority of drivers who do not have medallions. This objective is largely shared by medallion owning drivers, many of whom choose to keep their medallions inside the gas and gate system where rates are capped. Driver survey responses indicated strong solidarity among both types of drivers (See Driver Surveys document).

Respect for the waiting list also appears to be shared value in the industry community. In the Driver Survey, drivers both on and off the waiting list expressed support for respecting the waiting list before moving to a system based on driver seniority.

5.2 POST-K MEDALLIONS AND THE WAITING LIST

To remain on the waiting list for a medallion, drivers must continue to drive. Their incentive to keep working rises the higher they are on the list. Many of those near the top will have worked years longer than when they would otherwise have chosen to retire. Their situation is akin to workers who stay in an industry to fulfill the final years of their pension plan. By this time they are not just people who got their name on a list early, they have a real investment in the years spent working to retain their waiting list position.

At the same time, it is apparent that the old system did not promise drivers as much as some might have hoped. The original Prop-K system required current medallion owners to retire or pass on before the medallion became available. With no compensation on retirement, medallion owners have the incentive to extend their working life as long as possible. This incentive, combined with the similar age distribution of those on the list and medallion holders, meant that the average expectation of a waiting list driver was to receive a medallion only when they were close to retiring themselves.

Recent changes by the SFMTA allow Post-K medallion owners to surrender their medallions for monetary consideration (up to $200,000) at age 60. These are then offered to qualified drivers for purchase at the transfer price set by the administration, with waiting list drivers having a first refusal option. The majority of drivers, both medallion and non-medallion, support this measure (See Driver Survey). It gives medallion opportunities to those on the waiting list sooner, but at the cost of purchasing at $250,000 or $300,000. Once a medallion is transferred to a new driver through this process, it acquires a different status and becomes part of a new system in which it is freely transferable to other qualified drivers without the retirement age or disability requirement.

Recommendation 1: *Right of first refusal for waiting list.* Hara Associates endorses the current SFTMTA provisions for the transfer and retransfer of existing medallions. Hara Associates also recommends that for any new medallions offered for sale or transfer to drivers, the right of first refusal be given to qualified active drivers on the waiting list, subject to the same terms and conditions attached to the offer for any other driver.

Other recommendations below place the majority of new medallions issued into the hands of active drivers.

5.3 ISSUING NEW MEDALLIONS

5.3.1 Time Frame

A staggered time frame is recommended for the release of new medallions so that the industry will be able to anticipate and adapt to new conditions.

Recommendation 2: *Schedule.* Hara Associates recommends that the maximum new medallions issued be:

- For 2013: 120 medallions;
- For 2014: 200 additional medallions;
- For 2015 and later: quantity as governed by industry demand at the set transfer price.

These are in addition to the 200 term-lease medallions authorized for issue to companies in 2012, 50 of which remain to be distributed in 2013.

The initial caps in 2013 and 2014 are intended to give the industry and the market time to adapt, as discussed above. They also control for the risk of a gold rush mentality that leads to too many medallions being issued and purchased by those with unrealistic expectations based on San Francisco's current taxi shortage.

After 2015, the industry can govern its own pace based on the extent to which players believe they can profitably use medallions and earn revenues sufficient to support the medallion transfer price.

Letting the industry's own assessment of profitability determine the longer-term rate of medallion releases also protects driver incomes from too rapid expansion. In addition, there is the practical consideration that one cannot compel drivers or other players to buy at a fixed price if they do not see a business case for it.

5.3.2 Keeping Medallion Prices and Driver Incomes Stable

The long-term guarantee that no medallion will ever be issued for less than the transfer price is effectively a value assurance for those purchasing a medallion in 2013 and 2014.

The SFMTA can enhance the security of purchasers further, at little cost to itself, by putting its intention to keep medallion prices stable into the medallion transaction. It can undertake to medallion purchaser that the SFMTA will not sell a full medallion for less than the transfer price of the transaction for ten years. Since medallions yield approximately $30,000 per year when operated within the present gate fee system, this is more than sufficient time for purchasers to be protected.

The floor price commitment will also address potential concern by industry players that the SFTMTA might begin offering medallions for a lower price after it had exhausted the medallion market at a higher price. Making the commitment means that the SFMTA has committed itself to long-term stability of driver income and industry profitability sufficient to sustain the medallion value.

The combined value of this proposal will enhance the security of purchasers and encourage individuals to take up the needed new medallions.

Recommendation 3: *Price Floor.* Hara Associates recommends that, as part of the issue of new medallions, the SFMTA undertake that it will not to offer full medallions for less than the transfer price for a period of ten years. This undertaking would provide a stable framework in which new medallion holders could take up the offered medallions with confidence.

5.3.3 Eligibility—Preserving the Owner-Driver System

To preserve the owner-driver character of San Francisco's system, drivers should be encouraged and enabled to become medallion owners.

Recommendation 4: *Promoting Owner-Drivers*. Eligible San Francisco taxi drivers should have first claim on the purchase of newly issued or retransferred medallions, except as provided in the wheelchair accessible taxi medallion recommendations in this report. Minimum eligibility should be three consecutive years of active driving. Where the number of interested drivers exceeds available medallions, and where the priority of the waiting list has been exhausted, seniority should be the basis for the opportunity to purchase a medallion.

In the phase-in years of 2013 and 2014, if there are insufficient eligible drivers to take up the available medallions, then registered color schemes should be offered the opportunity based on performance as assessed by the SFTMA.

The three-year minimum ensures that drivers have a firm idea of the business case for what they are purchasing. This protects both the driver and the system from poorly managed medallions. Using driver seniority once the waiting list has been exhausted is supported by responses to the Taxi Driver Survey.

The phase-in provision allowing color schemes to take up any slack ensures that there is an immediate uptake of the medallions needed to address the current shortage. The SFMTA already has experience in allocating medallions according to performance from the recent distribution of 150 term medallions to companies with registered color schemes.

5.3.4 Long-term Management of Taxi Numbers

Under the above recommendations, as of year 2015, the number of taxis will be managed to a level that matches demand per taxi sufficient to support the established medallion transfer value. This has several advantages over a formula that seeks to approximate the same thing. Taxi numbers adjust in accordance with industry demand. Demand by industry is in turn driven by customer demand sufficient to support an established medallion value.

- The result is driven by market conditions, without delay from regulatory hearings;
- The cost and distraction of regular hearings to rehear the same issues is avoided. Hearings can still be held on an exceptional basis to review the operation of the system;
- The risk of non-implementation is much less than were there a formula. As in the example of Miami, having a formula does not mean that it necessarily will be applied. Delays in application can lead to entrenchment of expectations that prevent catch-up adjustments later;
- There is a continuous revenue stream to support SFMTA operations through the 20% medallion retransfer fees in normal turnover, plus the price of any new medallions issued.

There are some similarities in the above recommendations to those made recently by the State of Victoria Taxi Inquiry in Australia (discussed in Chapter 2). An important difference is that San Francisco already has an administered price for medallions. Thus the recommendations here seek to stabilize and maintain that price, rather than bring it down to substantially lower levels.

5.3.5 Recommended Transfer Price

The SFMTA's Medallion Sales Pilot Project transferred medallions to new owner-drivers at a price of $250,000 per medallion. In drafting regulations for a permanent transfer program, this price was raised to $300,000. No transfers have yet taken place at the higher price.

Choosing a medallion transfer price ($250,000 or $300,000) is affected by long-run objectives for San Francisco, and fairness to industry stakeholders. In the long run, there is a trade-off between price and quantity. Higher medallion values must be supported by higher revenues collected from drivers, and ultimately from customers. This in turn means fewer taxis. Our survey data suggests that fewer taxis also means appreciably lower public transit ridership in San Francisco, especially in southern neighborhoods. This is due to the complementary nature of taxis and public transit as a package alternative to private vehicles.

Medallion lease fees are also incorporated in the gate fees charged per shift to non-medallion drivers. The lower transfer price will control pressure on gate fees. To the extent that revenue is a concern, the annual revenues to the SFMTA from managing the release and transfer of an increased number of medallions can be expected to meet requirements.

Recommendation 5: *Transfer Price.* Hara Associates recommends the transfer price for medallions be restored to the $250,000 used in the pilot transfer program. This amount is more consistent with the policy objectives of improving service with more taxis profitably in operation; and keeping gate fees and medallion lease fees affordable to non-medallion drivers. In addition, it recognizes the complementarity between improved taxi service, increased public transit usage, and reduced ownership of private vehicles.

5.3.6 Protecting Drivers from Excess Lease Fees through Direct Leasing

The above recommendations provide a complete system for the issuing new medallions. However there are further improvements that would greatly improve the long-term efficiency and fairness of the system. One is direct leasing of medallions by the SFMTA. Instead of transferring a medallion outright at the transfer fee, the SFMTA would offer the lease directly at a fixed price consistent with the capped gate fee. Under the two-price system currently observed in San Francisco, the lower lease price of $2,500 per month is consistent with the capped gas and gate fee, while the higher $6,000 to $7,000 per month now paid by some non-medallion drivers is not.

The latter price obtains when drivers are paying more than the regulated rates (gate fees) for the medallion. The higher price exists because the SFMTA is challenged in enforcing fee gate fee caps on medallions managed through affiliate leases.

Offering leases at the lower level is a cost-effective way of policing the cap on gate fees and preventing excess medallion lease fees. It will be difficult for a medallion to command $6,000 per month when the same medallion can be leased for $2,500 per month directly from the SFTMA. Even the potential to be able to secure a medallion lease directly will empower non-medallion drivers to refuse to pay excess tips to color scheme staff, a significant problem (see Chapter 2).

The idea of direct leasing by the SFMTA met substantial resistance during stakeholder interviews, but found majority driver support in the Driver Survey where 63% of drivers agreed with the statement that "Drivers without medallions should have the choice to lease medallions directly from the SFMTA." Of those in agreement, 53% were strongly agreed (scoring their agreement 5 out of 5). Only 26% disagreed. Support was strongest among non-medallion holding drivers. Most medallion owning drivers were strongly opposed, but a sizable minority (33%) also strongly agreed.

Support for direct leasing from the SFMTA is understandable given the high lease prices some drivers pay, and the high tips that drivers in the gas and gate system pay, often involuntarily.

The offer of leasing at an effective $2,500 per month will not cannibalize revenues from medallion sales. Annually, the $30,000 per year is a yield of 12% relative to an up-front expenditure of $250,000. For those with access to capital, the outright purchase is a better deal. For drivers without capital, the ability to pay the SFMTA directly for medallion leases is an empowering option that may yield lower net fees, a more balanced power relationship with their color scheme, and a more transparent process than the mysteries of who and how much to tip.

Recommendation 6: *Direct Leasing.* Hara Associates recommends that, as part of the new issue of medallions, priority be given to drivers who wish to lease directly from the SFMTA at a fixed monthly rate consistent with gate fee caps (approximately $2,500 per month at current levels).

The minimum term of such leases should be three years, with appropriate initial deposit to ensure interest and accountability. An option to renew annually for an additional year would permit drivers to plan the purchase of their own taxi vehicle.

A further advantage to direct leasing is that it will give the industry income stability once the San Francisco taxi fleet expands to a mature size suitable for the city. At this time, it is preferable that the fleet match taxi demand by decreasing naturally when demand falls, such as in a recession. This protects the income of the core fleet and retains skills drivers. The ability to have the fleet size move in both directions automatically will come from the choice of some direct leases not to renew, or for the entry of new lease takers to be delayed, while others retire through natural turnover.

The provision for direct leasing is also a measure which stabilizes income per taxi and further enhances the security of those who commit to the industry by taking up a full medallion.

5.3.7 Shaping Supply to Match Demand

Another optional improvement would be to issue new medallions or leases in the form of single operator permits with reduced hours. The SFMTA has already experimented with a limited number of Single Operator Part-time Medallions. Holders of these medallions are restricted to operating 90 hours per week, effectively a little over half time. In the earlier experiment these medallions were awarded by driver seniority and without a lease payment. If applied within the recommended model, such permits would be based on a reduced monthly lease payment, commensurate with the restriction on hours.

The advantage of issuing part-time medallions is that holders of such medallions will tend to operate when the need is greatest, adding to peak demand capacity without burdening off-peak. This protects driver income during the off-peak hours and is generally more efficient. Fuel consumption from competitive fare cruising during off-peak is also reduced. The potential capacity of modern dispatch and real-time GPS make enforcement of part-time medallions feasible.

Setting maximum hours for these lease medallions at 60, instead of 90, is also consistent with focusing the added capacity on peak hours.

Setting a transfer price or a lease price is more problematic. They are worth less than a full medallion because of the hours restriction, but the difference is not proportionate since the hours used will be the most profitable times of day. It is suggested that this form of medallion initially be offered only as a class of direct-lease medallion to avoid long-term commitments on mispriced medallion transfers. Initial pricing might take the form of a call for offers, with the resulting experience used to set a fixed price.

Recommendation 7: *Part-time Medallion Option.* That for 2014, in conjunction with adoption of the direct-leasing recommendation, the SFMTA consider offering part-time medallion leases restricted to 60 hours of operation. Administrative flexibility should be permitted on pricing until an appropriate price relative to other options is established. Success of this category would permit expanded capacity to focus on peak demand periods, without oversupplying off-peak periods.

Delaying the introduction of this form of lease until 2014 would allow the industry to gain experience with direct leasing in general, and invite more informed proposals leading to a fair price for the reduced hours. To be an effective method of shaping supply to meet demand, the part-time medallion option should be in place prior to 2015, when the move to demand-based medallion issue is scheduled.

5.3.8 Answering the Cost Squeeze on Color Schemes with WATs

Chapter 2 discussed the validity of taxi company complaints that they are facing a cost squeeze between regulated gate fees and the high cost of medallion leases operating outside the gas and gate system. Analysis showed the validity of the argument rested partly on the inability to attract a greater fee for service to providing good dispatch. More plentiful medallions sufficient to energize the dispatch market will relieve companies of much of this pressure.

An alternative solution proposed by some companies was to have more medallions in their own control. It was argued that this would allow stability, better planning, and a better ability to enforce high standards within their respective color schemes.

There is validity to the argument made for company medallions to provide a core of stability. The argument is strongest for newer companies which may lack access to Pre-K medallions. However, company medallions dilute the owner-driver system. The owner-driver system has its own advantages. In addition, 200 new company permits have already been authorized by SFMTA, although not for the reasons given above.

One positive response to the desire for a limited number of company permits is to increase the number of ramp medallions. There is a special argument for giving companies greater control of such medallions. With the medallion awarded directly, color schemes can be held accountable for meeting requirements to have the ramp taxis available for priority dispatch to wheel chair users at all times of day. Increasing the number of ramp medallions also provides greater density of service, reducing the cost per vehicle for responding to priority calls. Further, having more ramp vehicles anticipates the needs of the aging population.

A related idea is the need to build experience with purpose-built taxis that provide ramp service simultaneously with seeking an enhanced experience for other taxi users. New models are now available, such as the MV-1 or the Transit Connect. One vision of the future is to have a taxi fleet in

which all taxis are wheelchair accessible. Before evaluating such a future, a city needs to build its own direct experience with available models.

Recommendation 8: *Ramp/WAT Option.* That, in conjunction with the medallion issue schedule recommended in this report, the SFMTA request proposals from registered color schemes for up to 100 additional ramp taxis. Evaluation criteria should be based on the proposed discount from the regular medallion transfer price, service proposal for meeting priority dispatch calls by wheelchair users, and use of suitable purpose-built wheelchair accessible taxis. Any medallions issued under accepted proposals would come from the 200 medallions recommended for release in 2014.

It is anticipated that proponents would want to pay less for a ramp medallion due to the extra cost of acquiring purpose-built accessible taxis, and the priority service requirement. However, the competitive discount should not exceed the purchase price of a purpose-built accessible taxi.

Types of accessible purpose-built taxis will be addressed in the future report on vehicle and equipment standards.

Appendix A

Interview Participants

Appendix A
Interview Participants

Interviews included the following participants. Not shown are drivers who requested not to identified, and participants in driver group interviews. Hara Associates and Corey Canapary & Galanis thank all participants for their contributions.

Industry Stakeholders

- Abdelelah Alhimisi, Driver
- Paul Batmale, Principal, Gold Canyon Insurance Services
- Brian Browne, Economic Consultant
- Roger Cardenas, President, Bay Cab
- Tim Csontos, Vice President Business Development, Taxi Magic
- Jason DeWilliers, Vice President Sales, (Cabulous), Upstart Mobile
- Nate Dwiri, Yellow Cab
- Noor Eissa, President, Max Cab
- Jim Gillespie, General Manager, Yellow Cab
- Rua Graffis, Driver, Taxi Driver Institute, Driver, TAC
- Mark Gruberg, Driver ,United Taxicab Workers
- John Han, Driver, TAC
- Ed Healy, Driver
- Dan Hinds, President, National Cab, TAC
- Tara Housman, Driver, TAC
- Steve Humphreys, CEO, (Cabulous), Upstart Mobile
- Richard Hybels, Proprietor, Metro Cab, TAC
- Micky Kelly, San Francisco Taxi School
- Hansu Kim, President, DeSoto Cab
- Barry Korengold, Driver, San Francisco Cab Drivers Association, TAC
- Manny Kourkroulos, Dispatcher (Yellow, retired)
- Tim Lapp, Dispatcher (Yellow), TAC
- John Lazar, President and General Manager, Luxor Cab, TAC
- Tone Lee, Driver, TAC
- Erik Litzen, Director Dispatch and Driver Services, DeSoto Cab
- Carl Macmurdo, Driver, Medallion Holders Association, TAC
- Gratchia Makarian, Owner, Arrow Checker Cab
- Jacob Mayzel, General Manager, Town Taxi
- Tariq Mehmoud, Driver
- Richard Moles, Driver
- Brad Newsham, Driver
- Athan Rebelos, General Manager, DeSoto Cab
- Charles Rathbone, Operations Department, Luxor Cab
- Marc Soto, General Manager, Veolia Transportation
- Chris Sweis, CEO City Wide Taxi Dispatch; President, Royal Taxi, TAC
- Andrew Sun, Luxor
- David Trotman, Cab College
- Robert Vitcha, Dispatcher (Yellow)
- Phillip S. Ward, Attorney, Consultant

Tourism and Hospitality Industry

- Jon Ballesteros, Vice-President, Public Policy, San Francisco Travel
- Gary Bauer (CEO, Bauer's Intelligent Transportation), San Francisco Travel
- Rob Black, Executive Director, Golden Gate Restaurant Association
- Kathy Cady (Concierge, Marriott), Past-President, San Francisco Concierge Association
- Kevin Carroll, Executive Director, Hotel Council of San Francisco
- Mark Coulter (Hilton), Hotel Council of San Francisco
- Michael Dunne (General Manager, Hilton), President, Hotel Council of San Francisco
- Mariann Costello (Vice-President, Scoma's Restaurant), Golden Gate Restaurant Association
- Lee Gregory (Executive Vice President,McCalls Catering), San Francisco Travel
- Kathryn Horton, Convention Events and Services, San Francisco Travel
- Mary Maxwell, Hotel Council of San Francisco
- David Needleman (Genera Manager, Grand Hyatt), Incoming Chair, San Francisco Travel
- David Rice (Chief Concierge, Clift) San Francisco Concierge Association
- Oscar Rodriguez (General Manager, Marriott), Hotel Council of San Francisco
- Bob Sauter (Assistant General Manager, Moscone Center), San Francisco Travel
- Ferris Suér (Principal, National SalesManager, Allied PRA), San Francisco Travel
- Wes Tyler, (Chancellor Hotel), Hotel Council of San Francisco
- Michael Watson (Bauer's Intelligent Transportation), San Francisco Travel

San Francisco Airport, Landside Operations

- Antonia Carcellar, San Francisco Police Department -Airport Bureau, Ground Transportation Unit
- Sarah Hellman, Assistant Manager, Ground Transportation Unit
- Derek Phipps, Manager, Ground Transportation Unit

City of San Francisco

- Malia Cohen, Supervisor
- Joanna Fraguli, Deputy Director, Programmatic Access, Mayor's Office on Disabilities
- Scott Wiener, Supervisor

San Francisco Municipal Transportation Agency (SFMTA)

- Sonali Bose, CFO
- Leona Bridges, Director, SFMTA Board of Directors
- Cheryl Damico, Chair, Paratransit Coordinating Council
- Christiane Hayashi, Deputy Director of Taxis
- Malcolm Heinicke, Director, SFMTA Board of Directors
- Jarvis Murray, Enforcement and Legal Affairs Manager, Taxi Division
- Joel Ramos, Director, SFMTA Board of Directors
- Jane Redmond, Paratransit Coordinating Council
- Christina Rubke, Director, SFMTA Board of Directors
- Stu Smith, Paratransit Coordinating Council
- Kate Toren, Paratransit Manager, Division of Taxis and Accessible Services

Other

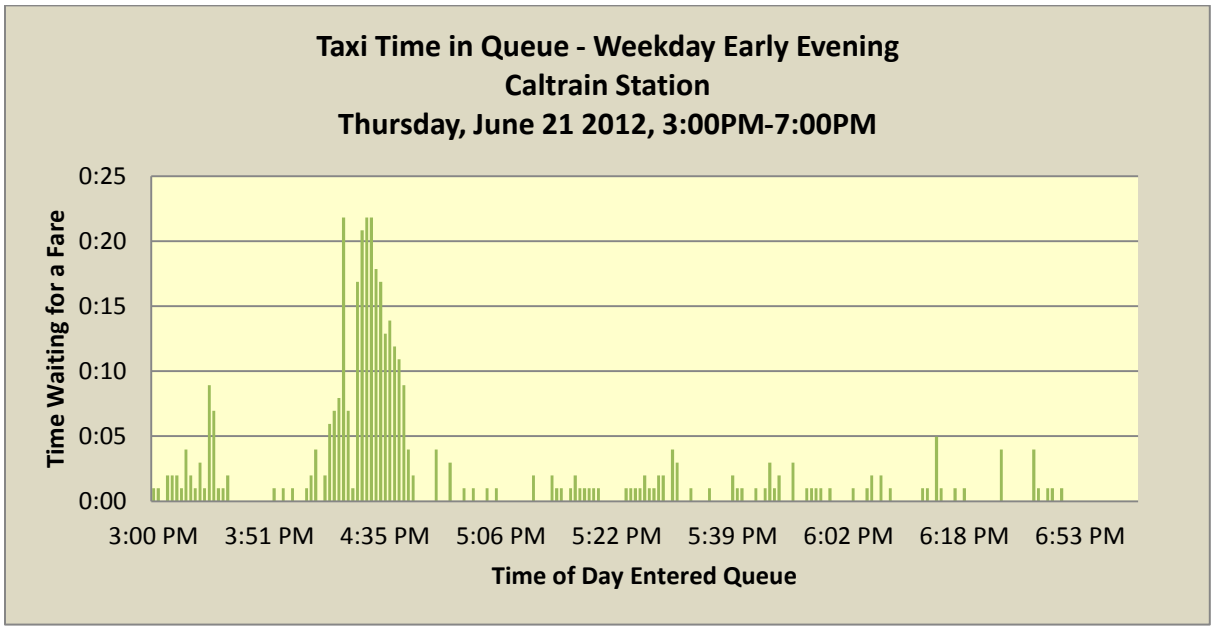
- Rebecca Reynolds Lytle, Senior Vice President, Lending, San Francisco Federal Credit Union
- Paul Wuerstle, Manager, Transportation Enforcement Branch, California Public Utilities Commission

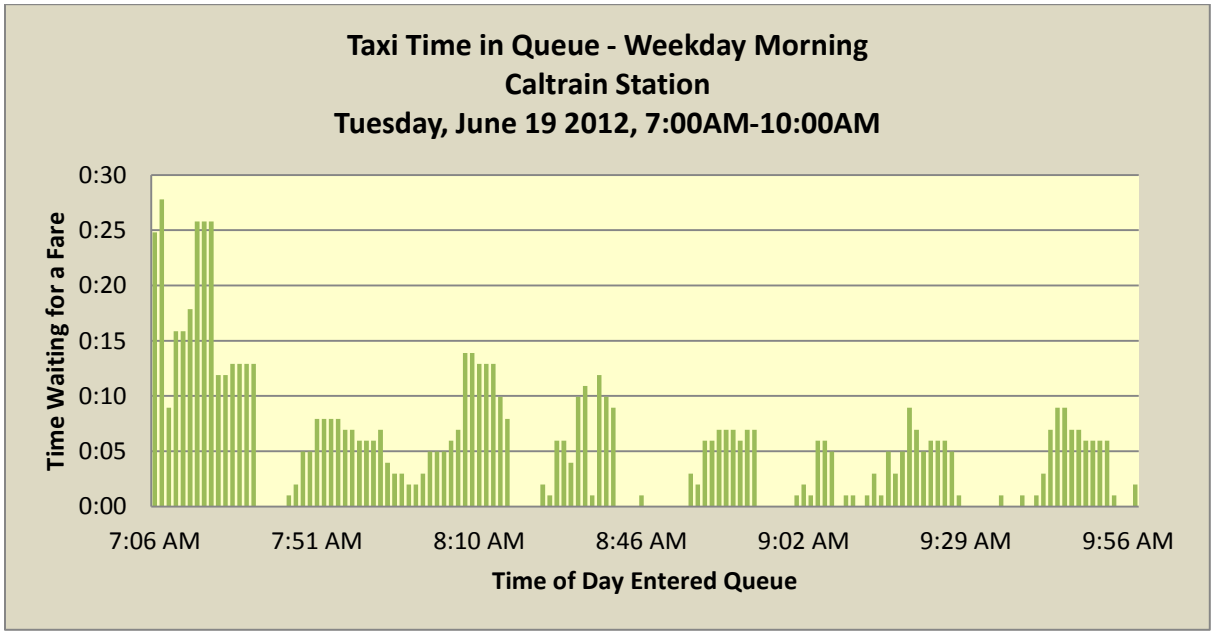
Appendix B
Taxi Stand Observations

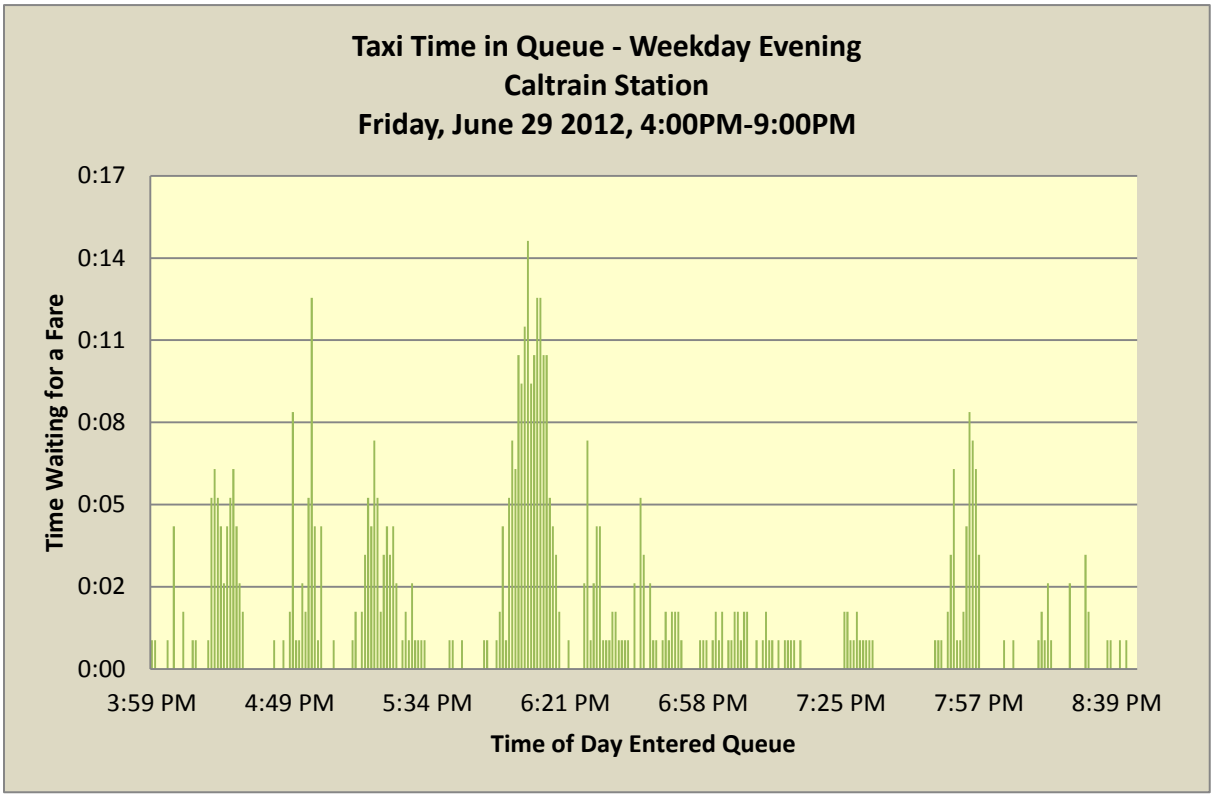
Appendix B
Taxi Stand Observations

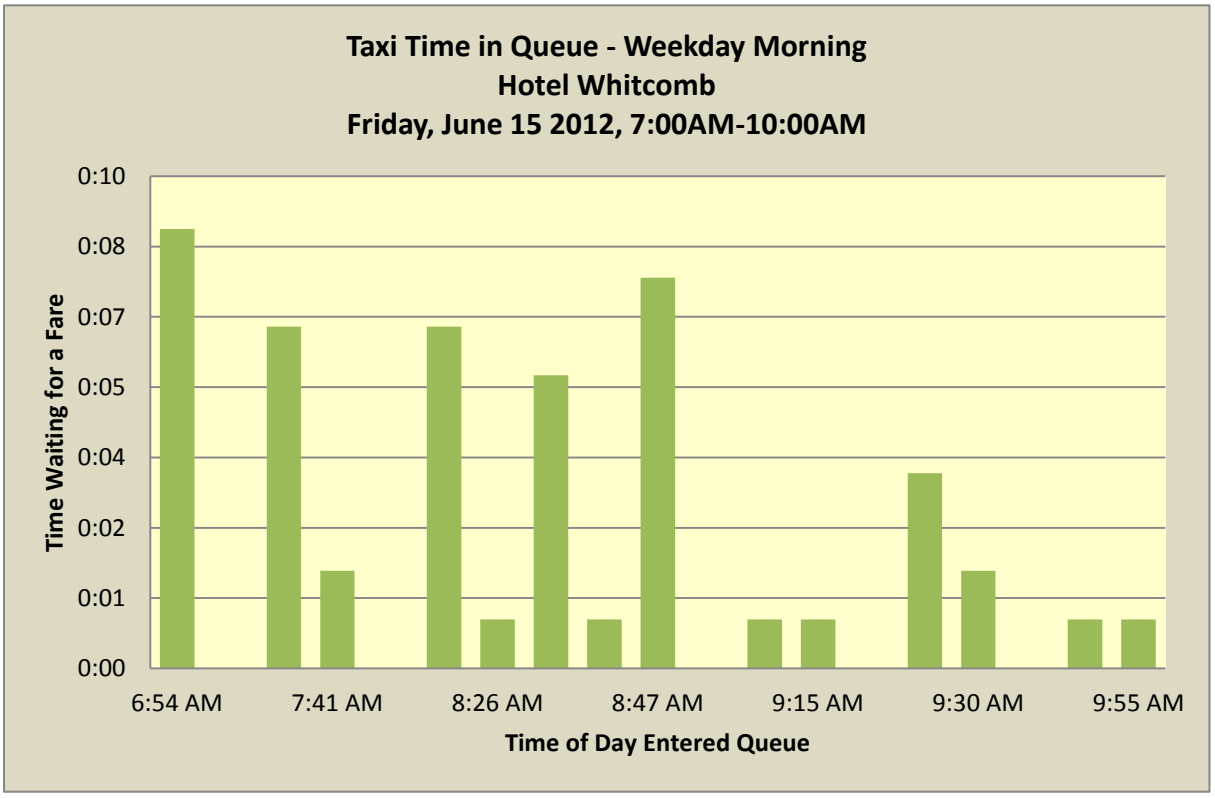
As a further check on taxi market conditions, Hara Associates and Corey Canapary & Galanis visited taxi stands at selected times of day and night. At each stand, the length of time a taxi must wait for a fare was timed. Excessive waiting time indicates an oversupply. Since taxis are free to allocate themselves between stands throughout the city, or to take dispatch calls, the waiting time at one stand is indicative of supply conditions throughout the city.

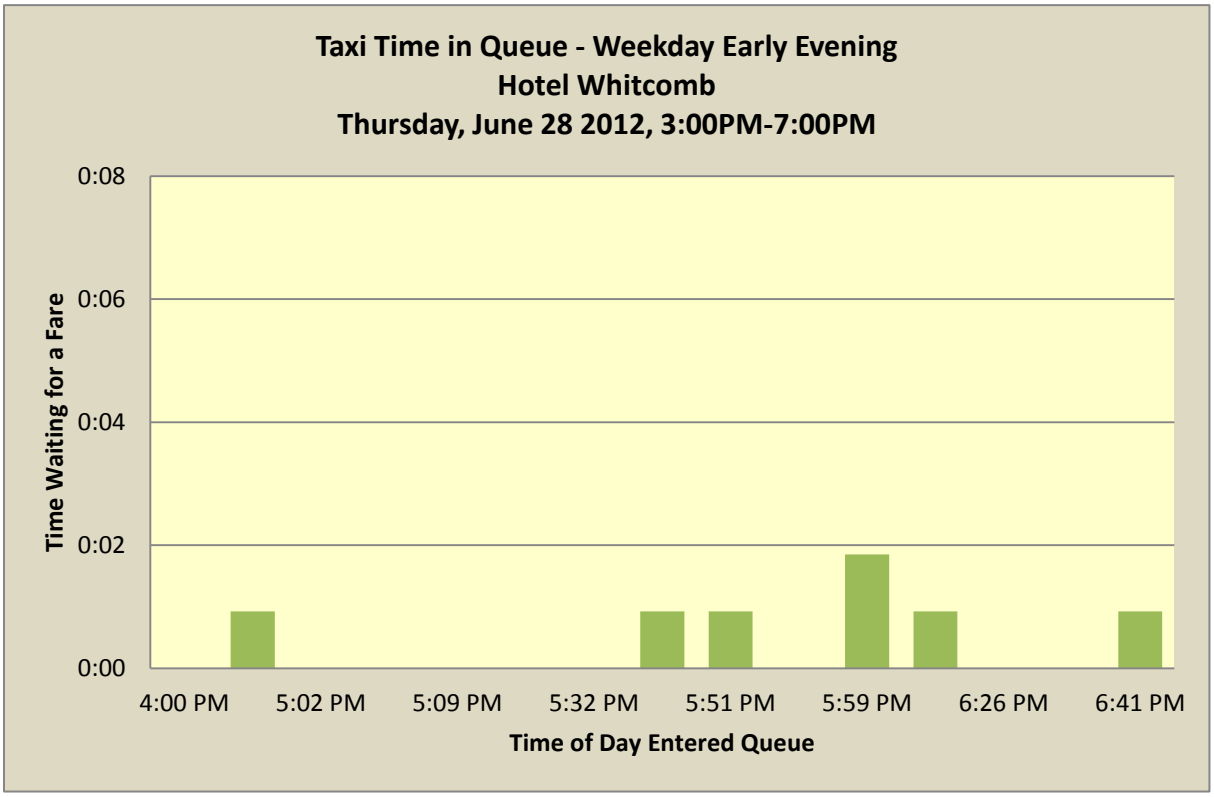
Charts of observations are provided below. *Not shown in the bar charts are instances where customers queued for taxis.*

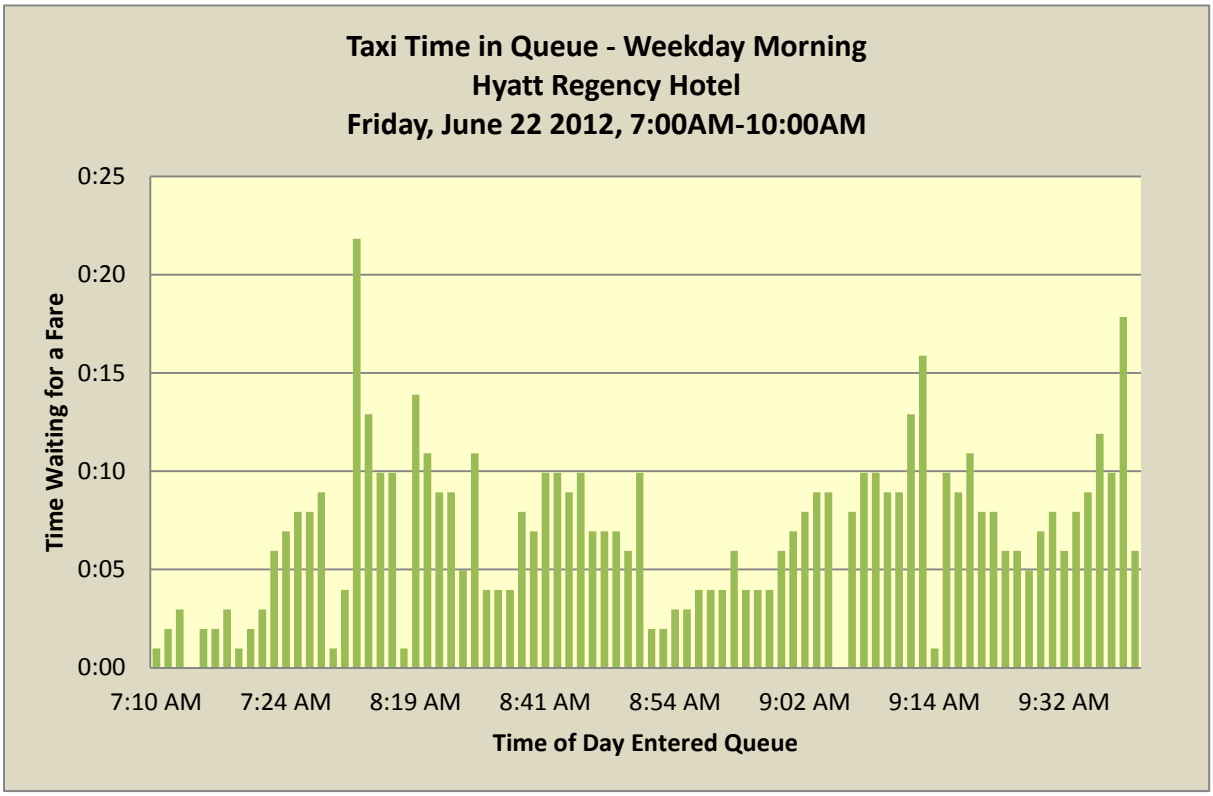


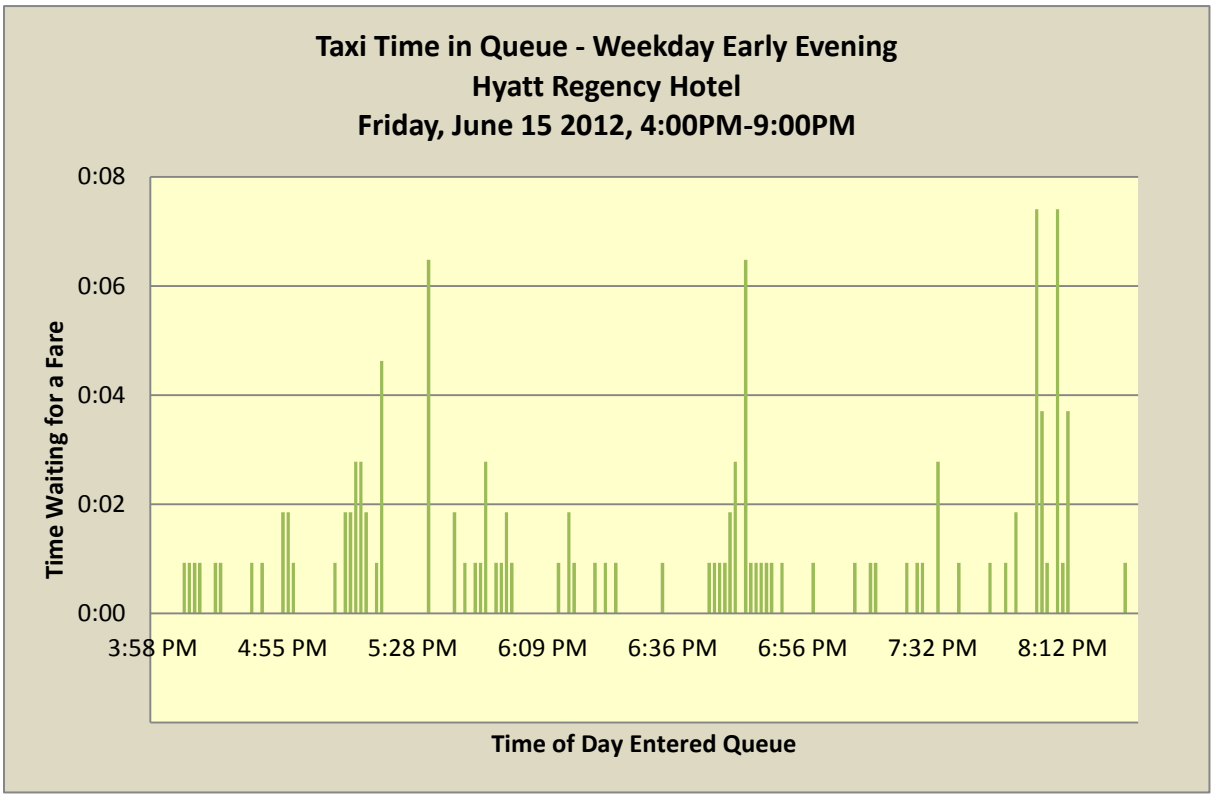


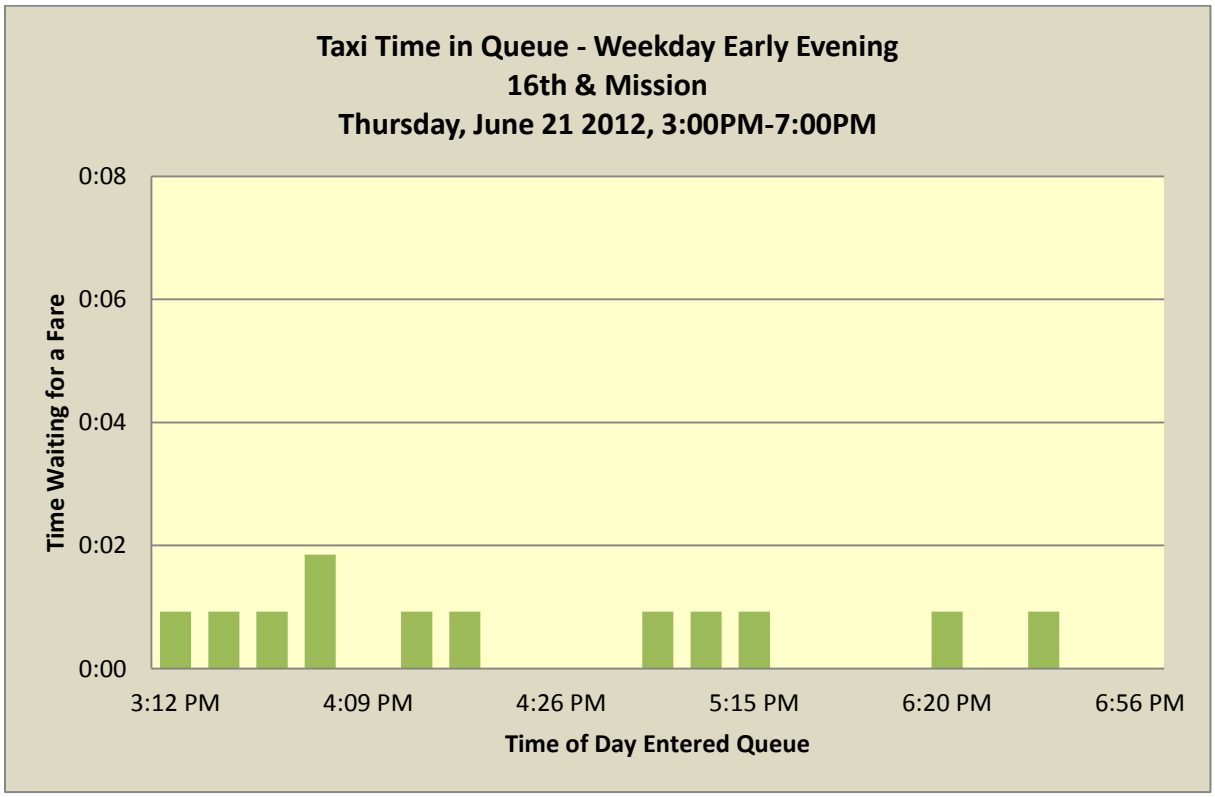

Taxi Time in Queue - Weekday Evening
Caltrain Station
Friday, June 29 2012, 4:00PM-9:00PM
Time Waiting for a Fare
0:17
0:14
0:11
0:08
0:05
0:02
0:00
3:59 PM
4:49 PM
5:34 PM
6:21 PM
6:58 PM
7:25 PM
7:57 PM
8:39 PM
Time of Day Entered Queue

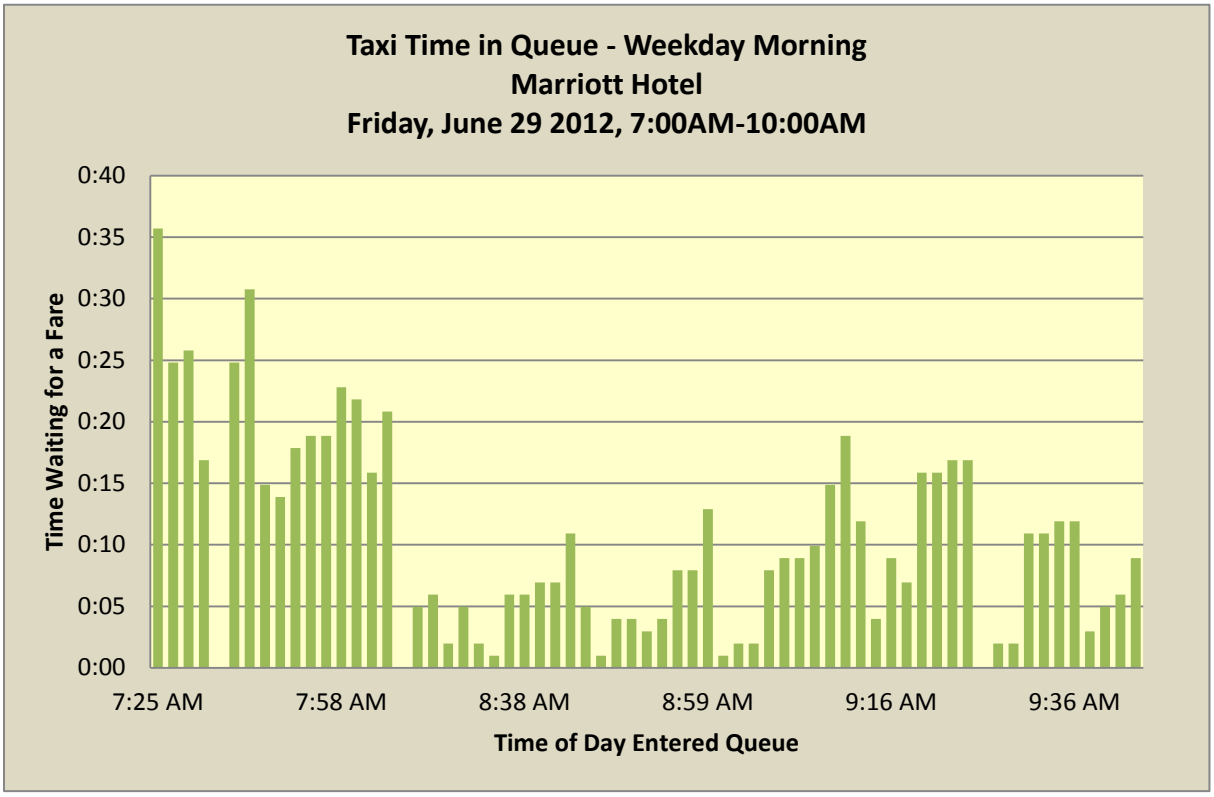

Taxi Time in Queue - Weekday Morning
Hotel Whitcomb
Friday, June 15 2012, 7:00AM-10:00AM
Time Waiting for a Fare
0:10
0:08
0:07
0:05
0:04
0:02
0:01
0:00
6:54 AM
7:41 AM
8:26 AM
8:47 AM
9:15 AM
9:30 AM
9:55 AM
Time of Day Entered Queue

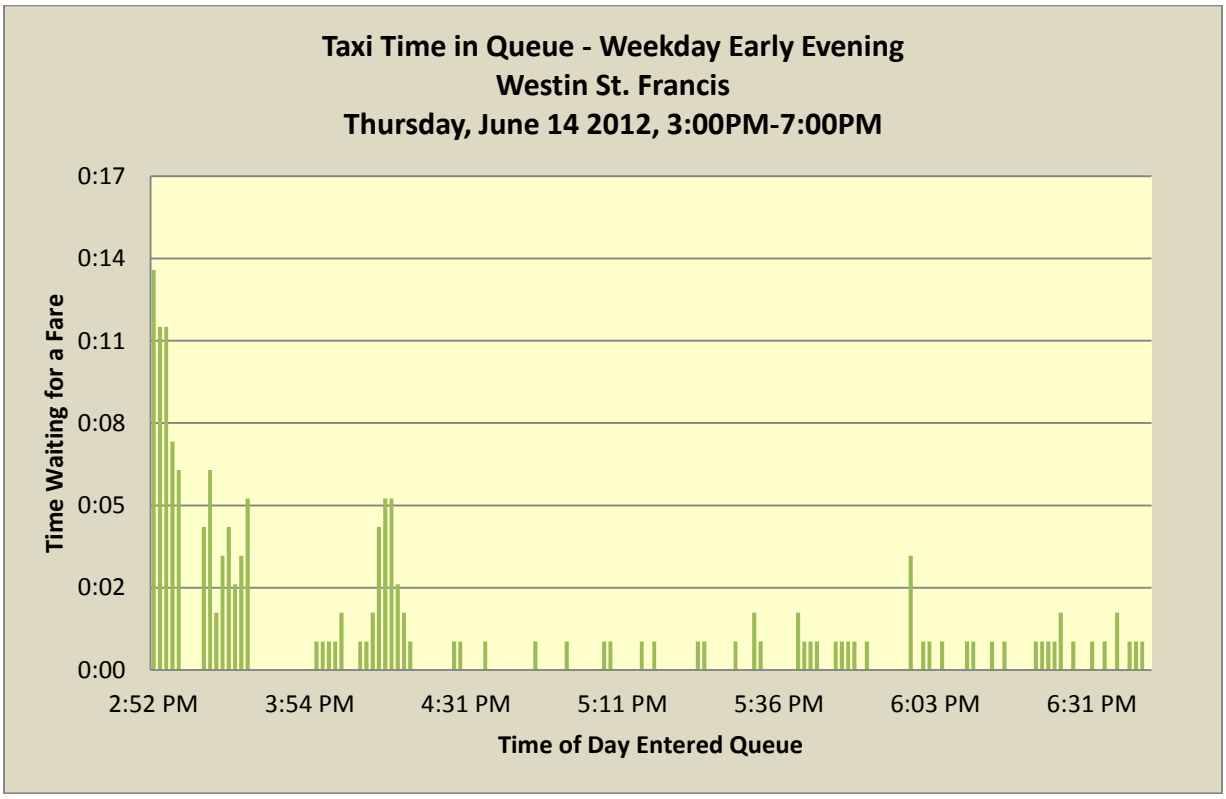

Taxi Time in Queue - Weekday Early Evening
Hotel Whitcomb
Thursday, June 28 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:08
0:06
0:04
0:02
0:00
4:00 PM
5:02 PM
5:09 PM
5:32 PM
5:51 PM
5:59 PM
6:26 PM
6:41 PM
Time of Day Entered Queue

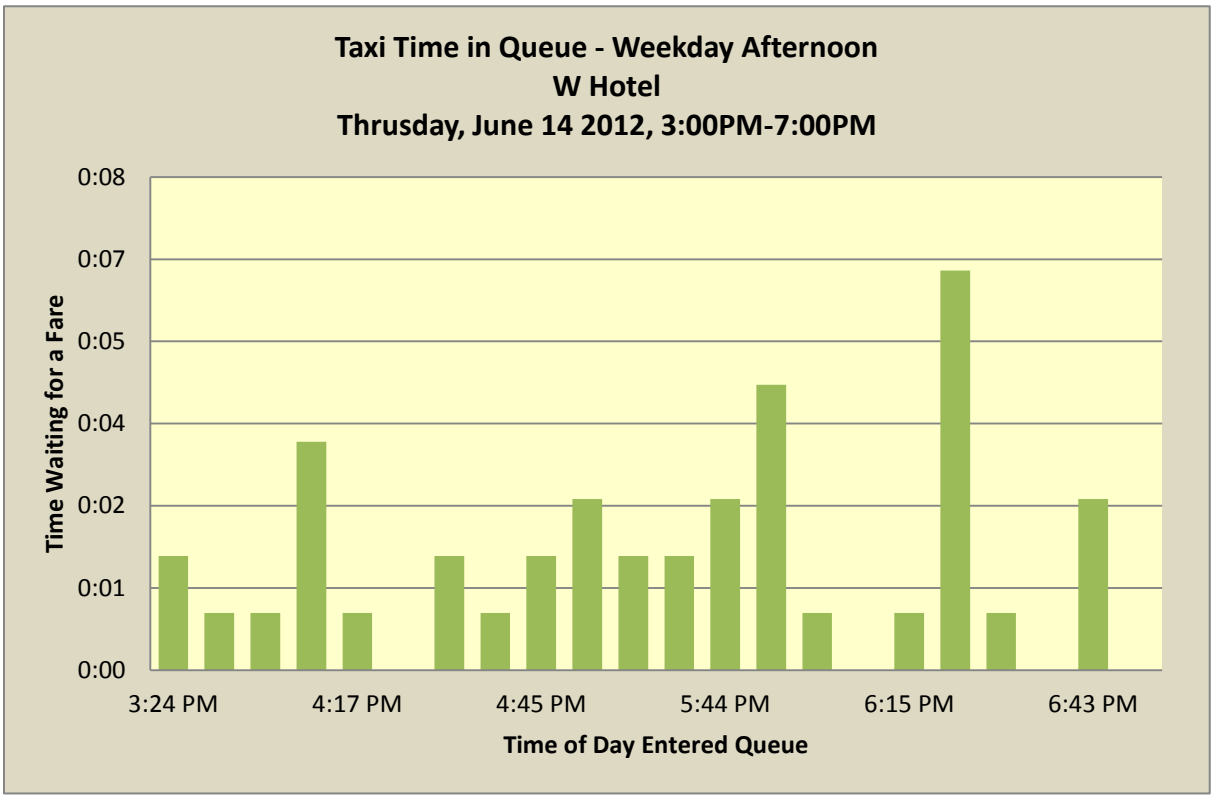

Taxi Time in Queue - Weekday Morning
Hyatt Regency Hotel
Friday, June 22 2012, 7:00AM-10:00AM
Time Waiting for a Fare
0:25
0:20
0:15
0:10
0:05
0:00
7:10 AM
7:24 AM
8:19 AM
8:41 AM
8:54 AM
9:02 AM
9:14 AM
9:32 AM
Time of Day Entered Queue

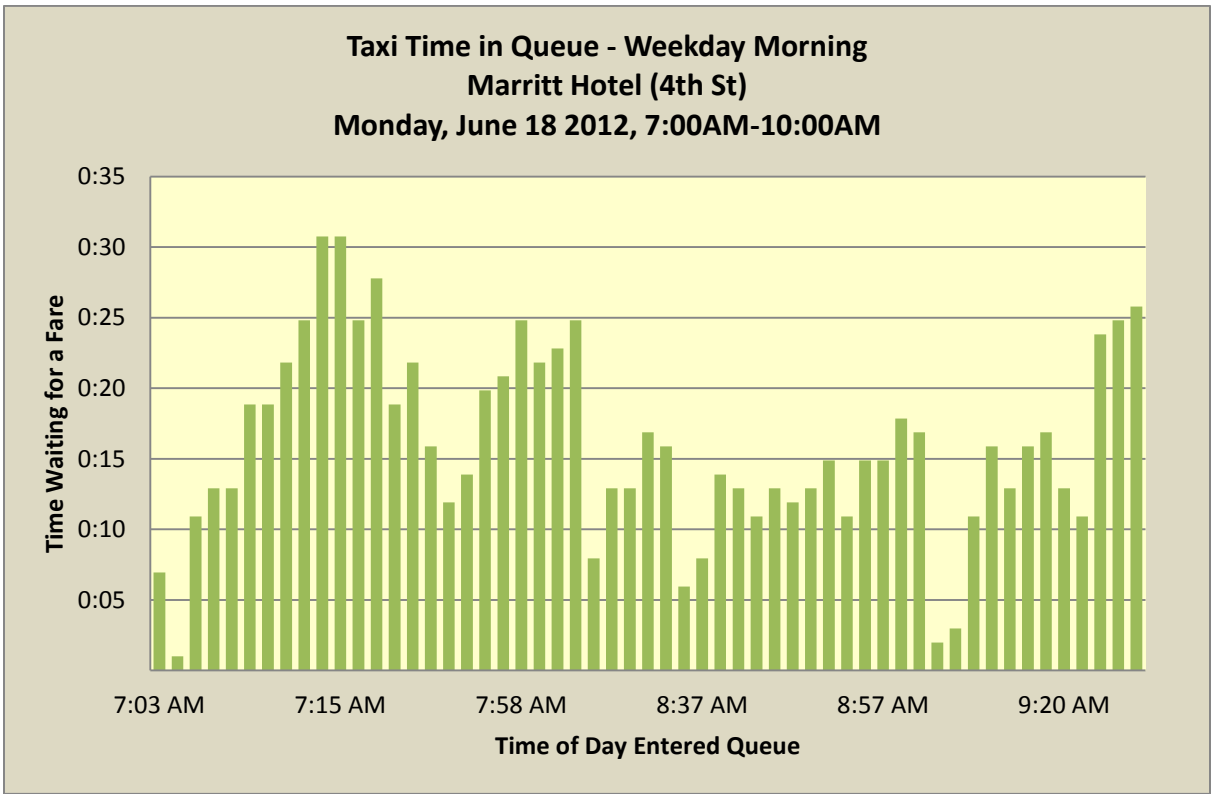

Taxi Time in Queue - Weekday Early Evening
Hyatt Regency Hotel
Friday, June 15 2012, 4:00PM-9:00PM
Time Waiting for a Fare
0:08
0:06
0:04
0:02
0:00
3:58 PM
4:55 PM
5:28 PM
6:09 PM
6:36 PM
6:56 PM
7:32 PM
8:12 PM
Time of Day Entered Queue

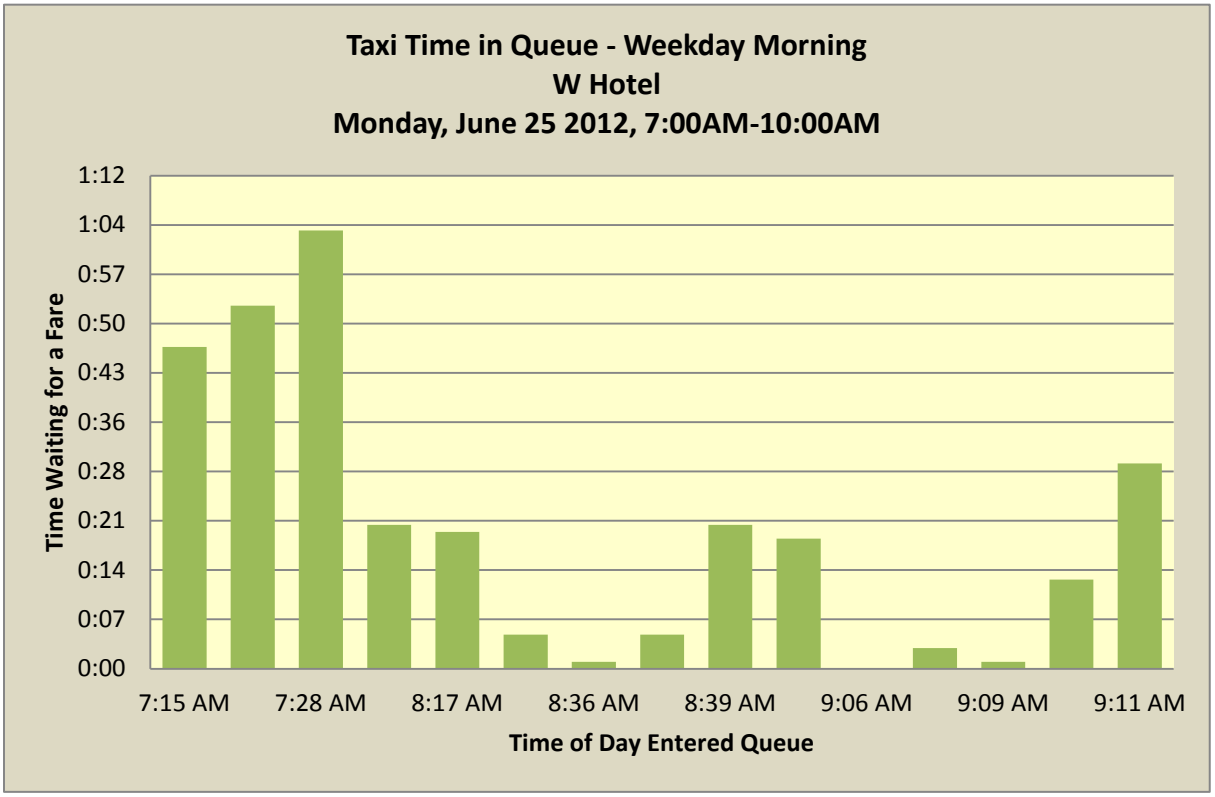

Taxi Time in Queue - Weekday Early Evening
16th & Mission
Thursday, June 21 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:08
0:06
0:04
0:02
0:00
3:12 PM
4:09 PM
4:26 PM
5:15 PM
6:20 PM
6:56 PM
Time of Day Entered Queue

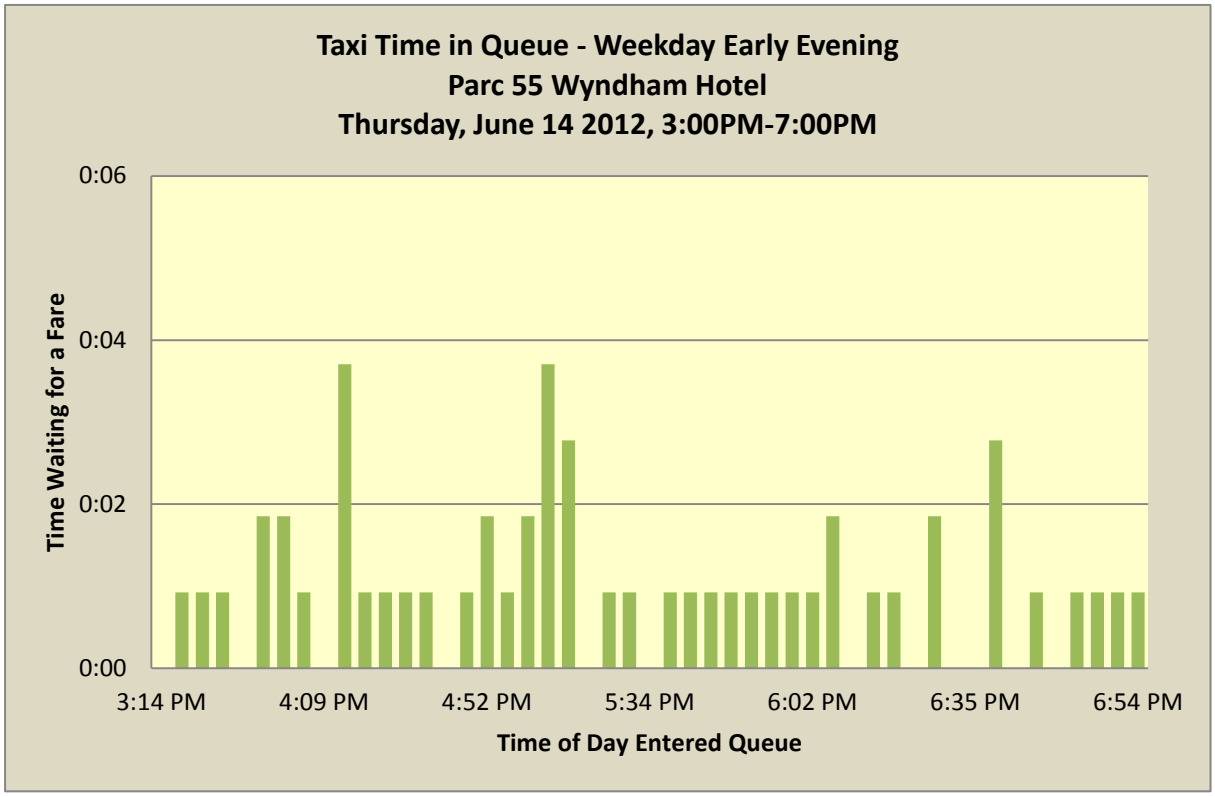

Taxi Time in Queue - Weekday Morning
Marriott Hotel
Friday, June 29 2012, 7:00AM-10:00AM
Time Waiting for a Fare
0:40
0:35
0:30
0:25
0:20
0:15
0:10
0:05
0:00
7:25 AM
7:58 AM
8:38 AM
8:59 AM
9:16 AM
9:36 AM
Time of Day Entered Queue

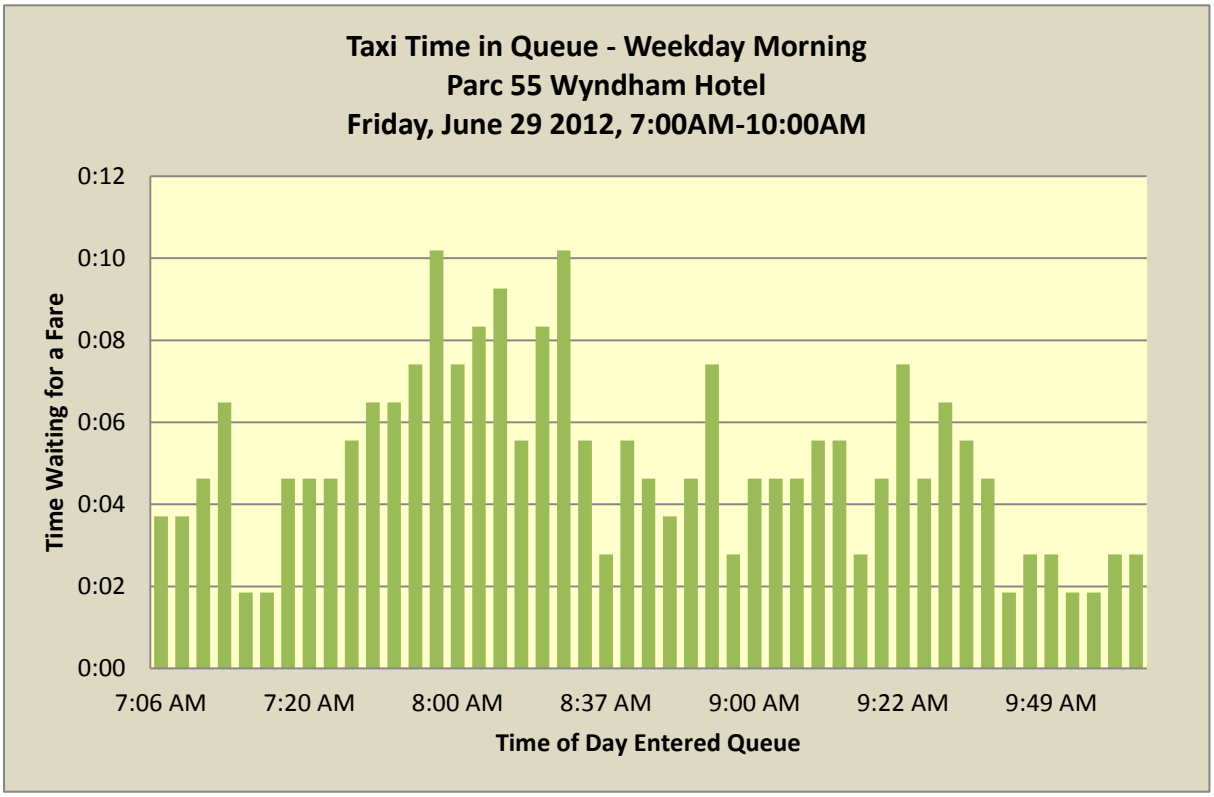

Taxi Time in Queue - Weekday Early Evening
Westin St. Francis
Thursday, June 14 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:17
0:14
0:11
0:08
0:05
0:02
0:00
2:52 PM
3:54 PM
4:31 PM
5:11 PM
5:36 PM
6:03 PM
6:31 PM
Time of Day Entered Queue

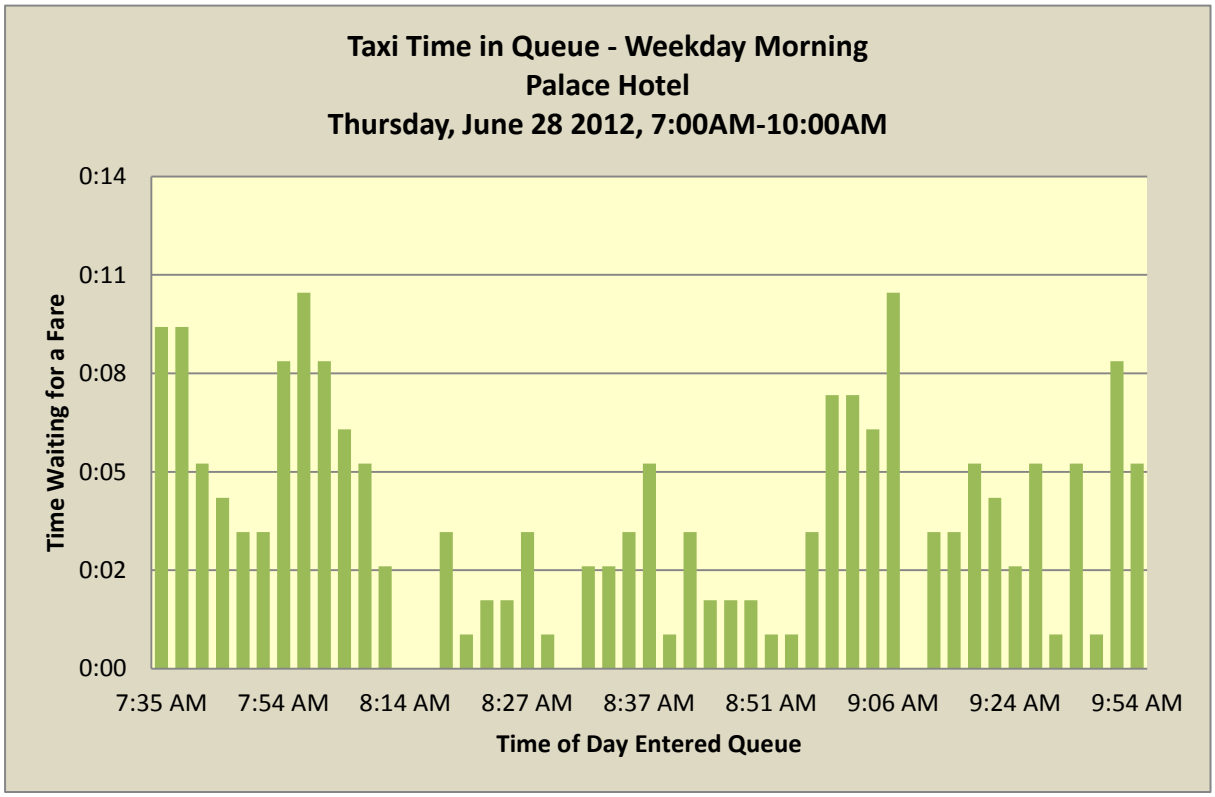

Taxi Time in Queue - Weekday Afternoon
W Hotel
Thrusday, June 14 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:08
0:07
0:05
0:04
0:02
0:01
0:00
3:24 PM
4:17 PM
4:45 PM
5:44 PM
6:15 PM
6:43 PM
Time of Day Entered Queue

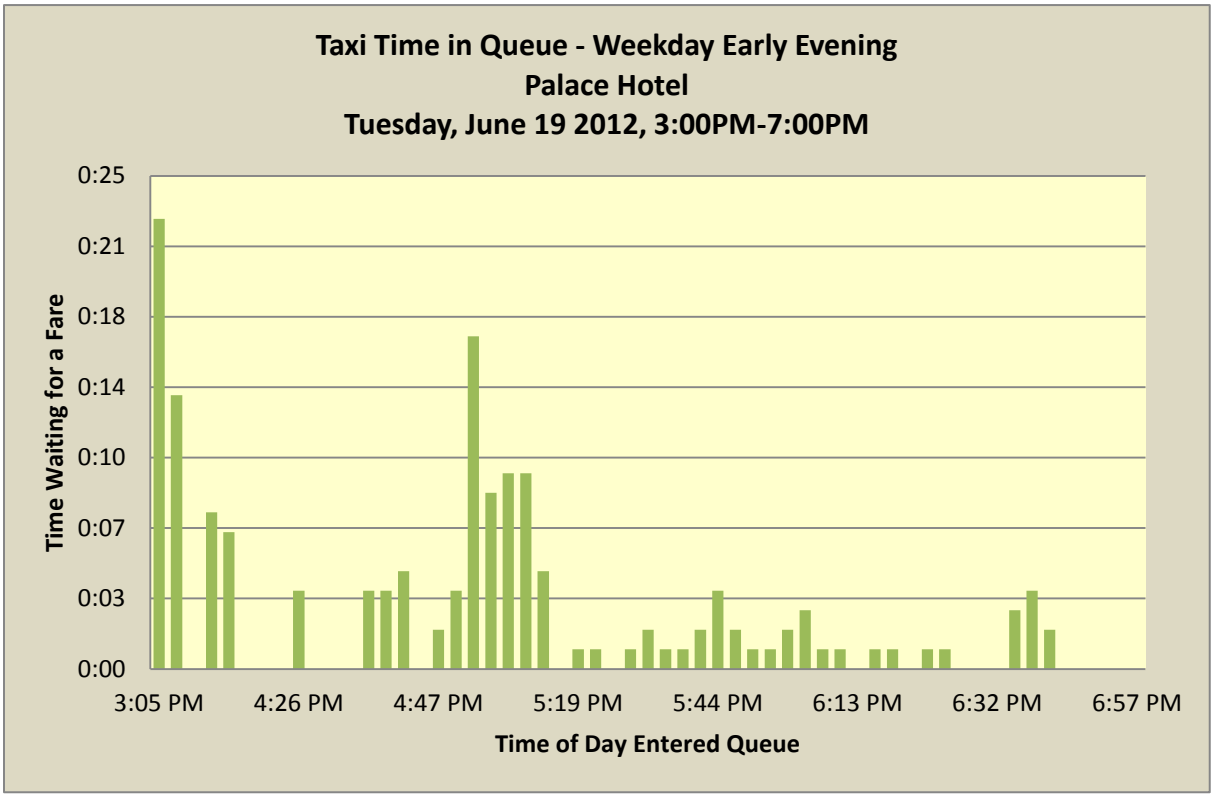

Taxi Time in Queue - Weekday Morning
Marritt Hotel (4th St)
Monday, June 18 2012, 7:00AM-10:00AM
Time Waiting for a Fare
0:35
0:30
0:25
0:20
0:15
0:10
0:05
7:03 AM
7:15 AM
7:58 AM
8:37 AM
8:57 AM
9:20 AM
Time of Day Entered Queue

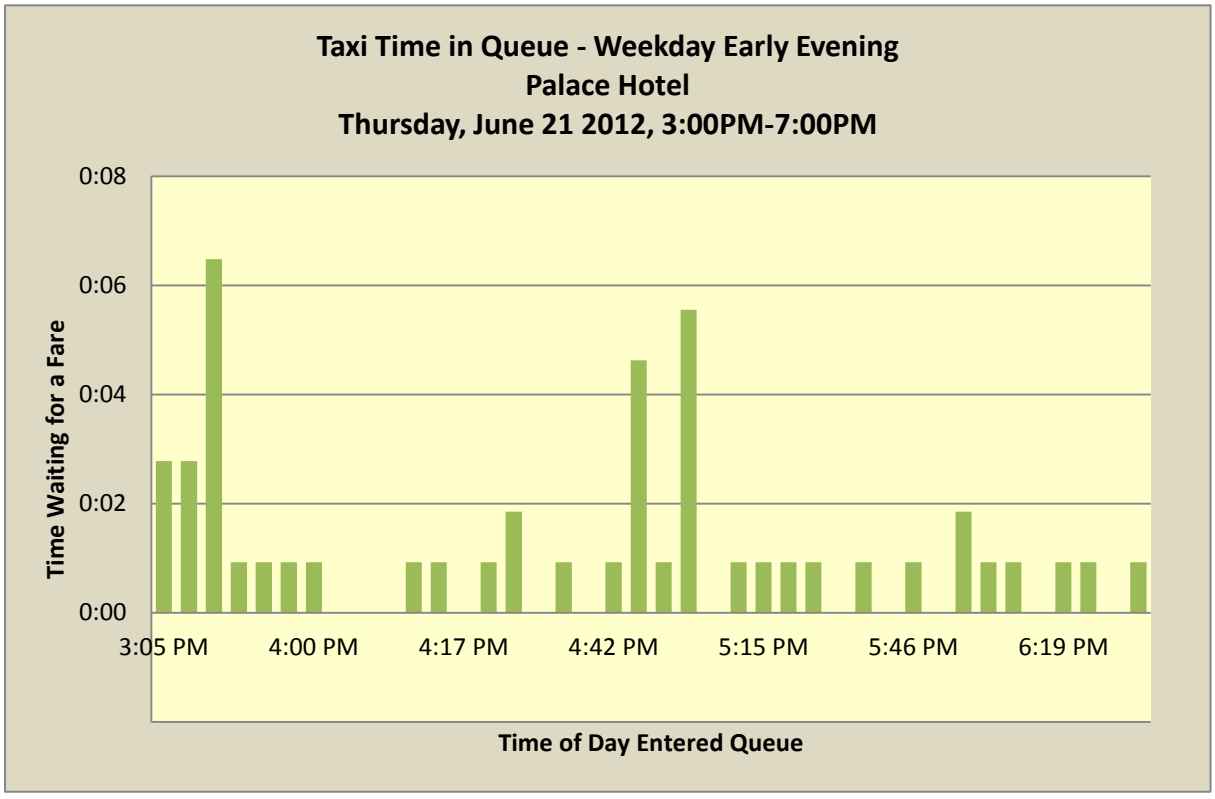

Taxi Time in Queue - Weekday Morning
W Hotel
Monday, June 25 2012, 7:00AM-10:00AM
Time Waiting for a Fare
1:12
1:04
0:57
0:50
0:43
0:36
0:28
0:21
0:14
0:07
0:00
7:15 AM
7:28 AM
8:17 AM
8:36 AM
8:39 AM
9:06 AM
9:09 AM
9:11 AM
Time of Day Entered Queue

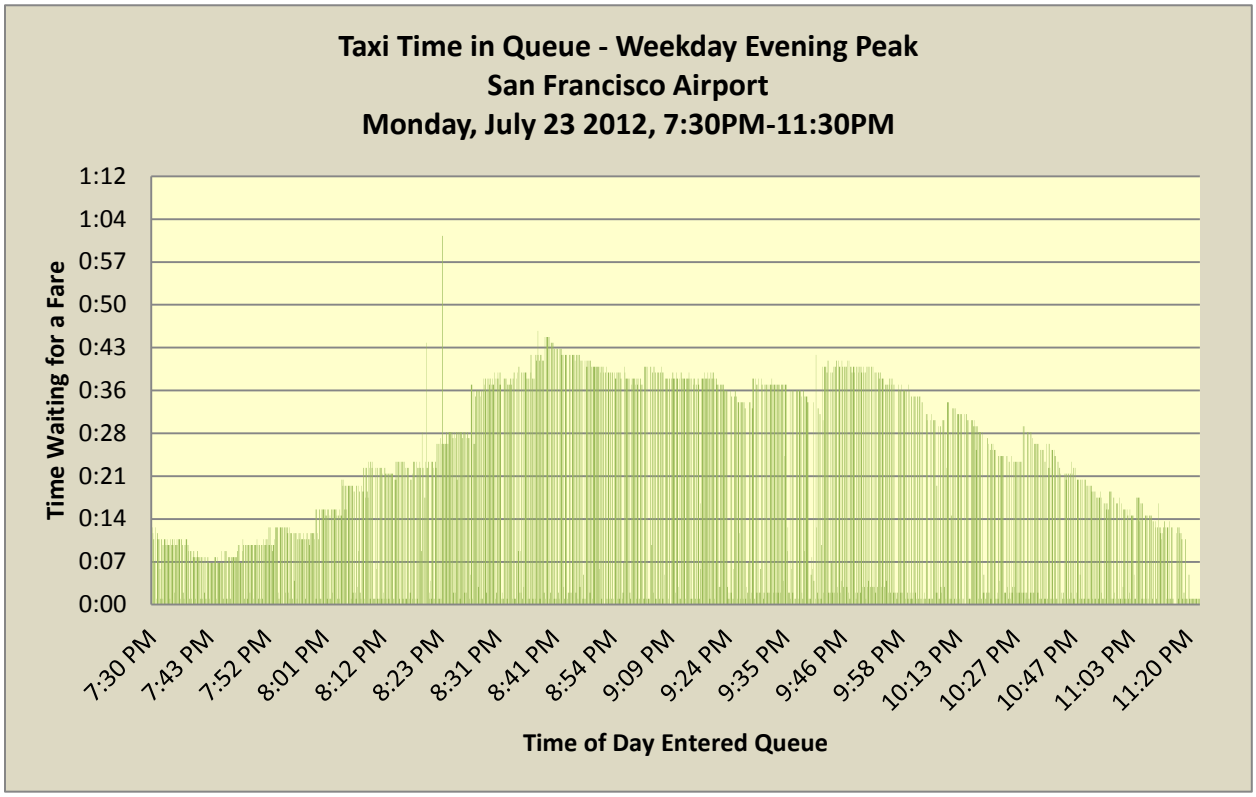

Taxi Time in Queue - Weekday Early Evening
Parc 55 Wyndham Hotel
Thursday, June 14 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:06
0:04
0:02
0:00
3:14 PM
4:09 PM
4:52 PM
5:34 PM
6:02 PM
6:35 PM
6:54 PM
Time of Day Entered Queue

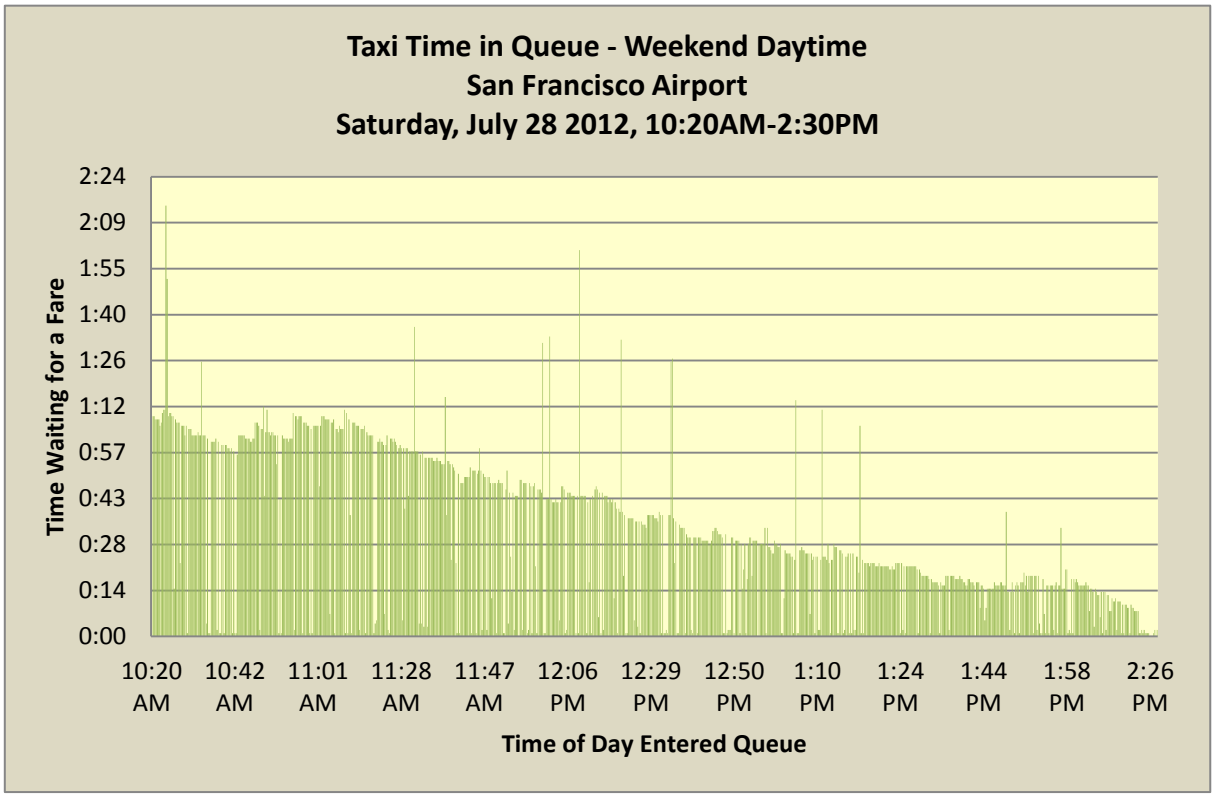

Taxi Time in Queue - Weekday Morning
Parc 55 Wyndham Hotel
Friday, June 29 2012, 7:00AM-10:00AM
Time Waiting for a Fare
0:12
0:10
0:08
0:06
0:04
0:02
0:00
7:06 AM
7:20 AM
8:00 AM
8:37 AM
9:00 AM
9:22 AM
9:49 AM
Time of Day Entered Queue

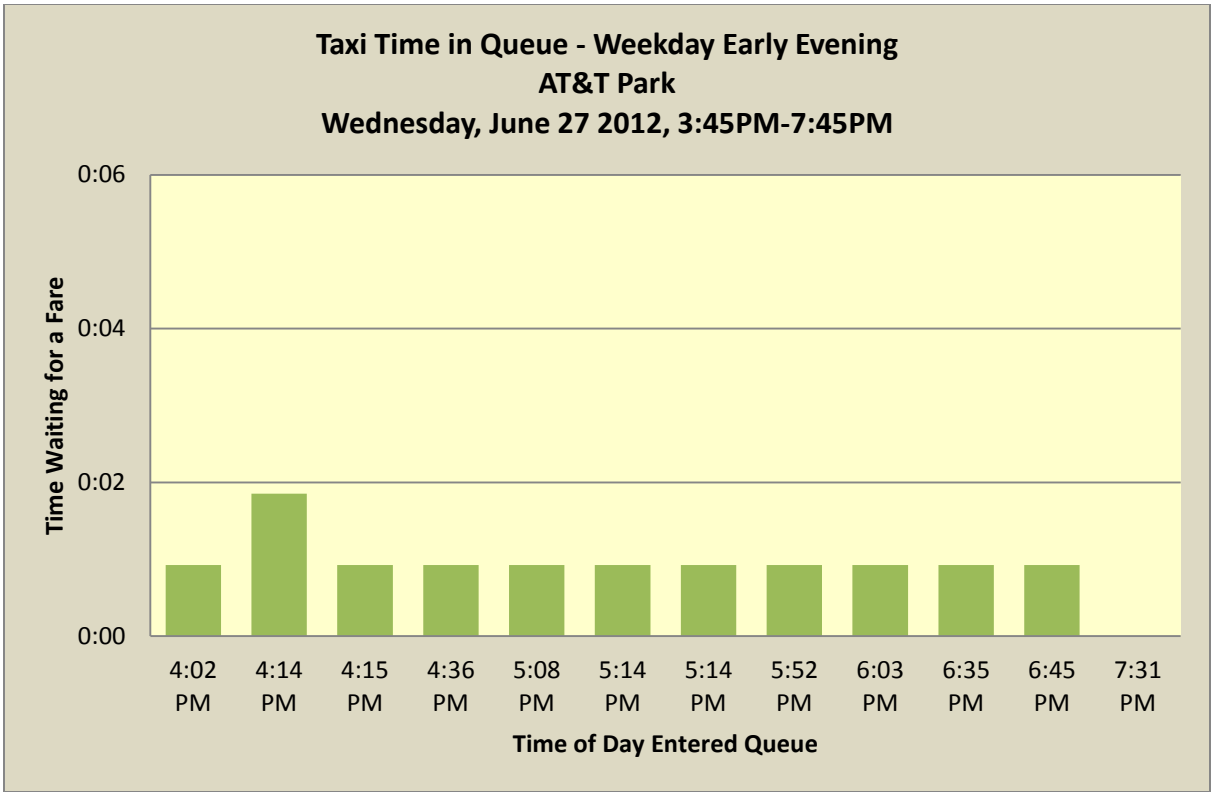

Taxi Time in Queue - Weekday Morning
Palace Hotel
Thursday, June 28 2012, 7:00AM-10:00AM
Time Waiting for a Fare
0:14
0:11
0:08
0:05
0:02
0:00
7:35 AM
7:54 AM
8:14 AM
8:27 AM
8:37 AM
8:51 AM
9:06 AM
9:24 AM
9:54 AM
Time of Day Entered Queue

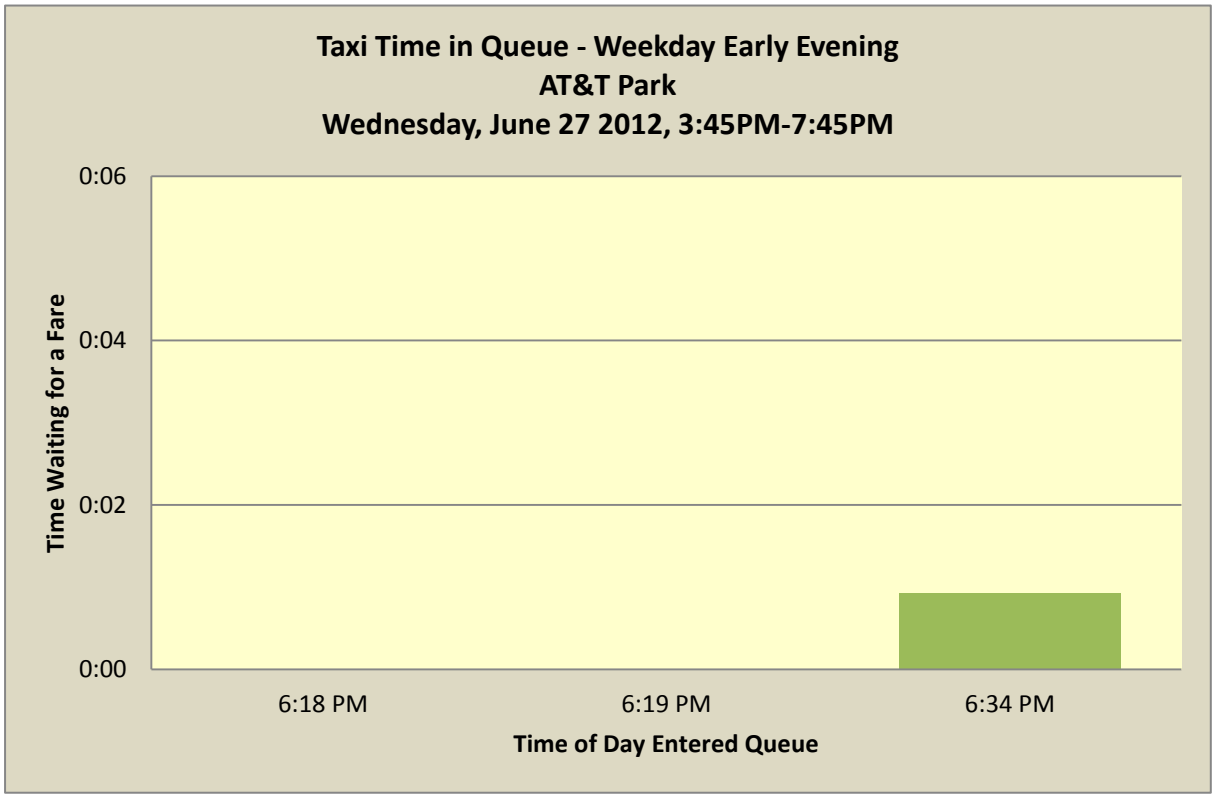

Taxi Time in Queue - Weekday Early Evening
Palace Hotel
Tuesday, June 19 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:25
0:21
0:18
0:14
0:10
0:07
0:03
0:00
3:05 PM
4:26 PM
4:47 PM
5:19 PM
5:44 PM
6:13 PM
6:32 PM
6:57 PM
Time of Day Entered Queue

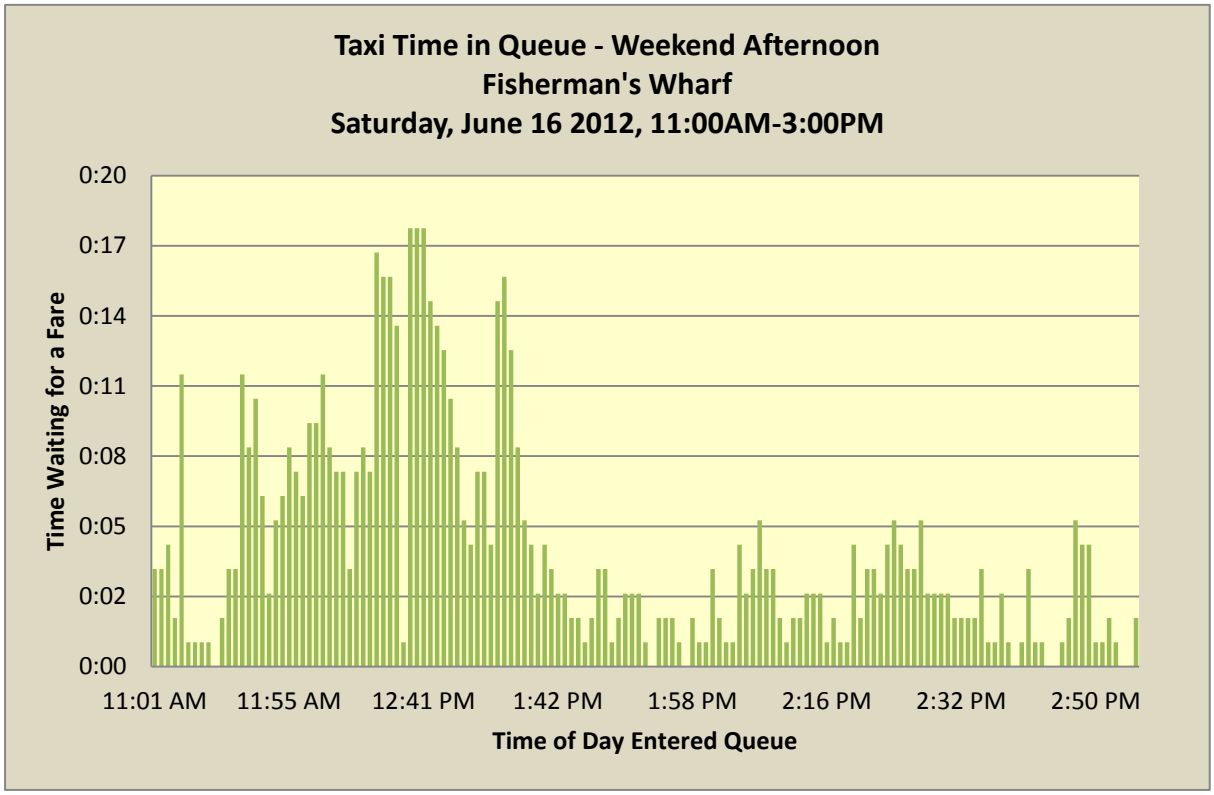

Taxi Time in Queue - Weekday Early Evening
Palace Hotel
Thursday, June 21 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:08
0:06
0:04
0:02
0:00
3:05 PM
4:00 PM
4:17 PM
4:42 PM
5:15 PM
5:46 PM
6:19 PM
Time of Day Entered Queue

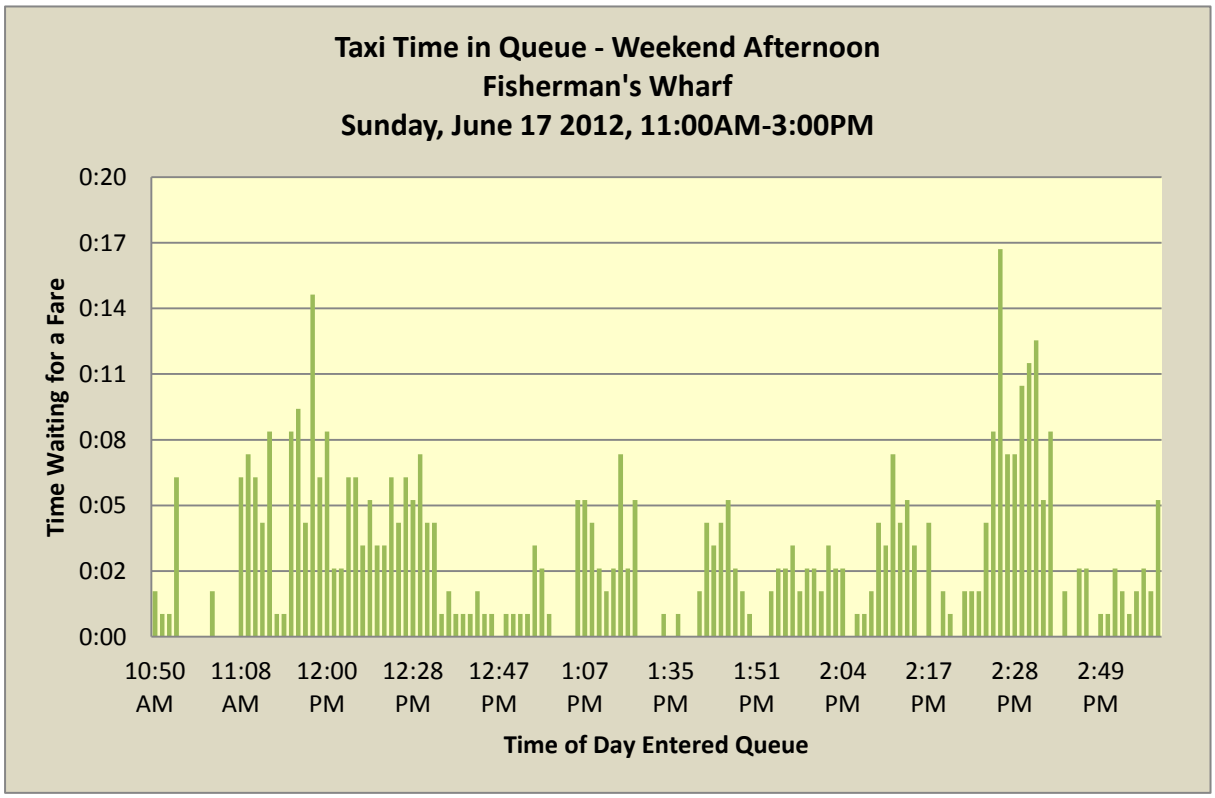

Taxi Time in Queue - Weekday Evening Peak
San Francisco Airport
Monday, July 23 2012, 7:30PM-11:30PM
Time Waiting for a Fare
1:12
1:04
0:57
0:50
0:43
0:36
0:28
0:21
0:14
0:07
0:00
7:30 PM
7:43 PM
7:52 PM
8:01 PM
8:12 PM
8:23 PM
8:31 PM
8:41 PM
8:54 PM
9:09 PM
9:24 PM
9:35 PM
9:46 PM
9:58 PM
10:13 PM
10:27 PM
10:47 PM
11:03 PM
11:20 PM
Time of Day Entered Queue

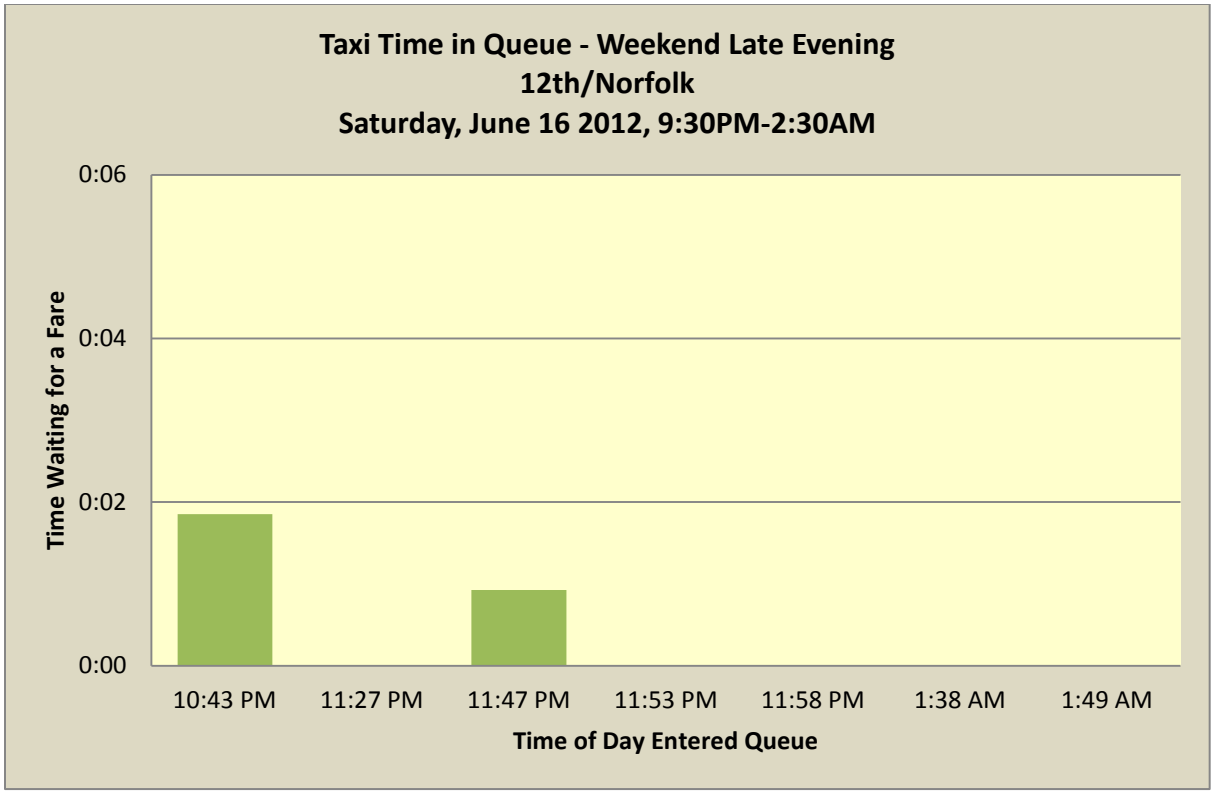

Taxi Time in Queue - Weekend Daytime
San Francisco Airport
Saturday, July 28 2012, 10:20AM-2:30PM
Time Waiting for a Fare
2:24
2:09
1:55
1:40
1:26
1:12
0:57
0:43
0:28
0:14
0:00
10:20 AM
10:42 AM
11:01 AM
11:28 AM
11:47 AM
12:06 PM
12:29 PM
12:50 PM
1:10 PM
1:24 PM
1:44 PM
1:58 PM
2:26 PM
Time of Day Entered Queue

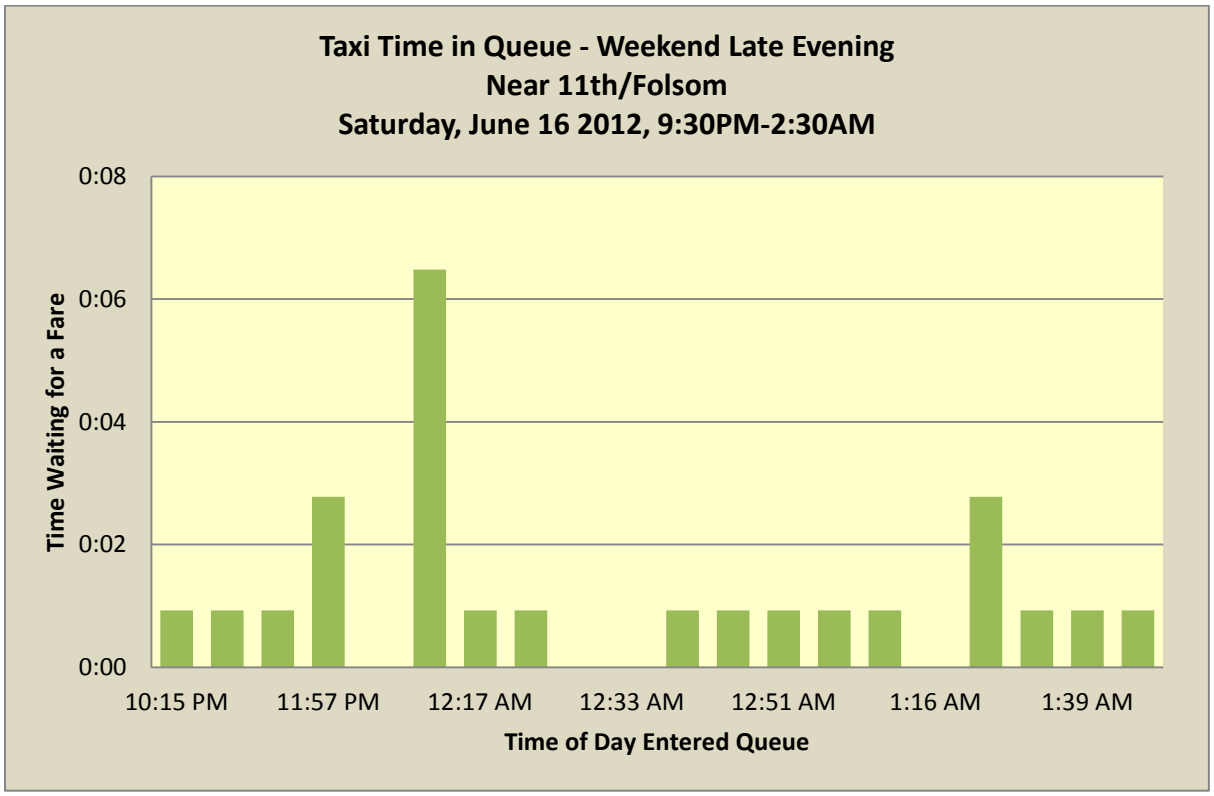

Taxi Time in Queue - Weekday Early Evening
AT&T Park
Wednesday, June 27 2012, 3:45PM-7:45PM
Time Waiting for a Fare
0:06
0:04
0:02
0:00
4:02 PM
4:14 PM
4:15 PM
4:36 PM
5:08 PM
5:14 PM
5:14 PM
5:52 PM
6:03 PM
6:35 PM
6:45 PM
7:31 PM
Time of Day Entered Queue

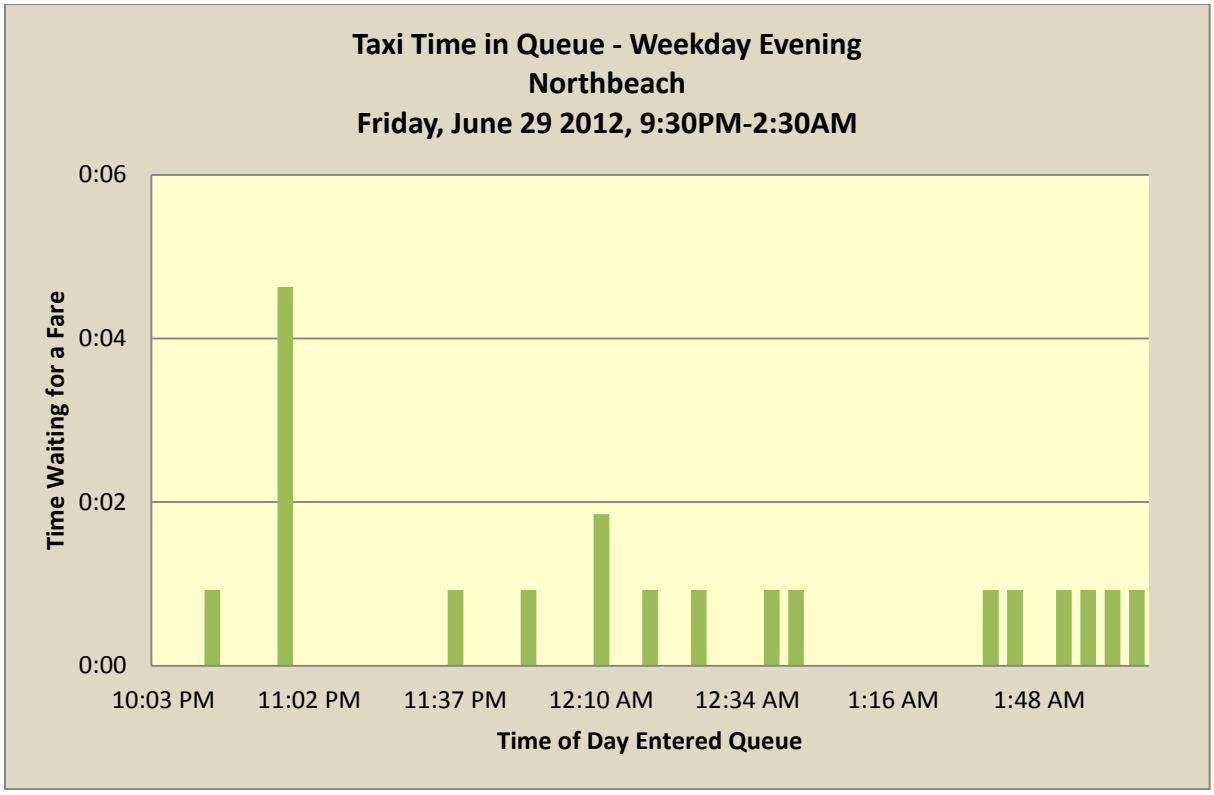

Taxi Time in Queue - Weekday Early Evening
AT&T Park
Wednesday, June 27 2012, 3:45PM-7:45PM
Time Waiting for a Fare
0:06
0:04
0:02
0:00
6:18 PM
6:19 PM
6:34 PM
Time of Day Entered Queue

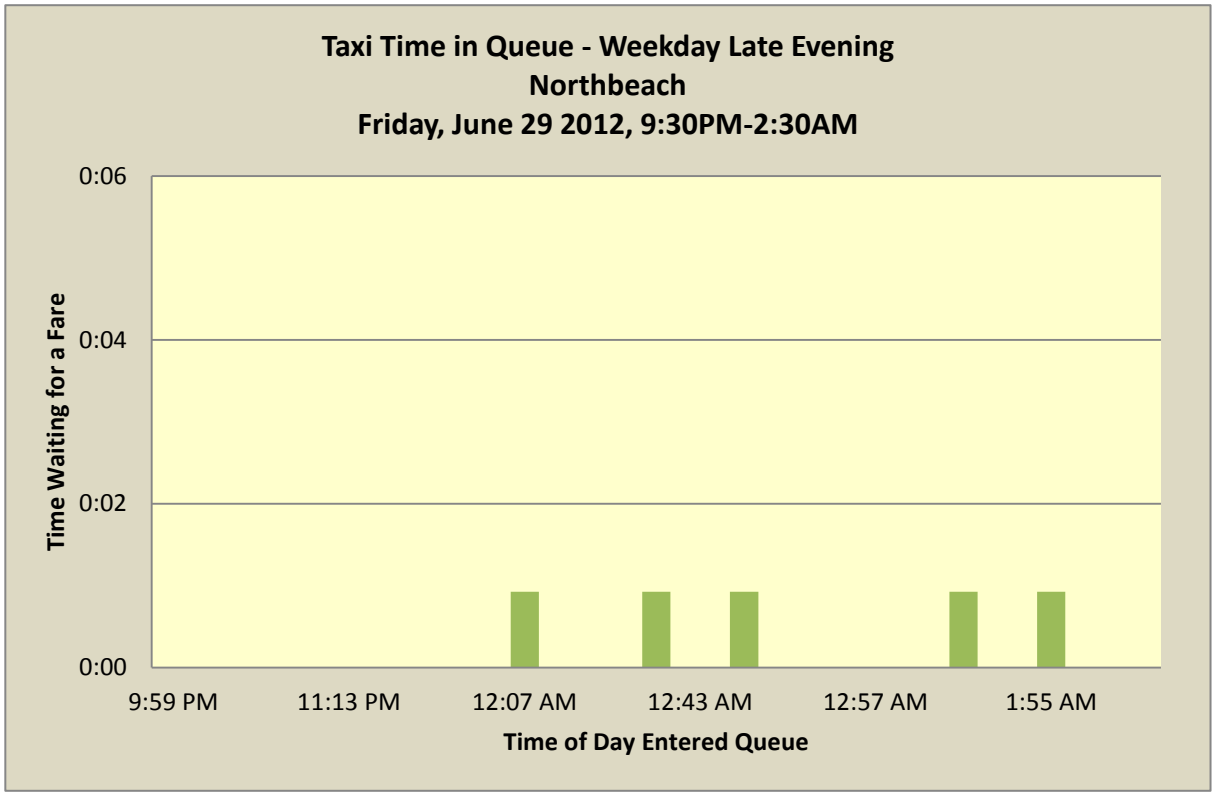

Taxi Time in Queue - Weekend Afternoon
Fisherman's Wharf
Saturday, June 16 2012, 11:00AM-3:00PM
Time Waiting for a Fare
0:20
0:17
0:14
0:11
0:08
0:05
0:02
0:00
11:01 AM
11:55 AM
12:41 PM
1:42 PM
1:58 PM
2:16 PM
2:32 PM
2:50 PM
Time of Day Entered Queue

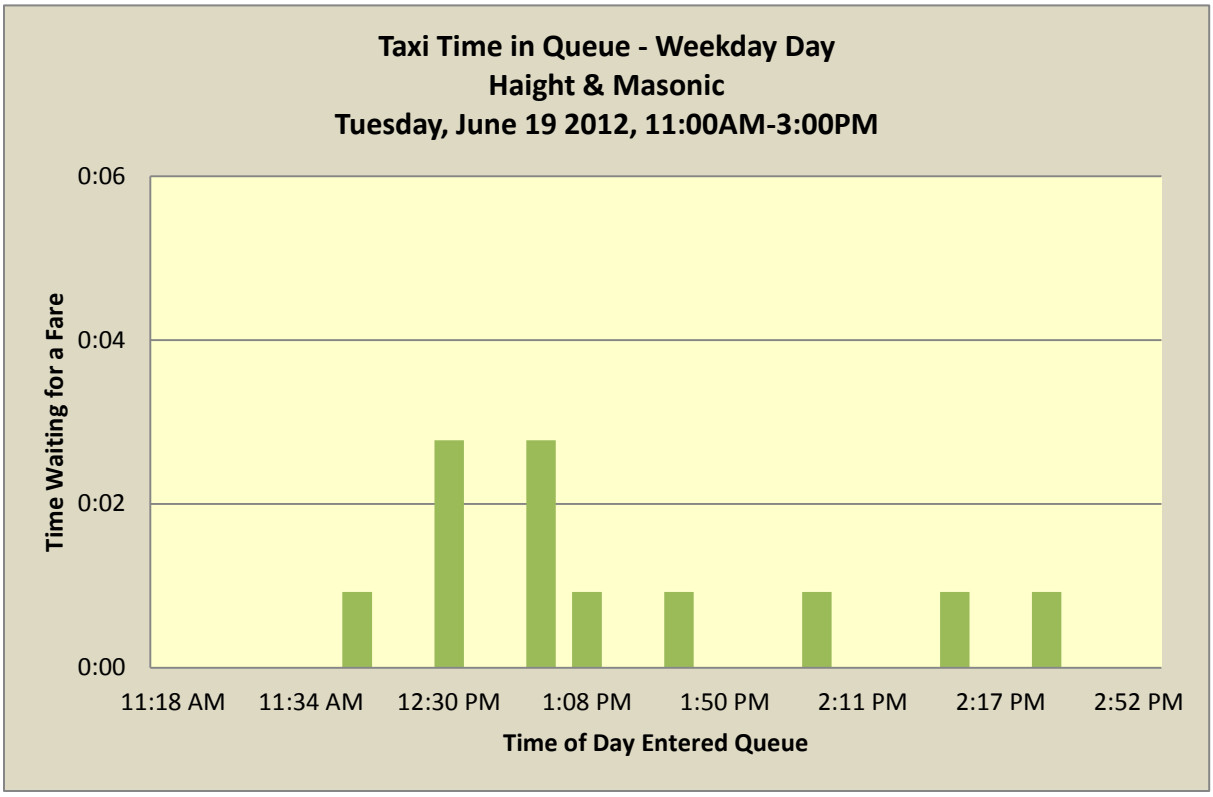

Taxi Time in Queue - Weekend Afternoon
Fisherman's Wharf
Sunday, June 17 2012, 11:00AM-3:00PM
Time Waiting for a Fare
0:20
0:17
0:14
0:11
0:08
0:05
0:02
0:00
10:50 AM
11:08 AM
12:00 PM
12:28 PM
12:47 PM
1:07 PM
1:35 PM
1:51 PM
2:04 PM
2:17 PM
2:28 PM
2:49 PM
Time of Day Entered Queue

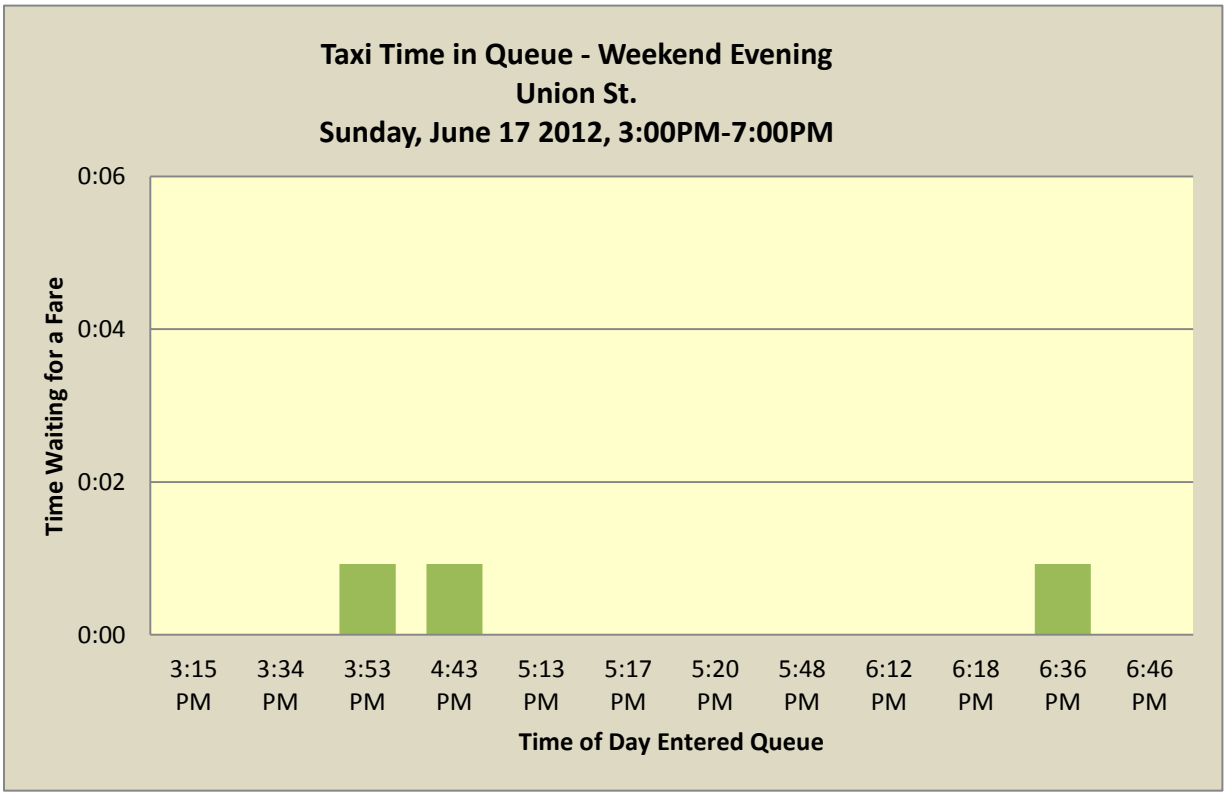

Taxi Time in Queue - Weekend Late Evening
12th/Norfolk
Saturday, June 16 2012, 9:30PM-2:30AM
Time Waiting for a Fare
0:06
0:04
0:02
0:00
10:43 PM
11:27 PM
11:47 PM
11:53 PM
11:58 PM
1:38 AM
1:49 AM
Time of Day Entered Queue

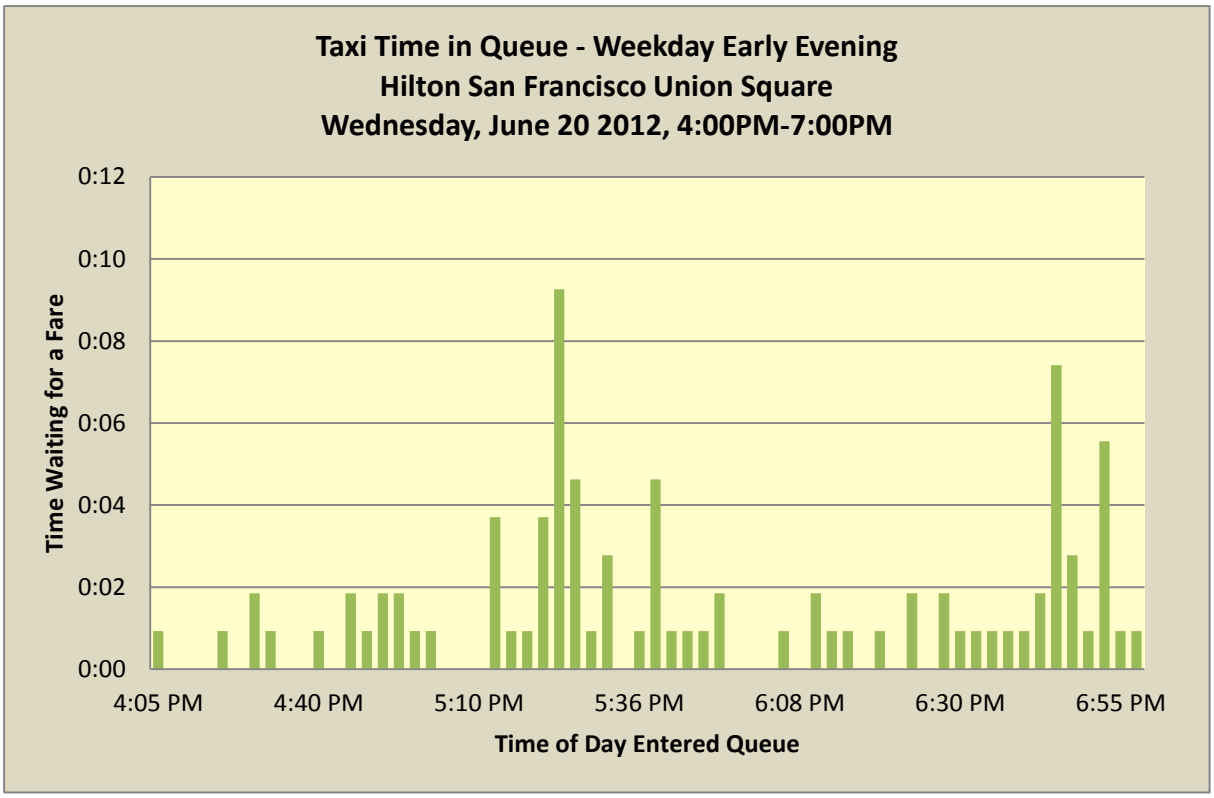

Taxi Time in Queue - Weekend Late Evening
Near 11th/Folsom
Saturday, June 16 2012, 9:30PM-2:30AM
Time Waiting for a Fare
0:08
0:06
0:04
0:02
0:00
10:15 PM
11:57 PM
12:17 AM
12:33 AM
12:51 AM
1:16 AM
1:39 AM
Time of Day Entered Queue

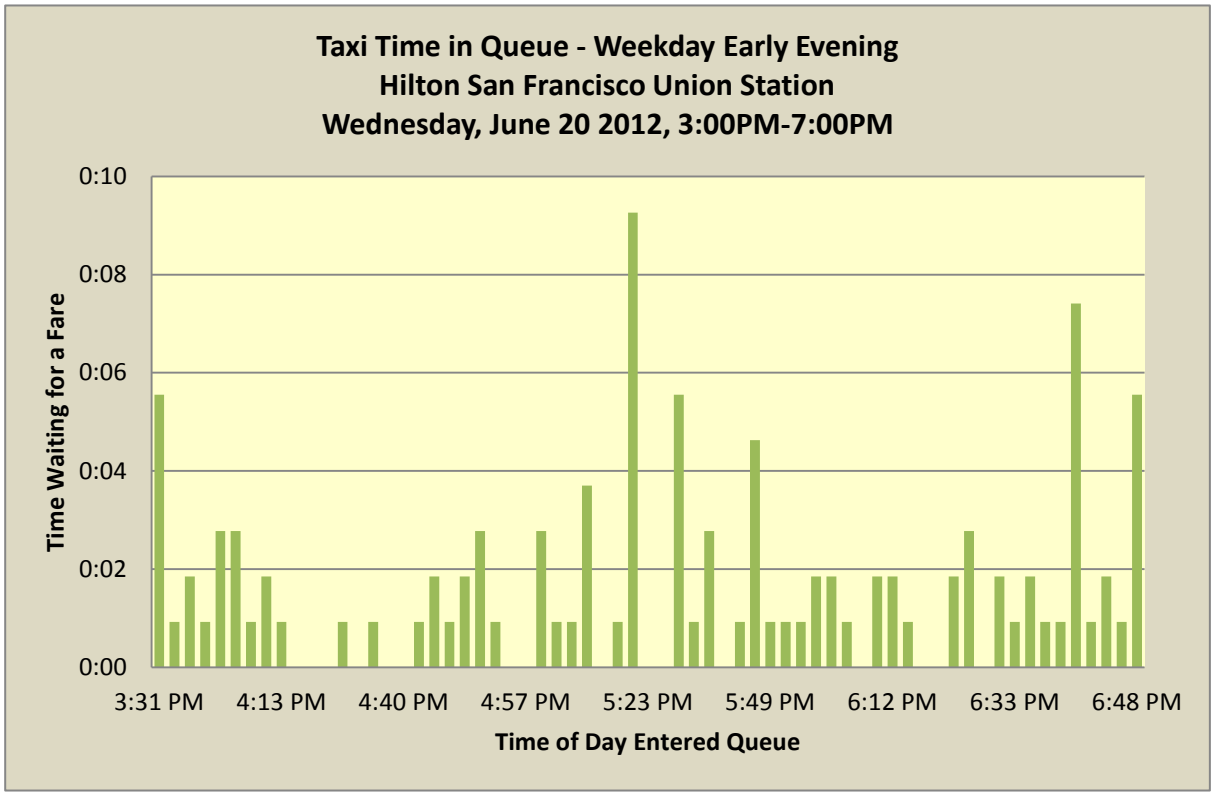

Taxi Time in Queue - Weekday Evening
Northbeach
Friday, June 29 2012, 9:30PM-2:30AM
0:06
0:04
0:02
0:00
Time Waiting for a Fare
10:03 PM
11:02 PM
11:37 PM
12:10 AM
12:34 AM
1:16 AM
1:48 AM
Time of Day Entered Queue

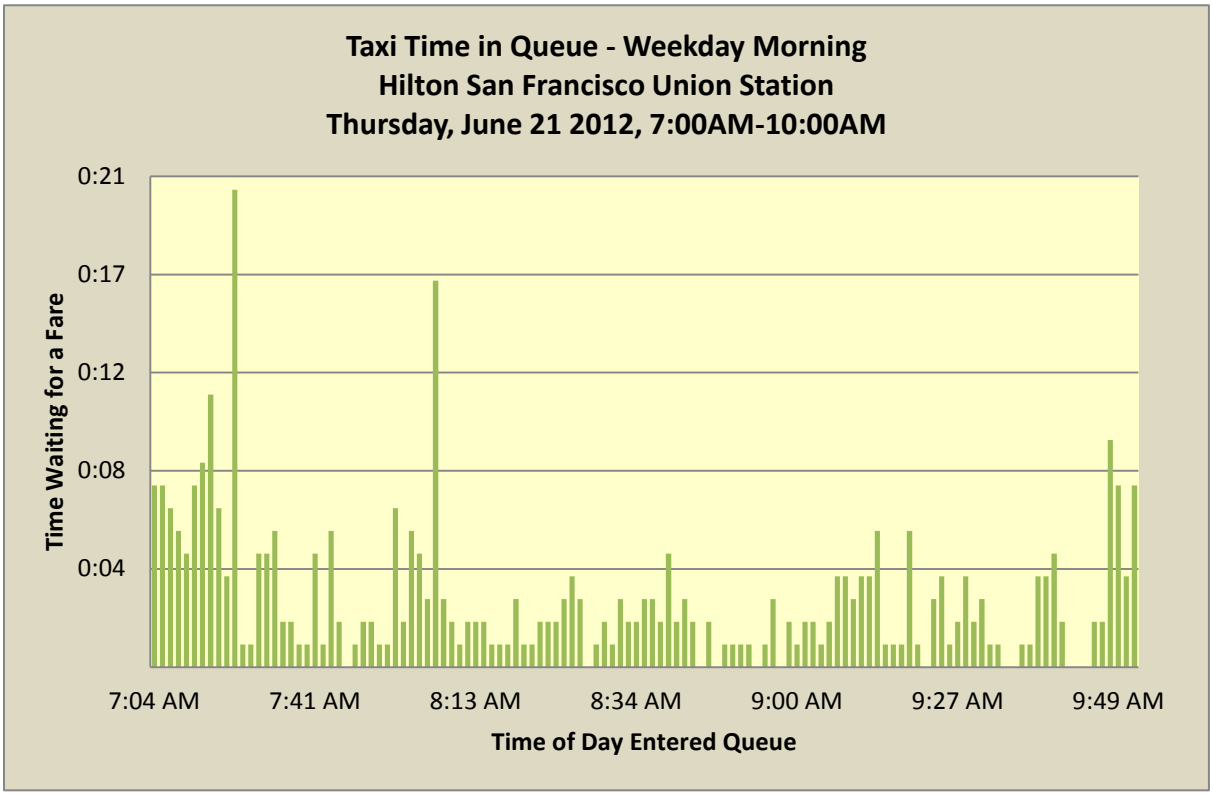

Taxi Time in Queue - Weekday Late Evening
Northbeach
Friday, June 29 2012, 9:30PM-2:30AM
0:06
0:04
0:02
0:00
Time Waiting for a Fare
9:59 PM
11:13 PM
12:07 AM
12:43 AM
12:57 AM
1:55 AM
Time of Day Entered Queue


Taxi Time in Queue - Weekday Day
Haight & Masonic
Tuesday, June 19 2012, 11:00AM-3:00PM
0:06
0:04
0:02
0:00
Time Waiting for a Fare
11:18 AM
11:34 AM
12:30 PM
1:08 PM
1:50 PM
2:11 PM
2:17 PM
2:52 PM
Time of Day Entered Queue


Taxi Time in Queue - Weekend Evening
Union St.
Sunday, June 17 2012, 3:00PM-7:00PM
0:06
0:04
0:02
0:00
Time Waiting for a Fare
3:15 PM
3:34 PM
3:53 PM
4:43 PM
5:13 PM
5:17 PM
5:20 PM
5:48 PM
6:12 PM
6:18 PM
6:36 PM
6:46 PM
Time of Day Entered Queue


Taxi Time in Queue - Weekday Early Evening
Hilton San Francisco Union Square
Wednesday, June 20 2012, 4:00PM-7:00PM
Time Waiting for a Fare
0:12
0:10
0:08
0:06
0:04
0:02
0:00
4:05 PM
4:40 PM
5:10 PM
5:36 PM
6:08 PM
6:30 PM
6:55 PM
Time of Day Entered Queue


Taxi Time in Queue - Weekday Early Evening
Hilton San Francisco Union Station
Wednesday, June 20 2012, 3:00PM-7:00PM
Time Waiting for a Fare
0:10
0:08
0:06
0:04
0:02
0:00
3:31 PM
4:13 PM
4:40 PM
4:57 PM
5:23 PM
5:49 PM
6:12 PM
6:33 PM
6:48 PM
Time of Day Entered Queue


Taxi Time in Queue - Weekday Morning
Hilton San Francisco Union Station
Thursday, June 21 2012, 7:00AM-10:00AM
Time Waiting for a Fare
0:21
0:17
0:12
0:08
0:04
7:04 AM
7:41 AM
8:13 AM
8:34 AM
9:00 AM
9:27 AM
9:49 AM
Time of Day Entered Queue

Appendix C
Practice and Experience in Five Peer Cities

Appendix C
Practice and Experience in Five Peer Cities

Five cities were selected to be comparable to San Francisco in terms geography, population, size of transit system, and level of tourism. They were:

- **Boston.** Boston has a comparable small land area and population to San Francisco, and is the middle of a larger urban conglomerate. It is also a leader in technology adoption and performance reporting, and auctions medallions.
- **Seattle.** Seattle has comparable land area as well as matching in other areas. It also has a long history of reform and is currently a limited medallion regime where taxi numbers are managed.
- **San Diego.** In addition to being a good match in other respects, San Diego shares the state of California legislative regime, including state regulation of limousines. It is a closer peer than Los Angeles – which operates a relatively unique taxi franchise system.
- **Miami.** Miami shares the small land area of San Francisco. Although its population is smaller, it is also the center of a larger urban conglomerate and a center for visitors. Miami has a long history of regulatory reform and recently underwent a governance review.
- **New Orleans.** Similarities in restricted area, tourism levels, and coastal. Has also undertaken recent research work and review itself.

This appendix reports their experience on the management of medallions and related issues. It represents a consolidation of research from public sources, and information gathered with the kind cooperation of the regulators in each jurisdiction. Comparative analysis on other areas of will appear in future reports of the *Best Practices Studies in Taxi Regulation* series.

The appendix begins with a comparative description, followed by fact sheets on each jurisdiction.

THE PEER CITIES: BASIC DIFFERENCES

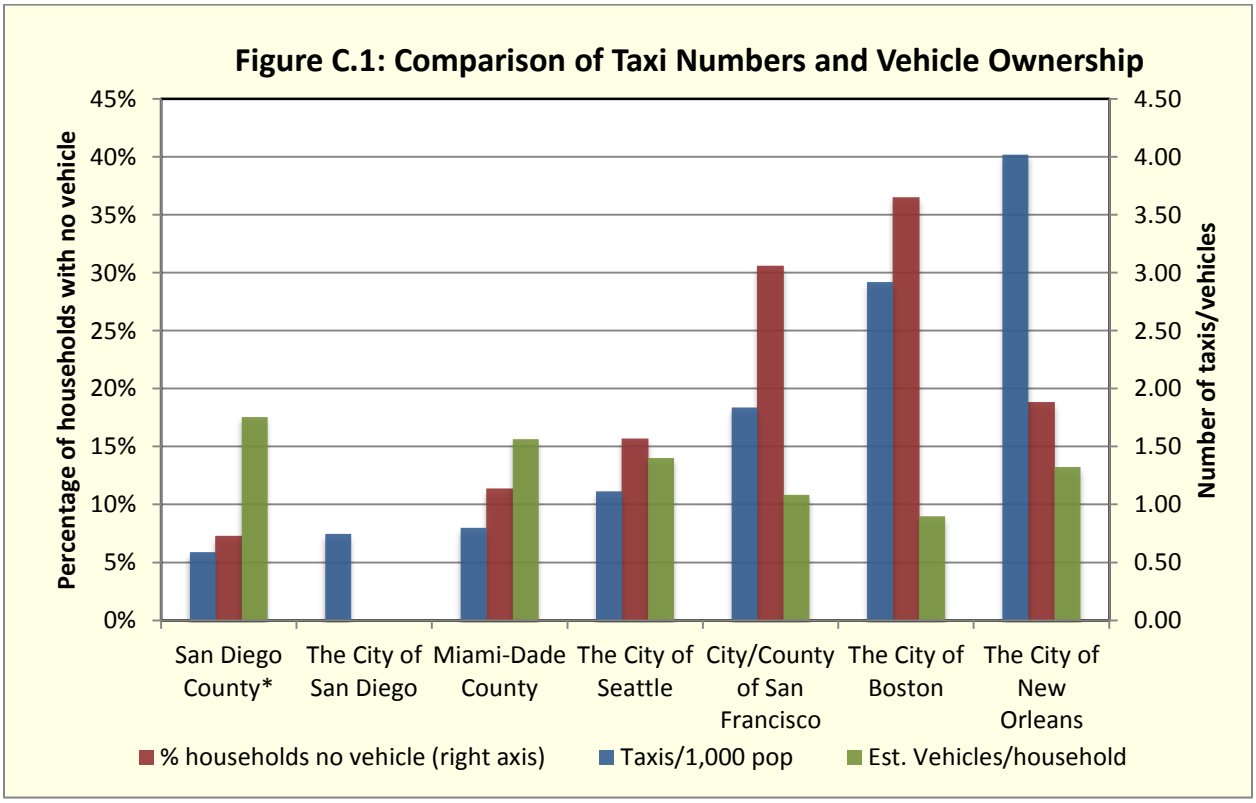
Among the ways in which the cities differ are their jurisdictional organization, rate of population growth, population density, and vehicle ownership.

In terms of jurisdiction, the City of New Orleans, like San Francisco, is coextensive with its county limits (Orleans Parish), although in New Orleans taxi regulation is managed by a municipal department. In Boston, the city police department is responsible for taxi regulation. Boston lies within the slightly larger Suffolk County, which it completely dominates, although the rest of the county is also urban. Both Miami and Seattle are the urban cores within quite large counties, but their administrative arrangements differ from one another. In Miami, taxi regulation was moved to the county level in 1981, while in Seattle, it has remained with the city. Since 1995, however, there has been a cooperative agreement between Seattle and King County. In both jurisdiction, taxis are regulated by government departments. Like Miami and Seattle, San Diego is the urban core of a larger county (San Diego County), but here taxi regulation rests with the county's Metropolitan Transit System—albeit only for San Diego and the six suburban municipalities that have administrative agreements with the MTA.

Demographically these cities differ greatly, which becomes particularly interesting when their rates of population growth are compared to changes in vehicle ownership and numbers of taxis. Miami-Dade and San Diego have grown explosively over the past 60 years—504% and 407%, respectively. Seattle has grown only slightly, while both Boston and New Orleans are smaller than they were in 1960, with the latter having declined by almost 50%.

Table C.1: City Comparison					
Jurisdiction	**Population (Census estimate for 2011)**	**Approx. Number of Taxis (including dispatch only)**	**Taxis per 10,000 population**	**% of households with no vehicle***	**Number of vehicles per household**
City and County of San Francisco	812,826	1,585	19.5	30.6%	1.09
City of Boston	625,087	1,825	29.6	36.9%	0.90
Miami-Dade County	2,554,776	2,042	8.0	11.6%	1.56
City of New Orleans and Orleans Parish	360,740	1,450	40.2	18.9%	1.32
MTS jurisdiction in San Diego County	1,779,000	1,051	7.5	7.3%	1.76
City of Seattle	616,627	688	14.0	15.9%	1.40

* *2010 American Community Survey,* based on Metropolitan Statistical Areas (MSAs).



Vehicle ownership data gives a good indication of population density. Together, vehicle ownership and density also influence taxi demand. In Figure C.1, the cities are ordered left to right according to the number of taxis per 1,000 population (blue bars). Except for New Orleans, the order also reflects the percentage of households with no car (red bars, right scale). The average number of vehicles per household (green bars) trend in the opposite direction. The following additional information about this data is noteworthy as well:

- San Francisco and Boston are the dense urban cores of larger metropolitan areas.

- Seattle is a dense urban core as well, but vehicle ownership data include a larger suburban area. Population density for King County, WA, is actually less than New Orleans.

- Although Miami isa major urban center, Miami-Dade County includes vast tracts of the Everglades, so the numbers for population density are distorted. However, vehicle ownership at the County/MSA level is high, suggesting that the average density of the inhabited area is still fairly low.

- Finally, San Diego is perhaps the least dense of the urban cores, with car ownership at the MSA-level high, and relatively few households without a car.

Recent Regulatory Changes

Both San Diego and Seattle experimented with deregulation in the late 1970s, essentially providing permits to anybody who met minimal qualifications. Both experienced unanticipated problems: while the number of taxis on the streets increased markedly, fares edged up, contributing to a drop in total demand, a substantial drop in trips per taxi and driver incomes, and an overall reduction in quality. A few years later, both cities reversed course. San Diego imposed a moratorium on new licenses in 1982, Seattle in 1987.

Of the five cities, Seattle was the first to initiate comprehensive reforms. Based on extensive studies in 1995-96, the city restructured the industry. Among the actions undertaken were:

- Forcing taxi owners into self-regulating associations under municipal oversight;
- Applying higher vehicular standards accompanied by stricter enforcement
- Establishing a cooperative agreement with the surrounding King County to share administrative responsibility including joint licensing.

Such standards are now fairly commonplace in most US cities.

Boston was one of the first to create licenses for Wheelchair Accessible Taxis (WATs), with 40 issued in 1992, only two years after the passage of the Americans with Disabilities Act. A few years later, 260 more taxi licenses were created, including 60 WAT licenses. All the peer cities now have programs for wheelchair accessible taxis. Boston adopted new technology standards in 2009.

Miami-Dade County was the first of these cities to exclusively license owner-drivers. Almost all permits issued since 1998 have been restricted to experienced local drivers—the exception being a single open auction of six licenses in 2012. When Seattle began to issue new licenses in 2008, it also restricted applications to owner-drivers. As of 2012, San Diego has reserved a share of new licenses for owner-drivers.

Despite its explosive growth—or perhaps because of it—there were fewer taxis in San Diego per 1,000 population in 2001 than in 1979, when deregulation was instituted. During an initial transitional period, 135 licenses were released pending development of a formula to determine the ideal number of taxis. Such a formula was adopted in 2012, along with new standards and requirements for vehicles, cameras, GPS, and credit card devices.

New Orleans launched an extensive reform program in 2012, requiring newer cars, GPS, security cameras, and credit card processing, all intended to be in place before the 2013 Super Bowl.

Overall Licensing Regime

Twenty years ago, these cities all had fixed caps on the number of taxi licenses and no effective mechanism to adjust that total. In the case of San Diego and Seattle, there were moratoriums in the aftermath of failed attempts at deregulation. Although Miami-Dade had a simple formula in its regulations—one taxi per 1,000 population—it had not adjusted the actual number of licenses following the 1990 census. With its rapid growth,more than 400 new permits should have be authorized by 2004. With the economy still struggling after 9/11, the formula was dropped. As an *ad hoc* measure, 75 new licenses were approved, including the launch of a WAT program. At the same time, a process to develop a new formula was begun. This program is ongoing.

Table C.2: Licensing Regime

Jurisdiction	Approx. Number of Taxis	Method of Managing Entry / Licensing Regime	Owner/ Driver Requirements	Adjustment Formula	Method of Issue	Regulated Leasing Rate (/shift)
San Francisco	1,585	Fixed Cap	Since 1978	No Formula	Seniority of drivers	$96.50
Boston	1,825	Fixed cap	No	Discretion of Police Commissioner	Auction	$77
Miami-Dade	2,042	Fixed cap	(Almost) all permits issued since 1998	Simple formula until 2004. Now by decision of Board of County Commissioners until new formula in place	Most by lottery to established drivers, 6 by auction (2012)	Not regulated, est. $350/wk (2007)
New Orleans	1,450	Certificates of Public Necessity & Convenience, but 105 new permits approved for issue in 2012	% since 2012	Normally burden of proof on applicants, but Director has approved 105 new licenses in 2012	For new permits, rating of best qualified	Not regulated, est. as much $1,600/mo. (2012)
San Diego & 6 adjacent suburbs	1051	Formula (fixed cap before June of 1012)	% since 2012	Aggregate demand/ number of trips to support one taxi	From June 2012, lottery: 40% to drivers,60% to cos.	Not regulated, est. $865/wk (2012)
Seattle	688 taxis, plus 241 in King Co.	Cap of 850 Fixed by Ordinance	All new permits since end of moratorium in 2009	Formula (with max. of 35 per year)	Lottery or competitive RFP	$85 [new rate]

The other two cities used regimes based on public convenience and necessity (PCN), under an overall cap. The key difference of this approach is that it relies on applicants to demonstrate that there is a need for additional licenses, Boston's cap of 1525 set in State legislation in the 1930s was challenged in court by an applicant who had been denied a permit. The Department of Public Utilities found there was a need for more medallions, and eventually a total of 300 more were created, including 100 for

wheelchair accessible vehicles. In New Orleans, although it had a fixed cap of 1600 taxicab permits (removed in 2009), this was more than the required number of taxicabs (New Orleans has more taxicabs per capita than the other comparison cities), and no new certificates of public necessity and convenience (CPCNs) had been issued in many years. New Orleans grants existing license holders and other stakeholders the right to participate in an open hearing. While it can be argued that regimes that require a political decision to increase the number of licenses are burdensome on applicants, the Boston case in particular shows that PCN regimes also represents a challenging process.

In short, all the cities found themselves with unrealistic caps, and no effective adjustment mechanism.

Issuing New Licenses

In recent years all five jurisdictions have taken steps to issue new taxi permits. In four cases, the decision had to be made at a political level, since none of the jurisdictions had adjustment formulas in place (other than Miami-Dade, which did not use it).

Perhaps surprisingly, Boston was the first to lift the cap on taxi licenses: surprising because Boston, as noted, actually had a falling population, so the ratio of taxis per capita was actually increasing. As noted, the process was precipitated by an aggrieved applicant who had been denied a permit as the current cap of 1525 medallions had been met. Although the Department of Public Utilities agreed there was a need for more permits in 1991, the regulator was slow to create more permits, other than 40 medallions for wheelchair accessible vehicles (WAVs). Further court proceedings eventually led to the auction of 260 permits, including 60 more for WAVs, beginning in 1999. As shown below, however, the new sales barely even slowed the growth in the increase of value of Boston taxi medallions.

San Diego's rapid growth made it one of the first to come to grips with its fixed cap. As noted, by 2001 there were as few taxis as there were at the time of deregulation in 1979, on a population basis. However, the City of San Diego had imposed a moratorium on the issue of new permits in 1982, and had no mechanism to adjust the number of permits. In 2001, the City Council approved the issue of 135 permits on an interim basis, pending the development of a permanent adjustment formula.

Miami similarly moved tentatively. As noted, Miami-Dade had had an adjustment formula since 1981, requiring the issue of new licenses following each census to maintain a 1 taxi per 1,000 residents ratio. However, the formula was not applied in the 1990's, such that by 2004, an additional 406 permits would have been required, and the ratio was abandoned. While the sale of 75 permits by lottery was approved, a comprehensive review of the taxi industry was launched, including the planned development of a new formula. This process is ongoing, although the Miami-Dade Board of County Commissioners approved a further issue of six permits for auction in 2012, with much higher values realized than expected.

When Seattle finally removed its moratorium in 2008, it substantially raised the overall cap and put in place an adjustment formula at the same time (with a maximum increase of 35 licenses per year), actually becoming the first of these cities to have an adjustment formula in place. As it happened, most of the new plates issued were for wheelchair accessible vehicles, which were not actually under the cap or formula.

In 2012 the City of New Orleans has offered additional licenses for distribution, without the need for applicants to demonstrate "public convenience and necessity". Only companies or drivers in compliance with the tough new vehicle standards can be qualified for permits, creating an incentive for existing drivers and companies to come into compliance rapidly.

Adjustment Formulas Compared

Since two jurisdictions now have adjustment formulas in place, it is interesting to compare them in detail.

Seattle has a relatively sophisticated model set out in the municipal code to determine the number of new licenses to issue[39] which identifies average service response times, total number of taxi rides, total paid trips per taxi, and average operating hours per taxi as factors to be considered. Computer dispatch reports are used for average service response times, while taximeter statistical downloads from meters when cars are inspected are used for operating statistics (revenue miles, revenue trips, fare revenue), and odometer readings for total miles. Effectively, there is a sample in excess of 30%, which is quiet reliable. (Meter changes and vehicles changes, among other things, prevent some meter readings from being used.) Using a base year of 2005-06, judged to be a "normal year"in terms of both industry revenues and taxi demand, and with an established expected dispatch response time of 10 minutes, the above factors are combined to determine how many new licenses are required.

In San Diego, when the moratorium was lifted, the issue of more licenses was tentatively tied to the growth in population and occupied hotel rooms. However, this formula was never applied and, instead, in 2012 a new formula was adopted[40], as follows:

$$S=D/M$$

Where:

- S = the calculated ideal supply of taxis
- D = measured aggregate demand for taxi trips
- M = the number of taxi trips needed to sustain one new taxi vehicle entering the market

The calculation is to be made every three years, with economic studies used to determine the values of D and M. As yet, there is no experience on exactly how these numbers are to be calculated. Additional permits are issued when S exceeds the number of active permits by 40 or more. Inactive (unassigned and vacant) permits are redistributed at the same time, effectively becoming five-year permits.

The models are very similar, in that they attempt to determine the economic condition of the individual taxi license holders (which depends in part upon the meter rates in effect). Both models also make a measure of the aggregate demand. Seattle has an additional wrinkle, in that the model also incorporates a service standard (dispatch response time) into the model. While San Diego has identified the issue of "underserved areas", requiring 25% of trips to originate in these areas (for new license holders), it has not yet decided on how to implement this requirement.

Methods of issue

The comparison cities provide a considerable variety of experience with methods of distribution of new licenses, including lottery, auction, RFP and, as New Orleans is using for its Certificates being issued, first-come-first-serve.

RFP

Request for proposals has been used by San Diego and Seattle. This approach offers the advantage that the process allows a ranking of applicants according to their suitability. It can also be open to new

[39] Section 6.310.500 (detailed in Director's Rule 6.310.500.A), rev 2008
[40] http://docs.sandiego.gov/councilpolicies/cpd_500-02.pdf

companies that meet the criteria. On the downside, it takes considerable administrative resources, and ambiguities in the definition of the criteria can lead to problems in the evaluation, and potentially to protests. An example of how exactness in the definition of the criteria is required is shown by San Diego's experience: while requirements were set, it was not specified that these criteria had to be met throughout the lifetime of the permits, for example the availability of wheelchair accessible service[41].

Lottery

Lottery is perhaps the most commonly used. Miami-Dade has been using this method for most of their sales since 1998. It was one of the methods experimented with by San Diego after 2001, and has now been chosen as the preferred method of distribution. It is also used by Seattle.
Where there is considerable demand, it offers a degree of fairness, and it is fairly easy to operate. However, once the bar of eligibility is set, there is no mechanism to select for better performers, for example among drivers meeting an experience requirement.

Auction

Boston has relied upon auction as the principal method of distribution for it recent sales. Miami-Dade tried this approach for the first time in 2012, for the sale of six permits. San Diego considered this approach, but in the end did not proceed with planned auction of 10 permits.
A substantial advantage of the auction method is that it provides a significant source of revenue. In Miami-Dade, the funds remain with the regulatory group, while in Boston they return to city coffers. As with lotteries, once minimum criteria for participation are set, there is no mechanism to select for superior performance.

First- come-first-serve

New Orleans has chosen this approach to distribute 105 new permits authorized in December 2012. A key advantage is that it can reward the owners and drivers (some permits have been reserved for each group) who come into conformity with significant new vehicle standards introduced earlier in the year.

It is interesting to note that, after experimenting with lottery, auction, and RFP in a "transitional" period (2001 to 2012), San Diego has most recently decided to use lotteries exclusively, with some permits reserved for current drivers, and others for companies.

Owner-Driver Requirements

In parallel to the increases in the number of licenses, some jurisdictions have adopted owner-driver requirements as a way to sustain or improve driver incomes. While lease drivers must pay the license owner for use of the vehicle (or, in some cases, the medallion only), an owner-driver is a working driver who owns the rights to the taxi vehicle license. He or she will earn more than a similarly skilled lease-driver, since no lease rate will have to be paid on the license, and the vehicle may (in some jurisdictions) be rented to a lease-driver for a second shift.

Public statements made in New Orleans in December of 2012 are a good example of the policy interest in driver incomes. Of the 105 new licenses authorized, 75 have been reserved for current drivers who do not currently own an interest in a taxi license. Deputy Mayor of Operations Michelle Thomas was quoted in the media[42] as saying the need for new permits surfaced as drivers showed up for taxi

[41]True North Research, Taxicab *Permitting Process Study Final Report,* prepared for the Metropolitan Transit System, October 21st, 2011, p.46.
[42] See http://www.nola.com/politics/index.ssf/2012/12/new_orleans_issues_105_new_tax.html

inspections after stricter regulations were introduced. Many taxis were operating under CPNCs they had to rent from a third party, in some cases for as much at $1,600 a month, but it was the cab drivers that had to foot the bill to upgrade their vehicles to meet the city's new standards. With their own CPNCs, drivers could spend money on improvements instead of covering rent. New Orleans has not, however, imposed a driving requirement on the new license holders.

The three cities that have implemented owner-driver licenses have all restricted distribution to experienced chauffeurs, and the transfer of the plate for at least the first five years after issue. In Miami-Dade County, since 1998 any new owner of a taxi license must operate the taxi for one shift per day, five days per week. Similarly, in Seattle, all licenses issued since 2008 come a requirement that the license holder must drive. The minimum driving requirement is for 30 hour per week (40 for wheelchair accessible taxi licenses), over 40 weeks per year for the first five years. In San Diego, 40 owner-driver permits were created with the transitional permit sales of 2001, and this approach was maintained in the 2012 policy, whereby 40% of all new permits issued will go to experienced drivers, who must drive the taxi for at least 1000 hours per year.

Table C.3
Driver Requirements for New License Holders

City	Proportion of new licenses going to current drivers	Driving requirement	Method of issue	Transferability	Notes on approach
Boston	None	None	n/a	n/a	Participation in auctions is not restricted.
Miami-Dade	All since 1998	one shift/day, 5 days/week	Lottery	Transferable after 5 years	By exception, six licenses were auctioned in 2012.
New Orleans	70 of 105 (67%)	None	First come first serve	Not transferable; redefined as privileges in 2012	Normally CPNC hearings required, but none were issued in many years
San Diego	40% in new policy of 2012	1000 hrs/ year for 5 years	Lottery managed by the MTS	Transferable after 5 years	New policy adopted by San Diego City Council
Seattle	All since 2008	1200 hrs/ year for 5 years	Lottery of best qualified drivers or competitive RFP	Not transferable to a corporation in first 5 years	Moratorium on new license lifted in 2008

While popular, owner-driver programs can create other problems, including a desire to work shorter or easier hours (leaving a shortage of taxis at night, especially on weekends), compounded by an eventual aging of the drivers, unless the license are relatively transferable. Aging drivers may also represent an increased safety hazard. (All of the owner-driver regimes examined here allow for transfer after five years.) And while owner-drivers tend to invest more in their vehicles, this also discourages them from leasing the vehicle to another driver, who may not be as careful with it. This issue can be dealt with if the medallion can be leased separately from the vehicle itself.

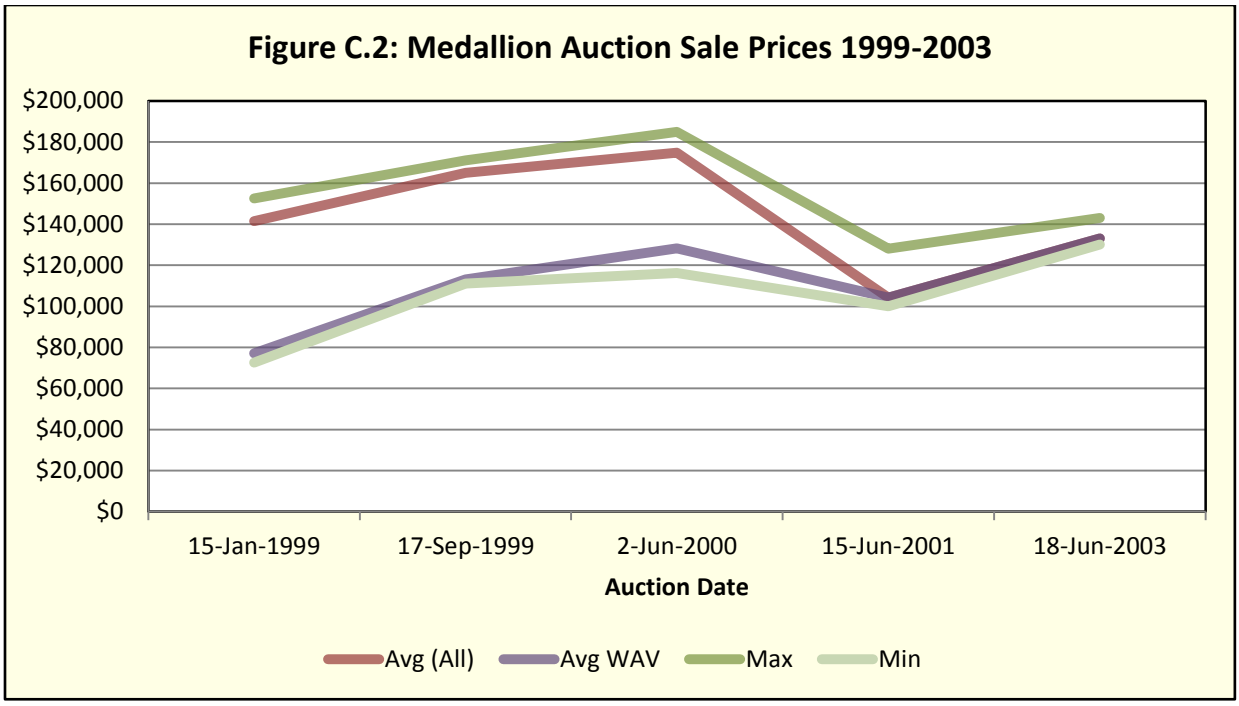
Impact of new sales on the value of existing license holders

As noted, all five comparison jurisdictions have lifted caps on the issue of permits in recent years. Given the strong stakeholder concern over the impact of new plates on existing license holders, it is interesting to examine the impact on the value of licenses already in circulation. Until 2012, when New Orleans redefined taxi licenses as privileges granted (or to be taken away) by the City, all jurisdictions sanctioned the resale of licenses (although there are, as noted, restrictions on licenses issued to owner-drivers for the first five years after issue).

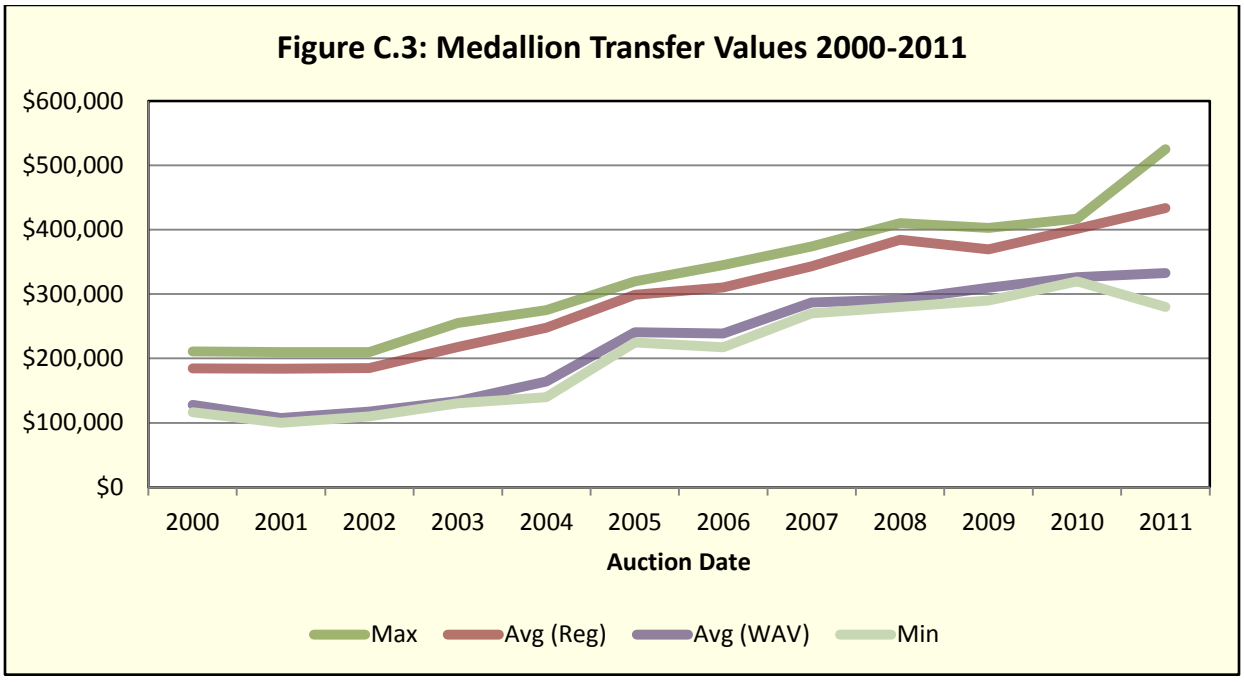
Table C.4: Impact of new licenses on the Value of Existing Licenses Holders

Jurisdiction	Total Taxis	Time Frame	% increase	Value before	Current value	Notes on Approach
Boston	1,825	1999-2003	17%	184,000 (transfer - 2000)	433,000 (transfer - 2011)	Transfers are not restricted to current drivers or firms.
Miami-Dade	2,113	2004-12	4%	190,000 (transfers)	2012 auction values 410,000 & up	Since there were so few sold, and transfers are restricted to current drivers who commit to driving the taxi, the 2012 auction sales are not likely to impact on the current market for transfers.
New Orleans	1,450	2012-13	10%	39,000 (median transfer value in 2011)	Not yet known	First issue of new licenses in many years approved in 2012.Distribution in process.
San Diego City	992	2001-12	14%	San Diego does not require transfer values to be declared	100,000 (2009)	Moratorium lifted in 2001. 125 plates issued in "transitional period". New formula put in place in 2012.
Seattle	688	2009-11	7%	113,000 (transfers)	146,000 (2011)	New plates mainly for WAT only, not affecting value of regular plates

There are few examples of jurisdictions that have significantly increased the number of permits in a stable market. This makes the Boston case particularly interesting, as 300 new permits, representing a 17% increase, were introduced over a relatively short period, even though the population was not growing. Initially, 40 WAV licenses were issued in 1992, but 200 regular medallions were sold by auction over an 18 month period. As shown in Figure C.2, below, the auctions of 2001 and 2003 consisted entirely of the last 50 WAV medallions, producing significantly lower average values. For regular medallions, despite the large increase in numbers, minimum, maximum, and average values all increased through the first three auctions.



Source: Boston Police Department

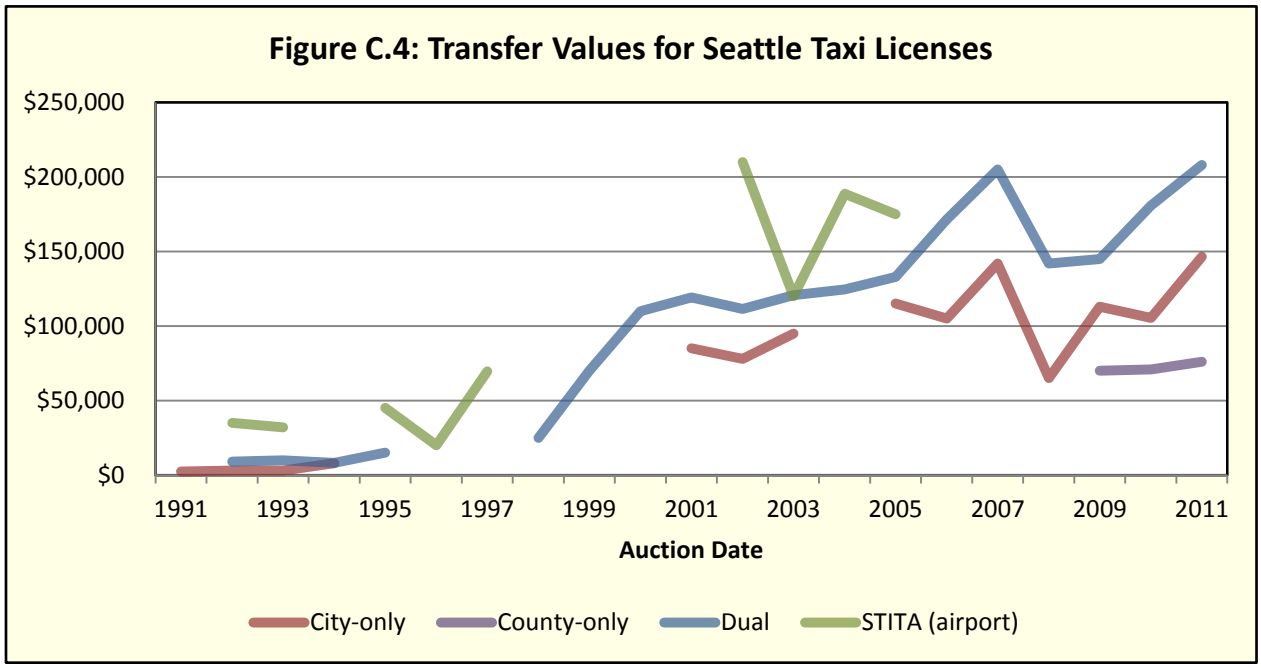


Source: Boston Police Department

Most interesting is that the auction of new medallions did not significantly depress the value of transfer sales during the auction period (1999-2003), which averaged between $166,000 and $181,000. In the years following 2003, prices increased every year except 2009, reaching an average of $421,000 in 2011, with a top value of $525,000. Wheelchair Accessible medallions sold for somewhat less, averaging $332,500 in 2011.

Historical evidence suggests that Boston medallions were worth $32,000 in 1983[43] and $95,000 in 1995[44]. The numbers above strongly support the argument that, when there are too few medallions or plates (the number had been fixed since 1930) and cabs are not easily available, the market shrinks below its natural level and the value of the plates is also reduced. Identifying the demand for taxis is not a simple problem.

Seattle provides another interesting case, because their model is actually intended to maintain existing conditions, both in terms of service quality and economic performance. Improved recording of transfer sales in 2008 means the data are most solid for the last few years, but the records show that the transfer value of plates has continued to rise after the lifting of the moratorium.



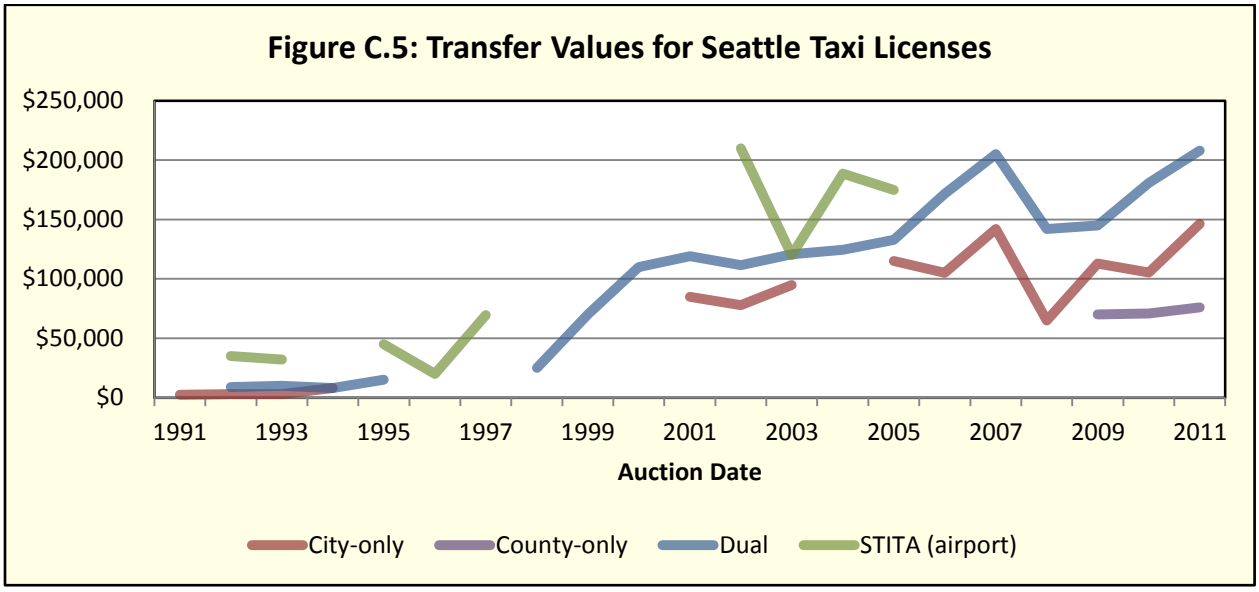
Source: City of Seattle. Averages are based on a higher number of transactions after reporting requirements on transfers were strengthened in 2008.

It should be remembered that Miami and San Diego are growing very rapidly, and that if the number of licenses is not increasing, the number of taxis per 1,000 population is actually falling. Thus, for these two cities, the experience with the sale of new permits would not be expected to have much negative effect on the values of current licenses. Miami, which recently auctioned a few permits, has seen values rise significantly. San Diego does not require transfer values to be declared.

In 2012, New Orleans effectively shut off the resale of permits when it declared CPNCs to be privileges granted by the city. Nonetheless, some recent data suggest what CPNCs are worth (in the absence of the sale of any new permits). The minimum reported values suggest some concessionary transactions, so the median value is shown, which is less affected by low value transactions, rather than the average.

[43] Frankena, Mark W., and Pautler, Paul A., *An Economic Analysis of Taxicab Regulation,* Federal Trade Commission Bureau of Economics Staff Report, May 1984, available at http://www.ftc.gov/be/econrpt/233832.pdf retrieved 24 August 2012.

[44] Government of the District of Columbia, "Taxi Medallion Systems", Memorandum from Fitzroy Lee, Deputy Chief Financial Officer, to Neil O. Albert, City Administrator, January 4, 2010, available at http://cfo.dc.gov/cfo/lib/cfo/taxicab_medallion_memo_jan4.pdf retrieved 24 August 2012.



Overall, despite increases in the number of permits, all four jurisdictions for which there are data have experienced continuing increases in the value of current licenses.

ACCESSIBLE TAXI LICENSES

Under the Americans with Disabilities Act (ADA) adopted in 1990, jurisdictions are not required to ensure the availability of wheelchair accessible taxis, but over time all five jurisdictions have taken steps to ensure the availability of service for wheelchair or disabled patrons.

Table C.5: Accessible Taxi Service

Jurisdiction	Total Taxis	Accessible Taxis				
		Accessible Taxis	% of Fleet	WAT Licensing Regime/Formula	Method of Issue	Notes on Approach
Boston	1,825	100	5.5%	Fixed Cap, based on public convenience and necessity	Auction	Applications open to all. Taxis must give priority to accessible calls.
Miami-Dade	2,113	80	3.8%	Fixed Number	Lottery, but two sold by auction in 2012	Target is 3%. New plates restricted to current drivers except two sold by auction. Taxis must give priority to accessible calls, but tracking difficult and penalties light.
New Orleans	1,450	5 (2012)	<1%	Fixed Number	Separate Lottery	Not yet issued while central dispatch facility is set up
San Diego	1,051	?	?	2012 Bylaw requires 70% of new permits to be WAT	Lottery	Prior to 2012, no specific target. Bonus points given in RFP for the 70 company licenses in transitional period led to a small number of WAT vehicles. New rules in 2012 will require 70% of new plates to be WAT.
Seattle/King County dual	929	45	4.8%	Formula, but no cap on WATs	Lottery (30) and RFP (15)	Applications open to all. WAT licenses are dual with King County. When issued, these licenses must be held for 5 years before they can be transferred.

Policies that the five jurisdictions are using include:

- Allocation of specific licenses, or a specific proportion of new licenses;
- A requirement that WA taxis give priority service to WA service requests; and
- Centralized dispatch for WA service calls.

In terms of vehicle standards, ADA requirements only apply to new vans or minivans, which must be wheelchair-accessible. Boston requires the use of new vehicles, while Miami and New Orleans require wheelchair accessible vehicles to be modified such that they are in compliance with the ADA vehicle standards[45].

The importance of vigorous enforcement is shown by the experience of Miami-Dade, where large WA taxis experience shorter waits at the airport because of their enhanced luggage capacity. This creates an incentive for these vehicles to go to the airport. While technically these vehicles should give priority to WA service calls, enforcement is difficult without either centralized dispatch or real-time GPS data.

AIRPORT SERVICES

Airports lie within the boundaries of three of the five jurisdictions. In another case (New Orleans), the airport is outside, but owned by the City, In Seattle, it is in King County, with which Seattle has a cooperative agreement.

Table C.6: Airport Taxi Service

Jurisdiction	Total Taxis	Airport Taxis			
		Licensing Regime/Formula	Location/Agency Regulating Taxis at Airport	Method of Issue	Notes on Approach
Boston	1,825	Open to all city cabs	Airport in City, Boston Police	n/a	No restriction on taxis service at the airport.
Miami-Dade	2,042	Open to most cabs in County	Airport in County, managed by Airport Authority	n/a	Abundantly served, recent restrictions on a few WA and UA cabs.
New Orleans	1,450	In 2012, AB synchronized with new City standards	Owned by City, but outside city limits. Aviation Board governed by separate Ordinance	n/a	All city cabs qualify, as may cabs from surrounding parishes. Additional fee of $200.
San Diego	1,051	Fixed Cap (180 on any day)	Airport in City, managed by SDRAAB	Transfer	Airport cabs must have city license with additional decal. New rules restrict transfer.
Seattle	688	45 (Determined by contractor)	Airport in King County, managed by Port of Seattle	Exclusive contract	Contract (currently with Yellow Cab), requires service within 5 mins.

In four of the five jurisdictions, Boston being the exception, there is an airport authority that regulates taxis. This authority may limit the numbers of taxis, imposing additional regulatory requirements.

Since the airport in San Diego is within the city limits, all taxis must have a city license. However, the San Diego Regional Airport Authority Board requires an additional decal, of which the numbers are limited.

[45] 31-89 (a) 25

Most of these have been held for many years, but starting in the coming year the transferability of these decals will be restricted.

Seattle's airport is located in King County, with which the city has extensive jurisdictional cooperation. However, the airport itself is operated by the Port of Seattle, which has a unique approach among these jurisdictions. A single contract is let with one company, which is held to a standard of providing service within five minutes. It is up to the service provider, currently Yellow Cab, the largest association in Seattle, to determine how many cabs to have at the airport at any given time.

The New Orleans Aviation Board decided in 2012 to synchronize its vehicle standards with the City. The airport being outside city limits, taxis from other nearby jurisdictions can also provide service, but they will now also have to meet the tougher vehicle standards being imposed by New Orleans. The airport will continue to collect a $200 annual fee to provide service at the airport.

In Miami-Dade, where it is commonly recognized that the airport is over-served, taxis with County permits are generally free to provide service from the airport. Recently some restrictions have come into force, excluding new wheelchair accessible or underserved zone licensed taxis from pickups at the airport.

ZONE PERMITS

Three of the jurisdictions, namely Miami, Seattle and San Diego, have taken some action to respond to the widespread problem of underserved areas. Taxis tend to congregate where there is the most business, so calls for service from outlying areas habitually experience longer delays.

Miami identified specific Underserved Area zones some years ago, and additional permits are allocated to serve areas in North and South Miami-Dade County.[46] A minimum of 75% of Underserved Area (UA) Taxi pickups in the Northern underserved taxi service area must originate there, while in the South Miami-Dade taxi service area for-hire taxi licenses are restricted to picking up passengers in that area only. Owners must be able to provide documentation. The regulations also require UA vehicles that were equipped with connection to a radio dispatch as of 2007 to have maintained this affiliation, but it is unclear how effective this measure is.

Persistent complaints that these restrictions did not provide drivers with an adequate income led to two modifications, in 2009 and 2012. Since 2009, UA WAT license holders have been able to convert their licenses to operate countywide (except for Miami International Airport) upon payment of $10,000[47], while in 2012, UA license holders were allowed to work outside of their area half the time (even numbered plates on even numbered days, and odd-numbered plates on odd-numbered days).

Seattle tracks dispatch response times to all areas of the city, and incorporates this information into its formula assessing the need for more licenses. Target dispatch times for more remote areas are slightly longer.

In San Diego, a 2009 passenger study showed that service to areas outside central San Diego and the adjacent peninsula region, where the airport is located, experience longer dispatch times[48]. The City's 2012 Policy on Taxi Permits imposes a requirement that 25% of trips of new permittees must originate

[46] See s. 31-93, (c) and (d).
[47] Section 31-82 (ℓ-5)
[48] 2009 passenger survey, True North Research, p.10.

in underserved communities. However, what and where the underserved areas are remains to be established. Effective enforcement will likely require submission of trip records in electronic format.

DISPATCH ASSOCIATIONS/ COMPANIES

The five comparison jurisdictions organize radio dispatch in different ways. Three require affiliation with a company providing dispatch services (New Orleans does not at all, and Miami-Dade does not require affiliation for newer owner-driver licenses). Three have formal licensing procedures. Boston and San Diego, which are the exceptions on this, are the most similar: both require affiliation to companies which are not directly licensed themselves, but are regulated. Moreover, the companies provide similar services.

Table C.7: Dispatch Associations (Companies)

Jurisdiction	Total Taxis	Companies				
		Type of Company	No. of Cos/ Assns	Affiliation req'd?	Co's Licensed?	Services Provided
Boston	1,825	Radio Association	7	Yes	No, but Regulated	Color scheme, dispatch, records, lost and found.
Miami-Dade	2,113	Passenger Service Company	38	Not for owner-drivers	Yes	Color scheme, dispatch, records, lost and found, complaints
New Orleans	1,450	Taxi Lines	27	No	Yes	Color scheme, records, complaints.
San Diego	1,051	Dispatch Service Organizations	17	Yes	No, but Regulated	Color scheme (for vehicles licensed after 1991), dispatch, records, lost and found.
Seattle	688	Taxi Associations	4	Yes	Yes	Color scheme, dispatch, records, lost and found, complaints

Dispatch technology varies. In 2012, New Orleans became the third jurisdiction to require GPS systems to be installed and used for dispatch in all taxis (Boston and Seattle already required it). The other two require GPS for new vehicles. In San Diego, larger firms already have GPS; expected that GPS will become standard;

Use of GPS systems also allows for abundant data to be collected, stored and transmitted electronically. While Boston requires real time access to GPS data from taxis, this is not used for data collection and analysis. In New Orleans, where the system is very new, there are no requirements to submit the data. In fact, companies are not required by law to provide dispatch services to member cabs, although it can be assumed that this is a primary advantage of forming a company. Only Seattle makes considerable use of the GPS data, using it to analyze dispatch call response times, the need for new licenses, as well as estimating driver incomes, used in the regulation of lease rates.

In Miami, the passenger service companies need only provide two-way radio or cellular telephone dispatch service.

In San Diego, companies have somewhat more freedom, being able to set their own policies on such things as:

- Standard time elapse for answering the telephone service-request line(s).
- Standard time elapse for the taxi's arrival at requested pick-up location.
- Additional two-way communication devices (mobile or cellular phones) in taxis.

- Lost and found for passengers' items.

While current policies and procedures must be on file with MTS, the MTS does not use the data on service standards to assess company performance.

Table C.8: Limousines and Other Vehicles for Hire

Jurisdiction	Total Taxis	Limousines and Vehicles for Hire				
		Number of Limos/VFH	Licensed	Fees	Market Separation Measures	Notes on Approach
Boston	1,825	n/a	State regulation open entry			Open entry
Miami-Dade	2,042	625 luxury sedans	County caps numbers		Much Higher rates, 2-hour minimum	Cannot be more than 2 years old when placed in service, cannot exceed 5 years of age; inspections required.
		121 stretch vehicles	County regulation; open entry		Much Higher rates, 2-hour minimum	Cannot be more than 2 years old when placed in service, cannot exceed 7 years of age; inspections required.
New Orleans	1,450	6 passenger Luxury Sedans CNCPs	City regulation, CPNC required	Initial license $100, renewal $150	Rates are higher, 3-hour minimum	**Not transferable;** vehicles must be current year; inspections required.
		7-9 passenger limousines CNCPs	City regulation, CPNC required	Initial license $100, renewal $150	Rates are higher, 3-hour minimum	**Not transferable;** inspections required.
San Diego	1,051	n/a	State regulation, open entry			No restrictions as long as vehicle can be insured; no specific inspection requirements.
Seattle	688	200 FHV dispatch only	City caps numbers		Rates can be competitive, e.g. airport	security cameras required; inspections.
		Up to 725 limousines	State regulation open entry			Must have Seattle business license; City inspects limousines under an agreement with the State

n/a = not available

LIMOUSINES AND OTHER VEHICLES FOR HIRE

The principal features distinguishing limousines and other vehicles for hire from taxis are that they can operate only by dispatch, and they do not use meters.

In most jurisdictions, limousines are governed by open-entry rules governed at the state level, as is shown by a study prepared by Miami-Dade County[49], which compared rules in eleven larger jurisdictions (populations of about 1 million and up, including San Diego as well as Miami-Dade). Of the eleven, only Chicago, along with Miami-Dade, limited the numbers of limousines. In Seattle, the number of limousines is not limited, but vehicles-for-hire are.

While generally more restrictive than taxicabs, distinctions between limousines and various other vehicles for hire are often specific to the jurisdiction. For example, of the three jurisdictions that regulate limousines or other vehicles for hire (in Boston and San Diego these are regulated at the state level), all recognize at least two classes of vehicles for which the standards are slightly different.

In Seattle, while the State of Washington manages the licensing of limousines, by arrangement these are inspected by the City, which is also involved in enforcement. City-licensed for-hire vehicles are defined as not being limousines. Miami-Dade and New Orleans both require “luxury sedans” to be newer than other limousines or vehicles for hire. They are also smaller, either in seating capacity (New Orleans) or wheelbase (Miami-Dade).

[49]Miami-Dade Board of County Commissioners, 2012

Boston, Massachusetts

Jurisdiction Served:	The City of Boston
Name of regulator:	Hackney Carriage Unit, Boston Police Department
Population (2010 census):	617,594
Taxi fleet (by type):	1,825 taxis, of which 100 are WAT medallions (5.5%)
Number of limousines:	State Regulated
Taxis per 10,000 Population:	29.5
Drivers:	Approximately 6000
Vehicles per household (metropolitan Boston - 2010 American Community Survey):	1.4
Proportion of households with no vehicles (metropolitan Boston - 2010 American Community Survey):	0.324
Plates Transferable?	Yes, with approval of the Police Commissioner
Market value of plates/medallions:	Average values are over $400,000, with a top sale value of $525,000
Medallion/taxi license lease value:	(regulated) $77/12-hour shift, $700/week

In Boston, the responsibility for taxi regulation rests with the Police Department. The Massachusetts Legislature formally delegated the power to regulate the taxi industry on the Department in 1930. The Hackney Carriage Unit is the oldest specialized unit in the Police Department, founded the same year as the Department in 1854. Part of the licensing unit, it is headed by a Superior Officer, the Inspector of Carriages, who regulates the industry under the direction of the Police Commissioner. It is also responsible for pedicabs and sightseeing vehicles.

While Boston has maintained a quota system for medallions based on public convenience and necessity for more than 80 years, it is of particular interest because it significantly expanded the quota without apparent long run impact on the market value of taxi licenses. This may be an example, not only of how low supply may hide potential taxi demand leading to a failure in service, but how results can be improved within conventional quota systems.

As well, significant amendments were made to the Hackney Carriage Rules in 2009[50], requiring new GPS, passenger information and payment-processing systems in taxis. Boston's initiative to mandate "clean" (alternate fuel) taxicabs also provides a lesson, as this measure was struck down on the basis that it violated federal law concerning fuel emissions

In 1934, the Massachusetts legislature, while confirming the Boston Police Commissioner's authority to regulate the hackney carriage business, established a regime of Public Convenience and Necessity, fixing a maximum number of medallions at 1525. This number remained in effect, until it was challenged in 1988 by an applicant who was denied a medallion on the basis the allotted number had already been reached. The Department of Public Utilities determined that public convenience and necessity required the issue of 300 more medallions, were eventually issued.

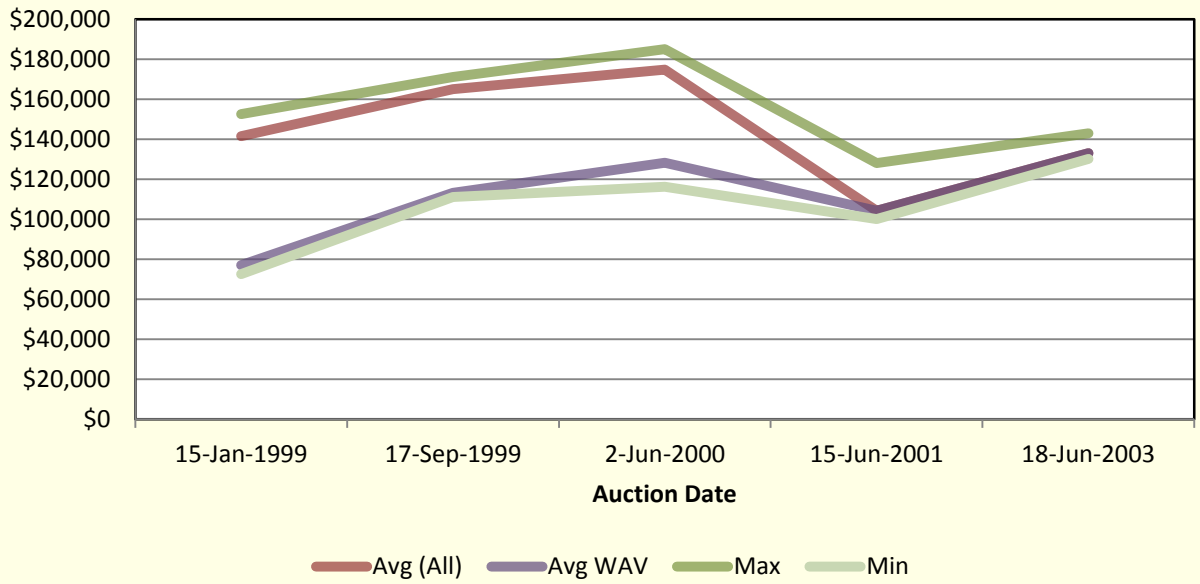
Issue of licenses

[50] http://www.cityofboston.gov/Images_Documents/Rules_tcm3-9921.pdf; the amendments are at: http://www.cityofboston.gov/Images_Documents/Amendment_tcm3-9922.pdf

In 1992, forty new medallions restricted to wheelchair accessible vehicles (WAVs) were issued, the first of 300 new medallions. One third of the total was for WAV vehicles. The remaining 260 new medallions were auctioned between 1999 and 2003 in successive lots, with 60 more of the new licenses going to WAVs.

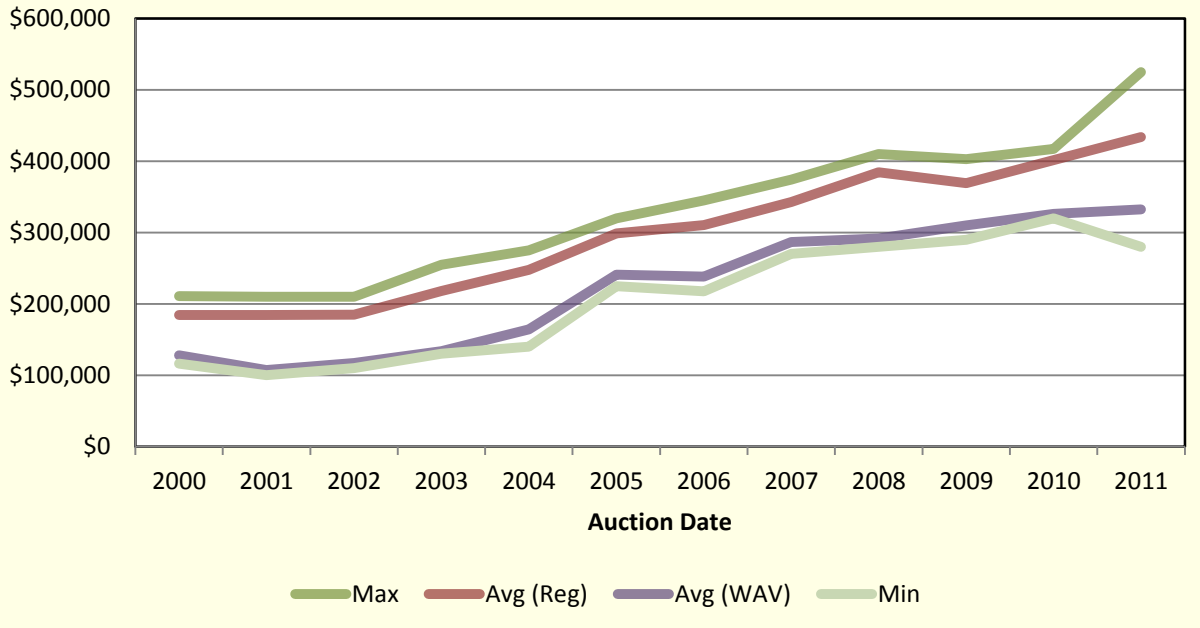
As shown in Figure 1, below, the auctions of 2001 and 2003 consisted entirely of the last 50 WAV medallions, producing significantly lower average values. For regular medallions, despite the large increase in numbers, minimum, maximum and average values all increased through the first three auctions.

Figure 1: Medallion Auction Sale Prices 1999-2003



Source: Boston Police Department

Figure 2: Medallion Transfer Values 2000-2011



Source: Boston Police Department

Under the Hackney Carriage Act of 1930, the Police Commissioner may grant licenses to suitable persons. Unlike most cities, there are no specific criteria, and this determination appears to be made on a case-by-case basis, though it may not be capricious.

Since, with the exception of the recent auctions, the number of medallions had been fixed for many years, Boston has an established practice for transfer, which requires the approval of the Commissioner, usually on advice from the Inspector of Carriages. The individual must advise the Department 20 days before the date of closing, and should expect to hear within 10 days. There is a $250 transfer fee payable by the seller, and another $250 fee payable by the buyer, $150 of which goes to the Boston Taxi Industry Elderly Program, B.T.I.E.P).

The auction of new medallions did not significantly depress the value of transfer sales during the auction period (1999-2003), which averaged between $166,000 and $181,000. In the years following 2003, prices increased every year except 2009, reaching an average of $421,000 in 2011, with a top value of $525,000. Wheelchair Accessible medallions sold for somewhat less, averaging $332,500 in 2011.

Historical evidence suggests that Boston medallions were worth $32,000 in 1983[51] and $95,000 in 1995[52]. The numbers above strongly support the argument that, when there are too few medallions or plates (the number had been fixed since 1930) and taxis are not easily available, the market shrinks below its natural level and the value of the plates is also reduced.

Accessible and Green Taxis

As noted, beginning in 1992, 100 new Medallions were issued for wheelchair accessible vehicles (WAVs), making Boston among the first cities to create accessible vehicle Medallions following the passage of the Americans with Disabilities Act in 1990. These are issued as required by "public convenience and necessity". These taxis are in general service, but WAV drivers must give priority to accessible vehicle calls.

Boston has also recently made reforms to promote a more fuel efficient taxi fleet. As of August 2008, all taxis coming into service must pass fuel efficient standards, set by the Boston Environment Department (known as clean vehicles) such thatby 2015, all Boston taxis will be fuel-efficient.

Zone permits and airport services

Logan International Airport is within the City of Boston, and all Boston cabs can serve the airport without restriction. The handling of taxis in the airport is somewhat unique: they take a number and wait in a holding pool which is a large parking lot. When their number is called, they go to the location where the passenger is waiting.

There are no special zone permits, or requirements for radio associations with respect to less-well served neighborhoods.

[51] Frankena, Mark W., and Pautler, Paul A., *An Economic Analysis of Taxicab Regulation,* Federal Trade Commission Bureau of Economics Staff Report, May 1984, available at http://www.ftc.gov/be/econrpt/233832.pdf retrieved 24 August 2012.

[52] Government of the District of Columbia, "Taxi Medallion Systems", Memorandum from Fitzroy Lee, Deputy Chief Financial Officer, to Neil O. Albert, City Administrator, January 4, 2010, available at http://cfo.dc.gov/cfo/lib/cfo/taxicab_medallion_memo_jan4.pdf retrieved 24 August 2012.

Dispatch

All Medallion holders are required to be affiliated with a taxi radio association. There are at present seven approved radio associations in Boston. Each association must have at least 40 members. Although they are regulated, the associations themselves do not pay fees to the City, they are not licensed, nor do they have to meet particular performance goals.

The principal function of radio associations is to provide taxi owners with 24 hour dispatch using two-way radios. Important amendments were made to the Hackney Carriage Rules in 2009, when all taxis were required to be equipped with GPS monitoring systems. These systems allow dispatch associations to identify and dispatch the nearest taxi or, as the case may be, the nearest wheelchair accessible taxi.

Taxi radio associations also provide their members with various record keeping and reporting services, elderly discount coupon re-imbursement, and lost and found property reporting. The call-dispatch records that must be kept by associations include the total number calls, the time and location of each request, the Medallion number of the cab dispatched, and the time and location of WAV's dispatched. The 2009 rule amendment also gives the Inspector of Carriages real-time access to extensive information about the whereabouts and activities of all cabs.

There are new dispatch technologies available as “smartphone” apps. Clients can go to "Taxi Magic", "poundtaxi" or "ubertaxi” (for limousines).

Other Vehicles For Hire

While taxis can pick up passengers at stands, by street hail, or through radio dispatch services, limousines, regulated by the State of Massachusetts under an open access regime, are restricted to dispatch. They do not have meters. The “Uber” model is somewhat controversial, as it appears to equip limousines with meters that have not been approved. In 2012, the Division of Standards of the Commonwealth of Massachusetts issued a Cease and Desist Order[53] to Uber in Boston.

[53] http://news.cnet.com/8301-1023_3-57493358-93/uber-boston-promises-to-fight-cease-and-desist-order/

Miami, Florida

Jurisdiction Served:	Miami -Dade County
Name of regulator:	Passenger Transportation Regulatory Division Department of Regulatory and Economic Resources (RER) Miami-Dade County (the structure of the County government is being reorganized)
Population (2011 estimate)	2,554,766 (Miami-Dade County)[54]
Taxi fleet (by type):	Taxis: 2,042 AT cabs 80 (2012)
Number of limousines (2011):	Luxury Sedans: 491 Stretch Limousines (6-8 persons): 50 Super Stretch Limousines (9 or more passengers): 202
Taxis per 10,000 Population:	7.99
Drivers: (Miami-Miami Beach-Kendall Area[55])	Approximately 1230* Number of certified drivers in County 4,000?
Vehicles per household: (2010 American Community Survey)	1.6 (Miami-Fort Lauderdale-Pompano Beach)
Proportion of households with no vehicles (2010 American Community Survey):	11.4% (Miami-Fort Lauderdale-Pompano Beach)
Are Plates Transferable?	With approval of the Department to a qualified chauffeur For newer licenses, only after 5 years of operation.
Market value of plates/medallions: February 2012, First ever county auction:[56]	Regular medallions auctioned for $410 to $431 thousand; 2 wheelchair accessible taxis sold for $312 & $325 thousand; Usual transfer prices (to qualified chauffeurs) $170-180,000
Medallion/taxi license lease value:	$350 per week (2007)[57]

In 1981, taxi regulation became the responsibility of Miami-Dade County, which consists of 35 municipalities as well as an unincorporated area. The Board of County Commissioners has wide authority to license and regulate not only taxis, but other vehicles for hire, including limousines, jitneys, ambulances, non-emergency vehicles and private school buses. These regulations are consolidated under chapter 31 of the County Code of Ordinances (For Hire Vehicles)[58].

Miami-Dade is of special interest because, like San Francisco, it has implemented an owner-driver system for new medallions (since 1998). Since then, Miami-Dade has relied primarily on lotteries for the new medallions, but has recently experimented with auctions, which generated significant revenue. Its long history of trying to ensure service to all areas of the County is also of interest.

Administratively, the responsibility for taxi regulation is discharged by the For-Hire Transportation Section, now under Business Affairs in the Department of Regulatory and Economic Resources (RER). The structure of the County government is being reorganized. These responsibilities were formerly managed by the Consumer Services Department (CSD), which is still the authority identified in the Municipal Code. The FHT section is also supported by the Taxi Advisory Group (TAG), comprised of consumer and industry representatives, transportation-related interests, municipalities and public

[54] US Census Bureau (http://quickfacts.census.gov/qfd/states/12/12086.html) July 2012

[55] (salaries-by-city.findthedata.org/q/31425/134/How-many-Taxi-Drivers-and-Chauffeurs-work-in-Miami-Miami-Beach-Kendall-Florida) August 2012

[56] Unusually, sale of these medallions was not restricted to current chauffeurs, resulting in higher prices.

[57] *Final Report, Taxicab Ridership Study Miami-Dade County*, January 14, 2007, available at: http://www.miamidade.gov/business/library/reports/taxi-ridership-study-final.pdf (accessed 10 October 2012)

[58] http://library.municode.com/HTML/10620/level2/PTIIICOOR_CH31VEHI.html

interest organizations. For example, the TAG had input on 2012 amendments concerning underserved taxi areas and temporary vehicle age extensions.

In 1981, Miami-Dade had to integrate the various municipal taxi regulatory systems. A uniform license structure was imposed, with uniform meter rates. Existing license holders were granted licenses, which they were free to sell or transfer; however, the license would revert to the county if it were not renewed in a given year. A maximum number of taxi licenses was set in 1981 (at one per 1,000 population). The issue of 325 permits by lottery in 1988 brought the number of permits approximately in line with Miami's rapid growth. The number of permits was not revised following the 1990 census.

In the 1990's, Miami-Dade started a major reform process in 1998, when a "medallion" system, based on owner-operation was adopted. Medallion holders need to fulfill a minimum number of hours driving their own licensed taxi. Separate lotteries are held for wheelchair accessible and underserved area permits. Similarly, the sale of existing for-hire licenses is also limited to registered taxi chauffeurs.

In the 2000 census, the population of Miami-Dade had grown to 2,373,000, such that by 2004, according the existing regulation, an additional 406 permits (a 22% increase) would have been required to meet the one taxi per 1,000 residents ratio. Given also the economic effect of the events of September 11th, 2001, such an increase was considered likely to have a significant impact on the incomes of drivers as well as the ability of the owner-drivers to finance loans[59]. While the sale of 75 permits by lottery was approved, the ratio was abandoned. Recognizing there were other problems as well, the County commissioned a study with the following terms of reference defined in the Ordinance:"to analyze

- *the relative use of taxi service* by visitors and residents,
- *the utilization of wheelchair accessible taxis*,
- *the geographic distribution of taxis* in the County,
- *the impact of additional for-hire taxi licenses on existing taxi chauffeurs*, *recommendations on the formula* to be used to establish the number of for-hire taxis, and other matters related to taxi use and need." [bullet formatting added][60]

The Final Report was produced in 2007.[61]The issues above are still under review, including the development of a formula. Meanwhile, Miami-Dade adopted special provisions for the sale of new permits in 2011, selling some permits by auction.

The following table lists the types of licenses issued by the For-Hire Transportation Section, showing some of their main characteristics. There are no provisions for "green" vehicles.

Type of license (CPNC)	Number	Transferable	Initial and annual fees
For-Hire Licenses:			
Taxis (December 2012):	2,113	With approval after 5 years of operation (new cabs)	Application fee: $350; Lottery entry fee: $100; License cost for lottery winners: $25,000.00; Annual renewal fee: $625.
Accessible Taxis (official 2012)	80 (incl. above)	Same	Same except license cost is $15,000

[59] Analysis of the County Manager, *cf.*
*h*ttp://www.miamidade.gov/govaction/matter.asp?matter=041899&file=false&yearFolder=Y2004
[60]s.31-82-(p). . .
[61]It is available athttp://www.miamidade.gov/business/library/reports/taxi-ridership-study-final.pdf

Type of license (CPNC)	Number	Transferable	Initial and annual fees
Underserved Area Taxis	62 (incl. above)	Same	Same except license cost is $15,000
Standard luxury limousine sedans (2012)	626	With approval	Application fee: $350; Lottery entry fee: $100; Annual renewal fee: $625.
Stretch and super-stretch limousines (2012)	134; (72 fleet permits)	n/a	
Ancient and antique limousines	none	n/a	
Passenger Motor Carrier Certificate (Vans and Mini-buses, including Jitneys, 9-28 passengers)	144 certificates; 879 vehicles	With approval	Certificate application: $350; Annual certificate fee: $625; Annual operating permit renewal fee: $625.
Special Transportation Service Certificate	5 licenses; 278 vehicles	No	Application fee: $130; Annual renewal fee: $625.
Non-Emergency Vehicle Certificate (Wheelchair and Stretcher Vans)	295	With approval	Application fee: $350; Annual renewal fee: $625.
Other licenses:			
Passenger Service Companies	38	No	Initial application: $350; Annual renewal fee: $150.
Chauffeur's registration	10,324	No	Annual renewal fee: $55.

Issue of Taxi Licenses

Taxis transport eight passengers or less and provide either street hail or pre-arranged service. They are equipped with a taximeter, and the passenger controls the route and destination. Taxi For-Hire Licenses are valid for one year.

As demonstrated by the Board's interest in the impact of the issue of new licenses on existing drivers in mandating the 2007 taxi-ridership study mentioned above, determining the number of licenses that are required is usually seen as a question of balancing factors,. However, citing the lack of "lack of accurate secondary data such as driver logs, computer summaries of caller's addresses, and the large number of taxi drivers that work off radio at the airport", the report found it difficult even to consider the relative demand of visitors versus residents.[62]

Since 2004, the number of licenses has been fixed by the Board of County Commissioners on an *ad hoc* basis. As noted, 75 new medallions were authorized for distribution by lottery, 25 per year for three years. Of those, 40 were specifically for wheelchair accessible vehicles, six to honorably discharged veterans, 15 for drivers of 25 or more years, and six more for drivers of 20 or more years. The remainder (as well as any that could not be allocated to the three foregoing categories due to an insufficient number of applicants) would be available by lottery to drivers meeting the minimum requirement of five years of experience.

Normally, auctions are only contemplated upon a final order of revocation where appellate proceedings have been concluded, but the Board of County Commissioners mandated an auction of six medallions in 2012, including two wheelchair accessible taxi licenses. What was unusual was that the sale of these licenses was not limited to current drivers. These medallions sold for substantially higher prices than the usual transfers: the four regular medallions were sold for $410,000, $428,000, $430,000 and $431,000

[62] *Final Report,op.cit.,* p.3.

respectively, while the AT medallions sold for $312,000 and $325,000.[63]Given the substantial cost, the "system deems a taxi for-hire license to be intangible property. The medallion owner can use it as collateral to secure a loan from a bank or any other financial institution."[64]

Since 1998, any chauffeur who is issued a taxi for-hire license must operate the taxi authorized by the license for one shift per day, five days per week. Licenses can only be issued in the chauffeur's own name. Nor can new for-hire taxi licenses be assigned, sold or transferred less than five years after issuance (with a few exceptions, such as where the driver is 62 years of age or older). Also, transfer to a corporation may be permitted in the case of the death or incompetency of the for-hire license holder. Winners must pay $25,000.00 within 120 days, although there are reductions for WAT and underserved area medallions. Applicants must also provide a record of transportation business activities, have committed no-crimes during past 5 years, provide fingerprints and photograph taken by County's Police Department; two credit references, proof of insurance and vehicle inspections. There is a $350 application fee, and a $625 annual renewal fee.

In 2011, approximately 49% of medallions were under corporate ownership, 30% taxi operator ownership, and 22% individual ownership[65]. While taxi licenses issued since 1998 may not be transferred in the first five years, older taxi licenses, now also called medallions, may be sold, given away or bequeathed, but any transfer is subject to the written approval of the Department. Transfer prices, which must be reported to the Department, are usually in the range of $170-180,000.

The change in prices since the adoption of the new "medallion system" in 1998 is remarkable. According to a County report, in 1992 license sales averaged about $26,000, but climbed to close to $52,000 by 1997 (one sale was for $80,000).[66]Given that the revenue from of auction sales is kept by the department to finance taxi regulatory activities, the auction resulted in a $1.5 million windfall above the expected market value of $140,000. This allowed Board to reverse a planned fee increase.

Accessible taxi license

In 2003, the County passed an ordinance implementing a wheelchair accessible taxi program, by issuing special medallions through a separate lottery which occurs first in each medallion lottery. A target at least 3% of all taxis being wheelchair accessible by 2006 was established. Evaluating the utilization of wheelchair accessible taxis was part of the mandate of the 2007 taxi-ridership study. While there are currently 80 such taxis to (3.8% of the taxi population), the main problem is that "while approximately half (54 %) of these permittees primarily work the airport … they are larger cabs and are often called to the head of the airport taxi line to handle larger amounts of luggage. Interestingly, airport curb personnel report that they rarely, if ever, have used these cabs to assist wheelchair passengers."[67]Curiously, it appears it is a punishable offence not to advertise that wheelchair services are given a priority (section 31-82-j-14), but there is no penalty for failing to give a WA call for service priority. This issue remains an active concern of officials in Miami-Dade.

[63]http://messages.finance.yahoo.com/Stocks_(A_to_Z)/Stocks_M/threadview?m=tm&bn=17670&tid=2327&mid=2327&tof=14&frt=2)

[64]http://www.miamidade.gov/business/licenses/taxicabs.asp Consumer Services Department (CSD) (July 2012)

[65] http://www.miamidade.gov/govaction/commminute.asp?cmbmeetdate=3095&file=true

[66]Oxenhandler, Steve, "Taxicab Licenses: In Search of a Fifth Amendment, Compensable Property Interest, *Transportation Law Journal,* Vol.27 (2000), p. 113 for 1998.

[67]Final Report,*op.cit.,*p.4

Zone permits and airport services

While regular licenses permitted to serve all municipalities in the county, like many cities, some areas of Miami suffer from poor taxi service. Miami is one of the few to have taken concrete steps to identify specific zones some years ago, and additional permits are allocated to serve areas in North and South Miami-Dade County.[68]

A minimum of 75% of Underserved Area (UA) Taxi pickups in the Northern underserved taxi service area must originate there, while in the South Miami-Dade taxi service area for-hire taxi licenses are restricted to picking up passengers in that area only. Owners must be able to provide documentation. The regulations also require UA vehicles that were equipped with connection to a radio dispatch as of 2007 to have maintained this affiliation, but it is unclear how effective this measure is.

Persistent complaints that these restrictions did not provide drivers with an adequate income led to two modifications, in 2009 and 2012. Since 2009, UA WAT license holders have been able to convert their licenses to operate countywide (except for Miami International Airport) upon payment of $10,000[69], while in 2012, UA license holders were allowed to work outside of their area half the time (even numbered plates on even numbered days, and odd-numbered plates on odd-numbered days).

Meanwhile, Miami International Airport (which is within the County) is generally recognized as an area with abundant service. Taxis licensed to operate in the County are generally free to operate at the airport although, as mentioned, some restrictions have been imposed on recent sales of new UA and WAT medallions.

There is also a specific program to serve short distance travel from Miami International Airport, the Airport Regional Taxi Service Program (ARTS). While 25 such licenses are authorized, only 16 remain active. The Board of County Commissioners has also established a specific rate structure for areas around the Airport.

Passenger Service Companies

Services provided by a Passenger Service Company must include providing two-way radio or cellular telephone dispatch services, for-hire vehicle color schemes and markings, maintenance and advertising of a telephone number for receiving all calls related to for-hire taxi services and handling passenger complaints and passenger lost and found.

PSCs must be registered. Applicants must provide the names of all partners, directors, officers, resident agents and stockholders who hold 5% or more of the shares of the corporation, police/crime records, and credit references. The radio or cellular telephone dispatch system must be described (there are no specific standards), including procedure for receiving passenger calls, dispatching calls, and maintaining required records; and a copy of the passenger service agreement forms for license holders and chauffeurs must be provided. The application fee is $350, with an annual renewal fee of $150.

Passenger service company registrations cannot be sold, transferred, assigned or leased. Any change in control or ownership of a PSC terminates the registration and a new passenger service company application shall be filed.

New medallion holders (since 1998) are not required to be members of a larger PSC, and may provide these services on their own without obtaining registration as a Passenger Service Company.

[68] See s. 31-93, (c) and (d).
[69] Section 31-82 (ℓ-5)

Licensing of Limousines and Other Vehicles for Hire

Miami-Dade County also regulates for-hire limousines, passenger motor carriers (including jitneys), special transportation and non-emergency vehicles on a countywide basis. As in the case of taxis, limousine and other service providers need to have a for-hire license or for-hire service company license from the County.

Limousines are not equipped with meters and are dispatched from one central business location. Service must be pre-arranged a minimum of one hour in advance of the transportation to be provided. There are several limousine vehicle types: there are standard ***luxury sedans,*** while ***stretch*** limousine means a sedan cut and stretched a minimum of forty-two inches beyond its standard basis, to carry between six to eight persons, excluding the driver, and ***super-stretch*** limousine means a luxury vehicle, stretched a minimum of 120 inches beyond its standard basis to carry nine or more passengers, including the driver.***Ancient*** and ***antique*** limousines are defined in Florida law, luxury motor vehicles twenty or more years from the date of manufacture, equipped with original engine and parts. (None of these are currently licensed.)

Luxury limousine sedan license holders operate only one vehicle per license: this is a closed category, with 626 vehicles permitted. However, stretch, super-stretch, ancient, antique, or collectible holders may operate more than one vehicle per license. There were 134 stretch and super-stretch vehicles registered in 2011, distributed among 72 fleet permit holders. Thus, while the number of licenses is limited, the total number of limousines is not. Luxury limousine sedan licenses are also distributed by lottery, with an entry fee of $100, and an annual renewal fee of $625. These licenses are transferable but no transfer will be approved that results in a license holder holding or controlling more than thirty percent of luxury limousine sedan licenses issued by the County. The transfer fee is $170 to another license holder, or $350 to a non-license holder.

There are effective measures ensuring market separation, including fares that are 3 ½ times higher than the hourly rate for taxis, and the need for pre-arrangement at an hour ahead.

Limousine drivers must have a for-hire chauffeur registration and fulfill the proper training requirements.

Passenger Motor Carrier Certificates are issued for vehicles with 9-28 passengers. Jitney services, operating on a fixed route but not on a fixed schedule basis, are included in this category.

Special Transportation Service Certificates are issued to companies operating STS vehicles. The Special Transportation Service is a complementary paratransit service operated in compliance with the Americans with Disabilities Act (ADA). To access this service, riders must be unable to use accessible public transportation services, and be registered with the County STS Certification Office. Paratransit services (local and inter-county) authorized in an adjacent county are allowed to pick up eligible passengers (such as residents of that county returning home) in Miami-Dade. Such services from other counties are not required to obtain a Miami-Dade County CPCN or have a for-hire chauffeur's registration.

Non-emergency Vehicle Certificates: Providers of non-emergency transportation require a Certificate of Public Convenience and Necessity. This service is intended for persons on stretchers or using wheelchairs, or whose handicap, illness, injury or other incapacitation makes it impractical to be transported by a regular common carrier or taxi, but who do not need medical attention in route. Vehicles are modified and equipped for wheelchairs or stretchers. The drivers must have a for-hire chauffeur registration, and the vehicles are inspected.

New Orleans, Louisiana

Jurisdiction Served:	The City of New Orleans, coextensive with Orleans Parish
Name of regulator:	Taxi & For Hire Vehicle Bureau, Department of Safety and Permits, City of New Orleans
Population (census estimate for 2011):	360,740
Taxi fleet (by type):	About 1450 (before release of new permits) 5 Accessible Taxis (AT) CPNCs (not yet issued) All City CNCP holders may serve the airport on for $200 fee
Number of limousines:	373
Taxis per 10,000 Population:	40.19
Drivers:	Approximately 3,000 for hire licenses have been granted by the City, of which about 2,100 drive taxis
Vehicles per household in that jurisdiction(2010 American Community Survey):	1.32
Proportion of households with no vehicles (2010 American Community Survey):	18.8%
Plates Transferable?	No, since April 2012
Market value of plates/medallions:	CPNCs sold in 2011 for a high of $67,000 in 2011. The median value was $39,000.[70]
Medallion/taxi license lease value:	$ 1600 monthly approx.

New Orleans provides an interesting example of a classic public necessity and convenience regime that is implementing a rapid modernization of its taxi rules, with a major reform launched in the spring of 2012. It is a major tourist destination city, and the goal was "to achieve a complete transformation of taxi service and Taxi and For Hire Vehicle Bureau by Super Bowl XLVII 2013." Taxi regulation is the responsibility of Taxi & For-Hire Vehicle Bureau in the Department of Safety and Permits. This unit also regulates limousines, sightseeing, courtesy, and animal-drawn vehicles. The regulations are consolidated in Ordinance 162, Vehicles For Hire[71], first adopted in 1956. The 27 new ordinances approved by City Council tightened driver standards, set rules for accessible taxis (issued on a somewhat different basis), and implemented a series of technological changes, such as GPS, new credit card machines and security cameras. While Louis Armstrong Airport is outside of the City limits, it is owned by the City, and ground transportation there is regulated through City Ordinance 22.

Historically, New Orleans has regulated the licensing of taxis based on certificates of public necessity and convenience (CPNCs). The allowed number of cabs was 1600, which was not subject to a population formula or other adjustment mechanism. While this limit was removed in 2009, the number of permits has remained below 1600. As the right of owners to sell or transfer CPNCs was formerly recognized by the City, there was an active secondary market, and few licenses were ever issued.

Two of the new ordinances sought to modify the terms of the CPNC licenses, defining them as privileges granted at the discretion of the director of safety and permits. Transfer of CPNCs was also restricted. While supporting the new vehicle standards, a federal judge blocked the City's attempt to declare CPNCs a privilege in August of 2012, but the injunction was lifted in December 2012.

The reforms did not affect the fundamental structure of the New Orleans regulatory regime, based on CPNCs. While it remains the responsibility of the applicant to demonstrate that the benefits of public necessity and convenience outweigh the likely or potential negative effects on other stakeholders, in

[70] *The Lens* Sept 21, 2011.
[71] http://library.municode.com/index.aspx?clientId=10040

December 2012 the City decided to make an additional 105 permits available, with 75 going to current drivers and 30 to companies. The total number of permits will remain below 1600. While this appears to give New Orleans significantly more taxis on a population basis than most other cities, this may be attributable to the importance of the tourist trade in the city, and the fact that New Orleans has the lowest meter rates among the five comparator jurisdictions.

The different types of CPNCs are shown in the table below.

Type of license (CPNC)	Number	Transferable	Initial and annual fees
Taxis	About 1450	No, since 2012	$150 per year, there is no application fee.
Accessible taxis (AT CPNCs)	5	No	Initial or annual renewal $300.00
Limousines (including luxury sedans) and Airport delivery limousine service.	373	No	New or renewal of CPNCs serve and maintain a fidelity bond ($10,000.00). Initial license $100, annual renewal $150
Airport contract limousines	Number of Airport permits?	No	
Animal-drawn vehicles	maximum 20 unrestricted & 10 restricted		Initial license or annual renewal $250.00.
Courtesy vehicles	maximum 75	No	Initial license or annual renewal $300
Temporary certificates for special events (CPNC's).			daily $20
Special charter			daily $10 and weekly $50 fees
Drivers	3000, of which about 2100 drive taxis	No	Initial or renewal fee is $40.

Beside Certificates of Public Necessity and Convenience, the city does not require any other license to operate a taxi or taxi company, except a driver's license.

a) Issue of Taxi Licenses:

The supervisor of the Taxi and For Hire Vehicle Bureau investigates all applicants and, in principle, renders decisions at least twice each year. Applicants are guaranteed a hearing, at which other interested parties may appear. The factors to be considered are impacts on other taxi businesses, driver incomes and traffic congestion[72].

The new permits announced in December 2012, will be distributed on a first come first serve basis for applicants meeting all the requirements of the (new) regulations. Besides vehicle standards, this includes the age of the vehicles, parish domicile of the applicant, length of industry service, alternative fuel vehicles, accessible vehicles, and complaint/violation history.

Earlier in 2012, provision was also made for a new class of wheelchair accessible taxi (AT) certificates, which are issued under a different regime, as it is up to the Director to determine whether any permits are required, and how many. The permits are then distributed by lottery. The first lottery for new AT CPCNs was held on July 27th, 2012, with five winners identified, but the permits have not been issued

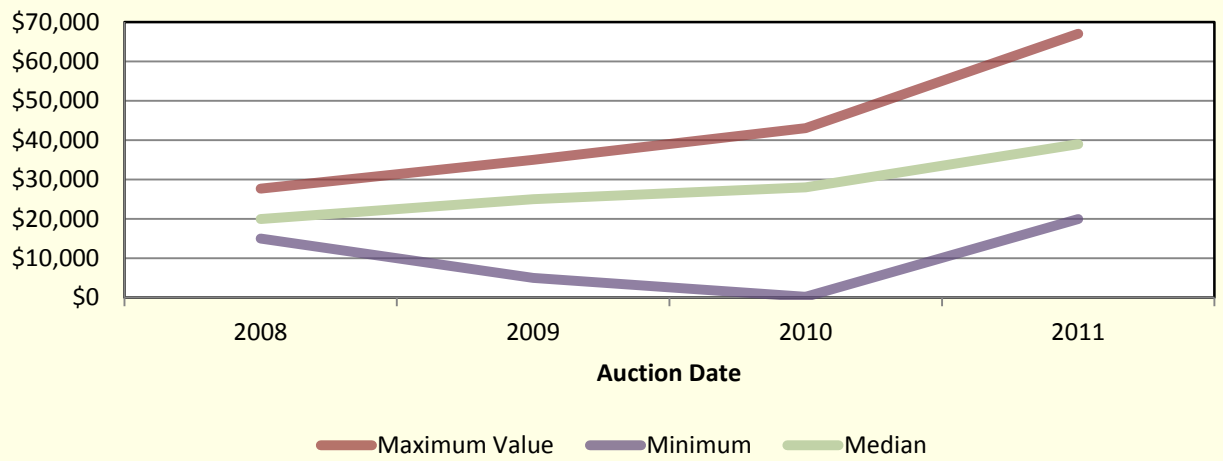
[72] Identified in Ordinance 162, s.185

until the centralized dispatch facility is operational. They are non-transferable, and are granted to cab drivers with at least 5 years of experience.

CPNC applicants must be 18 years of age, able to read, write and speak English fluently (in the case of partnership or corporation at least a principal partner or duly registered officer); must be citizens of the United States and resident for more than 6 months in New Orleans or a nearby parish[73]. Any corporation, association or partnerships needs to submit individual applications for each partner, principal officers and executive directors to get a CPNC, and fulfill all the provisions applicable to individuals. CPNC's have an annual fee of $150.

According to new rules, driver's permits and CPNC privileges are issued "at the discretion of the director of safety and permits"[74]. Previously, existing permits traded freely. According to *The Lens* (Sept 21, 2011) CPNC's were sold in 2011 for a high of $67,000. Data reflecting 347 transfers over a three and a half year period show a steady upward trend, with significantly higher values in 2011. The cost of registering a transfer with the city is $350. In Figure 1, below, the minimum reported values suggest some concessionary transactions, so the median value, which is less affected by low value transactions, is shown rather than the average.

Figure 1: New Orleans Transfer Values 2008-2011



Source: The Lens, September 21st, 2011

Accessible taxi license

As noted, a new category of CPNC was created in 2012 for accessible taxis (ATs), to be issued by lottery. Five lottery winners were identified. A key operational requirement is that these vehicles should be equipped with mobile radio or computerized communication system in contact with a 24 hourcentral dispatching facility, as the owners/drivers of AT CPNC companies must provide service to any location in the City within 30 minutes from the customer's call for service. Thus, the issue of these permits has been held up while a centralized dispatch facility is operationalized.

The bylaws also require accessible taxis to operate 40 hours per week, 47 weeks per year. Owners and holders of these certificates must not own or hold interests in any CPNC or business that owns one. They must meet several security requirements: if an applicant has violated any statute, ordinance or

[73] Specifically, in the contiguous parishes of Jefferson, St.Bernard, St. Tammany, Plaquemines, or in the oncontiguous parishes of St. Charles,St. John the Baptist, or St. James,
[74] Ordinance No. 024843, March 15, 2012.

regulation during the five years prior to application the bureau may refuse to issue the permit. The Bureau also investigates the record of the applicant regarding any other permits issued for commercial operation of a vehicle for the transport of passengers. An AT CPNC cannot be transferred, leased, sold or donated under any circumstances (a purchaser buying a company with an AT Certificate must apply for a new applicable permit).

There are also additional requirements for drivers. They must have a minimum experience of 5 years as full time driver, no more than 2 moving traffic accidents/ convictions/ violation of municipal code or have passenger complaints within 5 years (or 1 within 2 years, and pass a narcotics test and with mandatory revocation for the use of narcotics. The AT driver license's applicant needs to agree to a review of his/her records by a Law enforcement agency.

Airport and Zone

As noted, Louis Armstrong International Airport is outside of the City limits, but it is actually owned by the city. The Aviation Board has had some distinct rules, but it recently synchronized its vehicle standards with the new standards for the City, such that even taxis providing service from the airport to other nearby locations such as Kenner in Jefferson Parish will need to conform.

Formerly, there was a limit of 500 taxis to serve the airport. While a $200 annual fee remains in place, the issue of licenses to serve the airport will no longer be limited: any taxi with a valid City license will be allowed to pick up rides at the airport.

Taxi Lines

An individual or group holding 25 or more CPNCs may form a new taxi line. While taxi lines normally provide dispatch services to their taxis, membership or affiliation to a taxi line or dispatch organization is not required. All CPNC holders (or taxi line), except special charters, must maintain a business office with a telephone number in the parish.

Taxi lines are not licensed independently of the individual CPNCs that they hold, although there are a few particular rules relating to company applications for CPCNs. There are 13 companies at the present time.

Limousines and other vehicles for hire.

As seen in the table above, while there are no specific caps on numbers, the CPNC regime is used to regulate various other vehicles for hire, including limousines, sightseeing, courtesy, and animal-drawn vehicles.

Limousine CPNCs (which includes luxury sedans, which hold no more than 6 passengers) cover six to nine passenger vehicles. There are at present 373 limousine CPNCs. Limousine service includes airport contract limousines and airport delivery limousine service, but does not apply to wedding and funeral services.

Applicants for seven to nine passenger limousine CPNCs must possess a title or leasing document of a minimum of two limousines, not more than 5 years old. The rules for luxury sedans are more stringent: CPNCs are only be granted to applicants already owning two limousine CPNCs, and the vehicles themselves must be of the current model year.

All limousines and luxury sedans must have a safety inspection twice a year, in June and December. While limousines are not required to carry security cameras, nor do they have meters, from a safety perspective limousines are subject to essentially the same standards as taxis. The inspection fee is $50.

The number of permits for limousines serving the airport is determined by the department of safety and permits and the aviation board.

An important market separation measure is the regulation of limousine rates, which are higher than taxi rates. As well, the minimum booking period is at least three hours. Luxury sedans should not charge less than $35 per hour, and no more than $50 per hour, while for actual limousines, the rates should be at least $40 per hour, but not more than $65 per hour. Airport shuttles (to but not from the airport) may charge a maximum of $20 including federal tax and airport tolls.

San Diego, California

Jurisdiction Served:	Seven cities in San Diego County; Besides San Diego itself, El Cajon, Imperial Beach, La Mesa, Lemon Grove, Poway, and Santee, as well as the unincorporated area of the County
Name of regulator:	The Taxi Administration a unit of the Metropolitan Transit System (MTS) under San Diego Association of Governments (SANDAG)
Population (2010 census): 2011 estimate (US Census Bureau)	1,326,179 (city) 1,779,000 (taxi admin jurisdiction, including unincorporated area) 3,140,069 (County)
Taxi fleet (by type): official count	1,051 taxis among 454 permit holders (2012), 992 of which serve San Diego City (closed entry) 59 suburban permits (open entry) 225 taxis may serve the airport on any given day
Number of limousines:	886 (operating at the airport 2012)
Taxis per 10,000 Population:	7.4 (of city population) 5.9 (of population within MTS taxi jurisdiction)
Drivers:	4,000
Vehicles per household in San Diego County:(2010 American Community Survey)	1.8
Proportion of households with no vehicles (2010 American Community Survey)	7.30%
Plates Transferable?	Yes, with the approval of the Chief Executive Officer of MTS (for newer medallions, only after 5 years of issue date, but all current medallions are at least 5 years old).
Market value of plates/medallions:	$100,000 (2009)[75]
Medallion/taxi license lease value:	$865/ week (non official[76])

The City of San Diego, California is an interesting case where different local, regional and state authorities interact to regulate the for-hire vehicle industry. Taxis, along with jitneys, charter, low-speed, and non-emergency medical vehicles are regulated by the Taxi Administration of the Metropolitan Transit System (MTS), which itself is under the authority of San Diego Association of Governments (SANDAG). MTS Ordinance 11[77] specifies the regulatory requirements. However, the *number of taxi permits* is established by the City of San Diego, in Council Policy 500-02[78], while about 60 more are approved for pickups in participating suburbs. And, although the San Diego airport (Lindbergh Field) is within San Diego city limits, airport taxi permits are also regulated by the Regional Airport Authority. Limousine services are licensed by the California Public Utilities Commission, a State agency. Taxi driver licenses are issued by the Licensing Division of the Department.

Prior to 1978, San Diego regulated taxis on the basis of public convenience and necessity, but a number of issues, partly attributable to the dominance by a single firm, led to a process of deregulation[79]. The City Council allowed issue of an additional 6 permits each month and, after initially setting a ceiling on rates, removed it in 1980. Jitney service was also introduced.

[75]Nelson/Nygard Consulting Associates, *Taxicab Refranchising Plan Peer Review,* for the Los Angeles Department of Transportation, December 2009, p.30, available at: http://ladot.lacity.org/pdf/PDF190.pdf

[76]http://www.voiceofsandiego.org/opinion/article_caf085f8-d1de-11e1-9b61-0019bb2963f4.html

[77]http://www.sdmts.com/MTS/documents/OrdinanceNo.11.pdf

[78]http://docs.sandiego.gov/councilpolicies/cpd_500-02.pdf

[79] Gelb, Pat M., *Effects of taxi regulatory revision in San Diego, California*, Urban Mass Transportation Administration, Office of Technical Assistance, Washington, DC, 1983 available at http://catalog.hathitrust.org/Record/010630322

Although open entry is considered more viable in cities with less dense central cores and strong dispatch markets, like San Diego, San Diego's experiment with deregulation of its taxi market led to unanticipated problems. As expected, the number of taxis rapidly increased, from 409 to 915, while the number of companies went from 68 to 310, and the share of the largest company fell from 68% to 31%[80]. There was also an apparent improvement on dispatch response times. However, demand fell, as measured by total trips, causing a steep fall in driver incomes. Rapid turnover of drivers contributed to a decline in quality and, although there were fewer rules, the much larger number of taxis resulted in an increase in administrative workload.[81]

In 1982, San Diego City Council reversed course, imposing a moratorium on new licenses (which lasted until 2001), and put a ceiling on rates in 1983, which was 20% above the prevailing average. While companies were required to file their rates, they were free to bargain with customers[82].

In 1989 responsibility for regulating taxis for the City of San Diego transferred to the Metropolitan Transit Development Board (MTDB). In 2002 the MTDB (the name was changed to the Metropolitan Transit System (MTS) in 2005) was put under the jurisdiction SANDAG, which is governed by a Board from each of the region's 19 jurisdictions (18 cities and the county government). While SANDAG operates the MTS for the whole of the County, jurisdiction of the MTS Taxi Administration only extends over the seven cities with which it has contractual agreements, namely San Diego itself and six mainly eastern suburbs, El Cajon, Imperial Beach, La Mesa, Lemon Grove, Poway and Santee (Santee through June 30, 2013), as well as the unincorporated area of the County.

Responsibilities of the Taxi Administration include determining owner eligibility; inspecting vehicles; issuing permits; monitoring compliance with administrative and operational regulations; and investigating passenger complaints. As well as taxis, it also licenses and regulates low speed vehicles (LSV), non-emergency medical, jitney, charter, and sightseeing vehicles. It also regulates (but does not license) Dispatch Service Organizations, necessary to operate a taxi or a LSV.

A Taxi Advisory Committee provides input on taxi matters, including owner grievances and customer complaints, vehicle inspection criteria and process, and fees and fares for both the City of San Diego and the San Diego International Airport. Recent recommendations of the Taxi Advisory Committee have focused on the use of cameras to improve driver safety, and the passing on of additional charges imposed by the Airport Authority on rides originating at the airport.

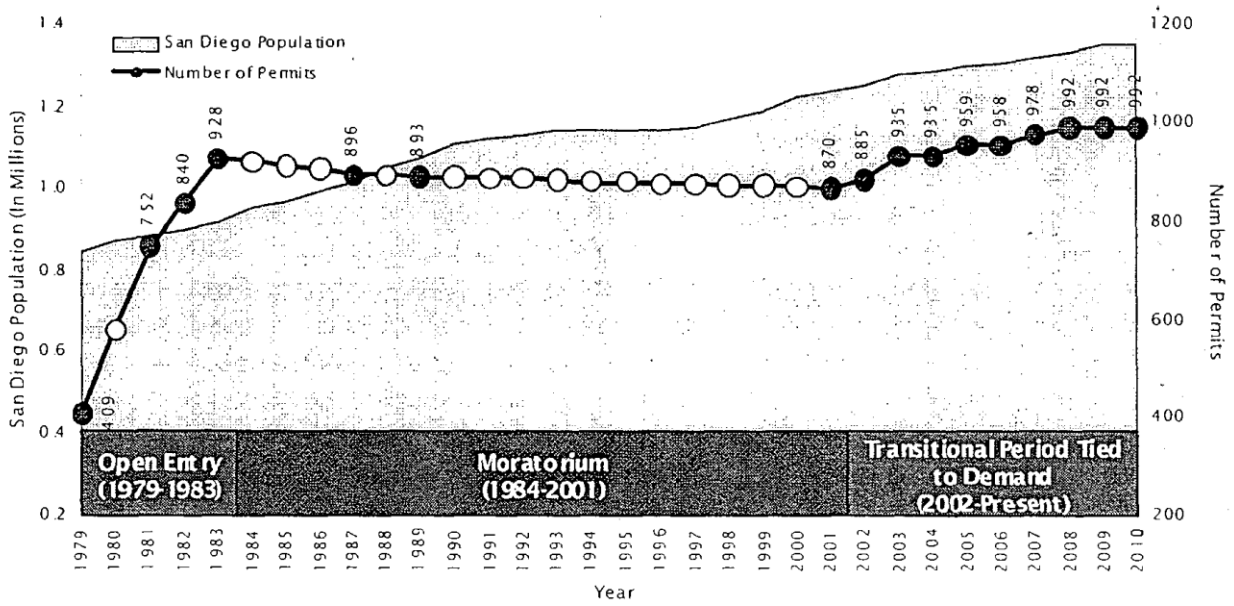
San Diego, of course, has been growing rapidly. In a revision of Council Policy 500-02, the City lifted the moratorium in 2001, immediately authorizing the issuance of 135 additional permits during a transitional period, after which a formula, based on population and hotel occupancy rates, would be applied. New permits cannot be transferred in the first five years after issue. The City also experimented with a number of methods of distribution, including lottery, auction and requests for proposals (RFP). In fact only 125 were issued during the transitional phase, as there were problems with the planned auction of ten permits. In 2012, the City Council revised the Council Policy on taxi permits, adopting a different formula and establishing lotteries as the preferred method of issue for both companies and individual drivers, as well as implementing various vehicle requirements.

[80]Frankena, Mark W., and Pautler, Paul A., *An Economic Analysis of Taxicab Regulation,* Federal Trade Commission Bureau of Economics Staff Report, May 1984, available at http://www.ftc.gov/be/econrpt/233832.pdf

[81] Teal, Roger F., and Berglund, Mary, "The Impacts of Taxicab Deregulation in the USA", *Journal of Transport Economics and Policy*, January 1987, pp. 37-56. See also True North Research, Taxicab *Permitting Process Study Final Report,* prepared for the Metropolitan Transit System, October 21st, 2011, p.14.

[82]Frankena and Pautler, *op.cit.*.

Figure 1, Taxi Permits and Population in San Diego, by Period



Source: True North Research, *op.cit.*, p.15

Meanwhile, the MTS also issues permits for the other cities that have contracted with it to manage taxi regulation. (These are issued on an open-entry regime, but holders are not permitted to pick up passengers within San Diego city limits.) This accounts for the difference between the number of permits authorized by the City of San Diego and the number of 1051 active permits showing on the MTS website.

From its peak of 928 in 1983, the number of San Diego City permits slid to 870 in 2001. With the issue of new permits in the "transitional period", the number grew to 992. In relation to the population, there are 0.75 taxis per 1,000 people (City of San Diego itself), and 0.59 for the area of jurisdiction of the MTS Taxi administration. This compares to 0.85 for San Diego at the end of the moratorium in 2001 and slightly more than 1 in 1983, at its peak.

The following table summarizes some of the main characteristics of these licenses.

Type of license	Number	Transferable	Initial and annual fees
Metropolitan Transit System			
Taxis	1,051 total among 454 owners (992 for San Diego City, 59 for other suburbs)	Newer permits (post-2001) after 5 years of issue Older medallions, 0001 through 1199 with approval ($200 fee per vehicle)	$3,000 application fee, plus $300 for each extra vehicle, plus $500 if a corporation. $1,750 application fee for older permits, plus $200 for each extra vehicle, plus $400 if a corporation. (All) $500 Regulatory Fee (2012) per vehicle
Low Speed Vehicle (LSV) permits (Centre City Development Corp. (CCDC) area)	35, though none are actually in service	n/a	$3,000 application fee, plus $300 for each extra vehicle, plus $500 if a corporation. $500 Regulatory Fee (2012) per vehicle
Jitneys	10 among 9 owners.	n/a	$3,000 application fee, plus $300 for each extra vehicle, plus $500 if a corporation. $500 Regulatory Fee (2012) per vehicle
Non emergency medical vehicles	193 among 26 owners	n/a	$3,000 application fee, plus $300 for each extra vehicle, plus $500 if a corporation.

			$500 Regulatory Fee (2012) per vehicle
Charters	4 vehicles (1 owner)	n/a	$3,000 application fee, plus $300 for each extra vehicle, plus $500 if a corporation. $500 Regulatory Fee (2012) per vehicle
Dispatch Service Organization	17**	n/a	$500 Regulatory Fee (2012)
The San Diego County Regional Airport Authority Board			
Airport taxi permits Airport Limousines	450 permits, of which 180 may operate daily. 886	Starting July 1, 2014, airport taxi permits will become non-transferable.	Fiscal Year 2013, ending June 30, 2013 "A-B" (alternate day) $295 per vehicle; "All" taxi permit: $590 per vehicle Driver Permit $40 per year
County Sheriff			
For- hire Driver's license (County)		No	1,500-2,000

Issue of Taxi Licenses

As noted in the *Taxi Permitting Process Study*[83], determining the number of licenses that are required is as a question of balancing demand and supply factors, that is, ensuring adequate supply of taxis without impairing owners' and drivers' ability to earn an appropriate return. Although Ordinance 11 states that the number of for-hire vehicle permits is determined at the discretion of the MTS Board, in the case of taxis, the number to issue is determined by the various cities. Almost all other vehicles for hire are approved on an "open entry" system, where anybody meeting the requirements is given a permit, and there is no fixed ceiling on the number.

The City of San Diego revised the Taxi Permit Policy (500-02) in 2012, adopting a new formula for adjusting the number of permits and determining the methods of issue. The formula, which is relatively simple[84], is as follows:

$$S = D/M$$

Where:

S = the calculated ideal supply of taxis

D = measured aggregate demand for taxi trips

M = the number of taxi trips needed to sustain one new taxi vehicle entering the market

The calculation is to be made every three years, with economic studies used to determine the values of D and M. Additional permits are issued when S exceeds the number of active (does not include unassigned and vacant) permits by 40 or more.

As mentioned, four different methods of distributing new permits were experimented with in the post-moratorium period[85]:

- Requests for proposals (RFPs), both for individual drivers and taxi operators;
- Lottery for individuals; and
- Auction. The auction method was not implemented, based on advice that it would violate cost-recovery provisions of the taxi program. The ten permits planned for auction were not issued.

[83] *Taxicab Permitting Process Study* (*op.cit.,p.32).*

[84] San Diego Council Policy 500-02, *op.cit.*

[85] The Taxicab Permitting Process Study provides a synopsis of the experience with each of these methods (*op.cit.*.p.43, *ff.)*

All new permits are now issued by lottery, with 40% going to individual drivers and 60% in blocks to established permit owners. The actual issue of the permits is managed by the MTS. As before, all permits are non-transferable for the first five years.

At present there are an additional 59 permits authorized by the MTS for use in the smaller eastern suburbs. Holders of these permits, which are made available on an open entry basis, cannot pick up passengers in San Diego City. While these are not issued at the level of the individual municipality, some municipalities require that taxi companies register their businesses to operate in that city.

A separate permit is required for each for-hire vehicle. While defined as a privilege, permits are automatically renewable (except for cause) upon payment of an annual fee. If a taxi is taken out of service, it must be replaced within sixty days, or the medallion may be lost.

Applicants, who must be 21 years of age, must provide names and addresses of their business partners, the number of permitted vehicles owned and operated, including the make, type, age and seating capacity of each vehicle; proof of financial responsibility; fare schedules; and a description of the color scheme, insignia, trade style, etc. Applicants must not have had a criminal conviction within the five years preceding the application. Taxi permit holders must have a business office open to the public during regular business hours.

Taxi permits are transferable, subject to MTS approval. Newer permits, issued since 2001, and LSV permits are transferable only after five years from the date of issue. Older permits (medallion numbers 0001 through 1199) may be transferred for a fee of $200. There were 95 transfers in 2010, and 76 in 2011. Although buyers and sellers are not required to report transaction prices, recent sale prices (2009) were around $100,000 for a city permit, and $170,000 for a City medallion with an airport permit[86].

Accessible and green taxi licenses

San Diego's 2012 Policy also imposes requirements for accessible and "green" vehicles, when there had been none previously, except at the airport. All individual permits and at least one-half of all new company permits must comply with the Americans with Disabilities Act standards, and all vehicles with new permits must meet the California Air Resources Board criteria for Low or Zero Emission Vehicle. Previously, there were no specific requirements in the regulations for accessible or green taxis, except for the recent RFP processes, which gave additional points to submissions committing to these kinds of vehicles[87].

Meanwhile, the MTS Taxi Administration implemented a new low-speed vehicle (LSV) service in 2004, for use in the downtown area. A LSV is typically a four wheel electric vehicle (other than a motor truck). With an unladen weight of 1,800 pounds or less, they should be capable of a speed between 20 and 25 miles per hour. These vehicles are permitted to wait at designated stands, accept street hails, and operate on a prearranged basis, like a taxi. While 35 LSV permits have been approved, none are actually in service.

Geographic Licenses and Airport Service

The City's 2012 Policy on Taxi Permits also requires that 25% of trips must originate in underserved communities. As the 2009 passenger study showed, as is quite common elsewhere, that service to areas outside central San Diego and the adjacent peninsula region, where the airport is located, experience

[86] *Taxicab Refranchising Plan Peer Review*, *op.cit.,* p.30
[87] *Taxicab Permitting Process Study,op.cit.,p.29.*

longer dispatch times[88]. However, what and where the underserved areas are remains to be established. Effective enforcement will likely require submission of trip records in electronic format.

As noted, the operation of LSVs is restricted to the downtown core, specifically the area of the Center City Development Corporation, but none are in service.

While a San Diego permit is required, the San Diego County Regional Airport Authority Board also regulates taxi permits, requiring an additional decal to provide service at Lindbergh Field. Although taxis operating at the airport have been able to sell their airport permits, the Airport Authority is also making changes to the transferability of its permits. While the market rate to purchase an existing permit has an estimated worth of as much as $80,000[89], starting July 1, 2014 airport taxi permits will become non-transferable. If not used or renewed, the new policy requires the permit to be surrendered to the Airport Authority or the holder must to pay a $3,000 fee to transfer to a new holder. However, the new holder is prohibited to make any future transfers and must agree to surrender the permit back to the Airport if no longer used or not renewed.[90]

The Airport has authorized the issue of 450 permits, however, only half that number may operate at the airport on any given day. The Airport's annual permit fees for fiscal 2013 (through June 30, 2012) are as follows:

"A-B" (alternate day) $295 per vehicle;
"All" taxi permit: $590 per vehicle.

The airport is taking other steps to modernize the fleet serving the airport, but its emphasis is different. In July 2010 the Airport Authority launched an incentive program to convert conventional for-hire vehicles to alternative fuels (AFVs). The incentives consist of a 100% reduction in ground transportation permit fees through 2014, to be replaced by penalty increases for non-converted vehicles that reach 200% in 2018, by which time it is intended that conversion to AFVs will be complete.

According to the Airport Authority there are also 886 limousines with approval to operate at the Airport.

Dispatch Service Organizations (DSOs)

As noted, all taxis and LSVs must be affiliated with a radio dispatch service. These companiesare regulated by the MTS and must be pre-approved before they can operate, but they not licensed as such. There are no fees. Only permits issued after 1991 must carry the colors of the radio dispatch service organization; for older medallions this is optional[91]. Currently, GPS-based dispatch is not required, although new licenses to be issued for the City of San Diego must have GPS. The four biggest companies, with over half of all taxis, already use new GPS-based dispatch technologies, such as Flywheel (formerly Cabulous), Taxi Magic, and Verifone.

The principal function of DSOs is to provide, as the name suggests, dispatch services to taxi permit holders, although they perform other functions, such as lost-and-found services. DSOs set their own service standards, such as telephone response or time to arrival of the taxi at the pick-up location.

[88] 2009 passenger survey, True North Research, p.10.
[89] *Cf. Transreviews*, March 24th, 2011,http://transportationreviews.com/news/2011/03/san-diego-airport-taxi-permits-to-become-non-transferable/
[90] San Diego International Airport Rules and regulations, Authority Code 9.19 (b)
[91] MTS Ordinance 11, s.2.3-c-5

Other Vehicles for hire and limousines

The MTS regulates a variety of other vehicles-for-hire, including jitney, non-emergency medical, charter, and sightseeing vehicles. All these vehicles are subject to many of the same vehicle and operating standards as taxis and LSVs, except that (other than jitneys) they are prohibited from standing or cruising for street hails. Limousines are regulated at the state level.

As noted, there have been *jitneys,* which operate on fixed routes, in San Diego since 1979. These services have remained viable, in part because of service between the naval station and the downtown core, although the principal routes now serve the border area.

Nonemergency medical vehicles transport physically and/or mentally disabled persons who require supervision and/or specialized transportation equipment or assistance related to the disability, and their attendants. Fares are based on a per-person plus per-mile rate or, if a shared ride, on a per-person and either a per-mile or per-zone rate. There are a growing number of such vehicles.

A *Limousine* service is defined as a luxury sedan or SUV transporting passengers on a prearranged basis. Limousines are regulated and licensed by the California Public Utilities Commission, a State entity. The Commission issues a Passenger Stage Corporation license. To qualify, an operator must have a properly register vehicle, proof of insurance, provide a driving statement, personal background information and undergo drug testing. Drivers require a California driver's license. A commercial driver's license is required if driving a vehicle capable of transporting nine or more passengers. As of December 2012, MTS Inspectors may inspect all CPUC licensed vehicles to ensure they are not exceeding the authority granted by their license, or operating as an unlicensed private-hire transportation provider.

Seattle, Washington.

Jurisdiction Served:	The City of Seattle
Name of regulator:	Consumer Affairs Unit, Department of Finance and Administrative Services
Population (2011 census estimate):	616,627
Taxi fleet (by type):	688, of which 351 and jointly licensed with King County. (There are 241 additional licenses in King County only) Of these, 199 are wheelchair Accessible, and 545 more are "green" (446 hybrids, 96 CNG as of Jan 2013). 199 for-hire vehicle licenses, of 194 are jointly licensed with King County.
Number of limousines (state regulated):	725 limousines; under a Cooperative Agreement with the State of Washington, the City of Seattle conducts safety inspections, street enforcement, and monitors insurance.
Taxis per 10,000 Population:	11.2
Drivers:	2745, with 337 more King County-only drivers, including part-time and seasonal drivers
Vehicles per household in that jurisdiction: (2010 American Community Survey)	1.4
Proportion of households with no vehicles: (2010 American Community Survey)	15.7%
Plates Transferable?	New taxi licenses cannot be transferredin first 5 years after issue.
Market value of plates/medallions:	Average of $146,000 (2011)
Medallion/taxi license lease value:	$85/shift or 525/week (eff. 11/15/2012)

Seattle places the responsibility for taxi regulation with the Consumer Affairs Unit of the municipal Department of Finance and Administrative Services. This department is a recent amalgamation of several departments with diverse responsibilities. The Department oversees everything from a centralized accounting facility, to local gas pumps, to the taxi and for hire vehicle regulatory programs, which are governed by chapter 6.310 of the Seattle Municipal Code, as well as limousines, under chapter 6.320. "Director Rules" implement more detailed and technical administrative rules, with public hearings to receive comments as required.

Seattle provides an interesting case study because it was a jurisdiction that deregulated in the 1970's, but then reversed and reregulated a few years later. Surplus supply remained for years, with a high concentration of large companies, older vehicles, and a general decline in the quality of service. There was a comprehensive rewrite of the code in 1996, and further significant reforms affecting leasing rules, alternate fuel vehicles, and security cameras in 2008. Seattle is also of interest because there is substantial interjurisdictional cooperation, dating from a 1995 cooperative agreement between Seattle and surrounding King County (which includes the airport).

As early as 1930, there were a limited number of licenses set by City Ordinance (in a 1:25,000 ratio to the overall population), which also prescribed fares and vehicle standards. In 1974, the ordinance was revised to prevent licensing requirements from interfering with competition. Then, in 1979 Seattle removed the cap on the number of taxi permits, and allowed firms to set their own fares. While the supply of taxis increased slightly, fares did not go down relative to regulated jurisdictions, and a hoped-for wave of rate-scheme innovation failed to materialize. Overall, demand for taxi services fell. Large companies still dominated the dispatch market, and new services and business models did not emerge.

Meanwhile, no price competition emerged at the airport, as a first-in-first-out rotation remained substantially in effect, and differential rates caused confusion.

A Taxi Liaison Group was established to channel feedback and improve service. In 1984, the City placed a moratorium on new licenses, and fixed fares. The process of reregulation had begun. The number of taxi licenses was frozen at 667 in 1990 but over time a number were returned to the city, so there were 643 actives by 1996. Effective January 1997, a range of new standards were implemented affecting new vehicles and driver testing.

In the view of the regulator, the license cap, rule changes and stricter enforcement have encouraged greater accountability to the public and better driver behavior, safety and training. Partly, this has been achieved by forcing independents into larger affiliations.

Type of License	Cap	Active Seattle	Joint with King County	King County only	Annual Fee	Transfer Value (2011 average – Seattle/Joint)
Taxis	850	688	351	241	$600 - Seattle $450 - King County	$146,000/$208,000
Accessible	none	45	45	6	Waived for both Seattle and King County	Unknown, as none sold yet (must be held 5 years).
Green	n/a	535	n/a	n/a	$600 - Seattle $450 - King County	Included under taxis
Taxi Associations	none	4	4	1	$1000 Seattle only	not transferrable
FHV (Seattle)	200	199	194	76	$600 - Seattle $450 - King County	$20,000
Limousines (State license)	none	Up to 725	n/a	n/a	$90 – City business license	Open entry

The moratorium on new licenses remained in effect until 2008, when the license cap was raised by City Ordinance to 850, with a 35 per year cap, to allow for issuance of additional licenses as needed to meet demand for taxi services are economy expanded.

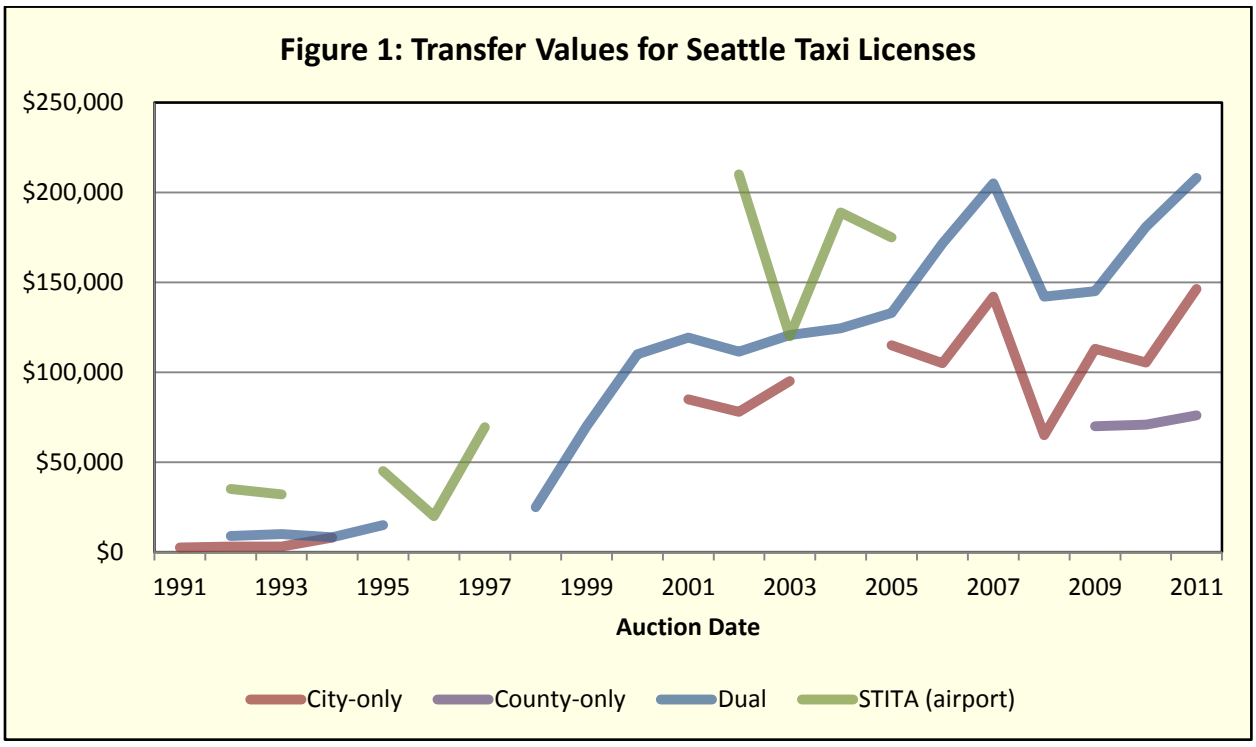
There are at present 688 Seattle taxis, of which 351 and jointly licensed with King County, which includes the airport. A 1995 agreement between the two jurisdictions allows cabs with both permits (which can be acquired in a single process) to operate seamlessly in each area. Taxi administration duties are shared between the two jurisdictions. King County licenses all drivers and Seattle licenses all vehicles, simplifying administrative work for drivers. Joint permits must be transferred together. There are 241 additional licenses serving King County only, not licensed for Seattle. Seattle taxis tend to be double shifted, whereas King County cabs are usually single shifted. The meter fare rates for each jurisdiction are identical, althoughKing County may apply a second rate on the meter below the Seattle maximum. There is also a cooperative agreement with the Port of Seattle, which operates the airport.

Issue of Licenses

While the City has set a global cap, it is considered to be well above actual requirements. The Director sets the procedure to determine how many new licenses should actually be issued. Determining the number of licenses that are required is seen as a question of balancing demand and supply factors, that is, ensuring adequate supply without impairing owners' and drivers' ability to earn an appropriate return.

Seattle has a relatively sophisticated model set out in the municipal code to determine the number of new licenses to issue[92] which identifies average service response times, total number of taxi rides, total paid trips per taxi, and average operating hours per taxi as factors to be considered. Computer dispatch reports are used for average service response times, while taximeter statistical downloads from meters when cars are inspected are used for operating statistics (revenue miles, revenue trips, fare revenue), and odometer readings for total miles. Using a base year of 2005-06, judged to be a "normal year"(in terms of both industry revenues and taxi demand), and with an established expected dispatch response time of 10 minutes, the above factors are combined to determine how many new licenses are required.

When the City issues licenses, they must be distributed either by lottery of the best qualified (only 10% of active drivers qualify), or by competitive request-for-proposal and award process. Lotteries for 15 WAT license were held in 2010 and 2011, while 15 more WAT licenses were issued by RFP in 2011. Applications for a license are made by individuals, and newly issued licenses come with a requirement that the license holder must drive. The minimum driving requirement is for 30 hour per week (40 for wheelchair accessible taxi licenses), over 40 weeks per year for the first five years.



Source: City of Seattle. Averages are based on a higher number of transactions after reporting requirements on transfers were strengthened in 2008.

[92] Section 6.310.500 (detailed in Director's Rule 6.310.500.A), rev 2008

Licenses which have been issued since 2008 must be held for at least 5 years before they can be transferred to a corporate entity holding multiple licenses. Ownership of taxi licenses in Seattle and King County is now widely distributed, with licenses held by 700 different businesses.

The value of Seattle licenses has climbed steadily, from just $2,500 in 1991 (which was after the moratorium on new licenses) to an average of $146,000 in 2011. They are currently selling for as much as $180,000 (at Yellow Cab). Joint licenses with King County sold for an average of $208,000 last year. Both values exceeded the previous highs set in 2006.

Accessible and Green Taxis

There are 45 dual-licensed (Seattle and King County) Wheelchair Accessible Taxis (WATs). Accessible taxi permits are not subject to the permit cap or the annual limit of 35 new licenses in any given year. Fifteen new licenses were issued in 2009, and 30 more in 2010 and 2011. As with regular taxis , the appropriate number of accessible taxi licenses is estimated using average dispatch response times, but allowing an extra 10 minutes to load and secure chairs before the meter is engaged from the time of the original call.

Applications for accessible licenses are made by individuals, and new license holders must drive. The minimum driving requirement for wheelchair accessible taxi licenses is 40 hours per week and 40 weeks of the year for the first five years (after which permit may be transferable).

King County runs the Metro Americans with Disabilities Act (ADA) Paratransit Program. This program provides 'curb-to-curb' service for persons with disabilities. This is a next day, shared ride service which people must gain eligibility for.

As for “green” vehicles, Seattle developed a loan program to assist taxi licensees to purchase green vehicles, but it has not been used, as loans are available from banks and credit unions. Green vehicles can be kept a year longer, and there is a green vehicle surcharge that can be added to lease rates. For Seattle and King County together, 55% of taxis are green (including 446 hybrids and 96 CNG vehicles).

Dispatch

All taxis must be affiliated with a dispatch service, and must bear the trade colors. There are at present five Taxi Associations operating in Seattle and King County (with one more in King County only). These associations must have at least 15 taxis and an identifiable color scheme. Besides providing their affiliated taxis with dispatch services, the companies collect, store and report various data.

There are new dispatch technologies available as “smartphone” apps. Clients can go to "Taxi Magic", "poundtaxi" or "uber” (for limos). Uber uses GPS technology to calculatefares, which may be problematic because it is not an approved measuring device under state and city weights and measures laws. As noted below, limousines are not metered, and must charge their passengers a flat fee by zone, or by hourly rate. Other smart phone apps, such as SideCar, are also used for unlicensed for-hire vehicle operation.

Zone permits and airport services

Taxi stands have been located near busy bars, and five late night taxi zones have been established. Up to four cabs can line up between 10pm-6am.

The Seattle Tacoma Airport, which is in King County, is operated by Port of Seattle. As noted above, there were problems in the deregulatory period: taxis at the airport stand were mostly independents all with different rate plans[93], so airport passengers did not know how to choose. Habitual reliance on a first-in first-out taxi line complicated matters for passengers.

Since 2010, the airport taxi stand is exclusively serviced by Yellow Cab, the largest taxi association in the city. Yellow Cab is contractually obligatedto the Port of Seattle to provide service to passengers within 5 minutes. Failure to do so results in a $50 fine, to a maximum of $500 a day.

There is a downtown hotel district to Airport flat rate of $40, the approximate meter rate.

For Hire Vehicles and Limousines

Besides taxis, Seattle allows for a maximum of 200 transferable vehicle-for-hire (FHV) licenses by ordinance. Prohibited from soliciting passengers, these vehicles compete with taxis in the dispatch market. They are not metered, and charge their passengers a flat fee by zone, or by hourly rate. These rates must be filed with the Director, and must be displayed within the vehicle.

For hire vehicles must, like taxis, be equipped with an operable digital security camera, but do not require GPS or silent alarm systems. These vehicles are not required to accept credit cards.

Limousines are licensed by the State of Washington, which does not limit the numbers of limousine vehicle permits. However, they must hold a Seattle business license (limousine carrier) to operate in the city, at a cost of $90. There are 725 licensed limousines operated by more than 400 companies in King County, and most operate in the City of Seattle itself. Like Seattle FHVs, a limousine is a for-hire car which operates on a prearranged basis (cannot be dispatched for immediate pickup), and does not use a meter. A limousine is unmarked. Under a 2012 cooperative agreement between the State of Washington and the City of Seattle, the City enforces regulations with respect to limousines (street enforcement – to prevent soliciting),as well as performing vehicle inspections on behalf of the State. The annual safety inspection fee is $25.

Drivers must obtain a limousine carrier license. Limousine companies must certify that all drivers are at least 21, hold Washington state driver's license, and have completed a Department-approved training course, passed an exam, a background check and a passed a medical.

[93] There were 101 different rate plansfiled (i.e., a combination of drop, distance and time charges) for the 168 companies operating in Seattle.