

# Downtown Juneau Parking: Usage Patterns Through December 2012

Compiled by the City and Borough of Juneau  
Community Development Department  
With the Parks & Recreation Department  
and  
Bootlegger Parking Enforcement

February 12, 2013  
Ben Lyman, Senior Planner

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On Monday, May 23, 2011, the City and Borough of Juneau embarked on a new trajectory of parking management, when free one-hour on-street parking in most of the downtown core was replaced with paid on-street parking, albeit with two free hours of parking available to all parkers. This change, achieved through the use of multi-space parking pay stations running a pay-by-license-plate system, was intended to encourage long term (all day or commuting) parkers to use off-street parking facilities while still providing free parking for shoppers and other short-term visitors to downtown Juneau.

Although some start-up problems were encountered, and communications problems disrupt system operation occasionally, there is little doubt that this new parking management system has resulted in behavioral changes for many downtown workers and visitors. Residents of some downtown neighborhoods have complained that the new on-street registration/payment requirement has resulted in spillover effects in their neighborhoods; the data collected by Community Development Department staff and presented in this document shows the level of those impacts more exactly than anecdotes are capable of doing, and offers insight to how those residents can find relief from any parking shortages that they have experienced.

Although the evidence that changing pricing and time restrictions for parking influences parking behavior is irrefutable, given the data shown in this document, not all of the documented changes in parking behavior were expected or intended, and some remain unexplained. Additional data collection over the long term will be required in order to understand long-term parking trends, especially as parking management is modified so as to adjust parking pressures to available supply.

In all of its past editions, this report was intended to be the unbiased record of parking use data collected to date. For the first time in the history of this report, staff set out in this January 2013 edition to determine if the three goals adopted with the Downtown Juneau Parking Management Plan of 2010 are being met, and if not, what changes can staff recommend for implementation to meet those goals. Each goal is discussed on the following pages, but at this time staff does not recommend any changes to management in order to better reach those goals.

In reviewing parking data, staff has found that additional information on parking management, parking availability, and even the use of parking pay stations needs to be disseminated to the public. Ample parking supply exists in downtown Juneau to accommodate peak parking events with capacity remaining; a lack of available parking can no longer be considered an excuse to not visit downtown Juneau.

With increased education of the parking public, parking use trends will continue to change; continued observations of parking behavior will be critical to responding to those changes, especially until the parking management goals adopted by the CBJ Assembly in the 2010 Downtown Juneau Parking Management Plan are fully achieved. Even after those goals have been met, continued data collection will be critical to making informed decisions on this vital and dynamic aspect of the transportation and land use connection. Parking will continue to be a critical issue as long as land is at a premium, residents desire a walkable community, and commuters rely on the private automobile as the dominant form of transportation. Changing land use patterns, demographics, fuel costs, and transit service levels will all play dramatic parts in the transportation of Juneau residents and visitors; to a lesser extent, weather patterns and non-motorized transportation mode share will also impact Juneau's parking landscape. Changes to variables that can impact parking use must be considered individually and in combination, as even temporary road reconstruction projects can have impacts on parking patterns that ripple for blocks through a neighborhood.

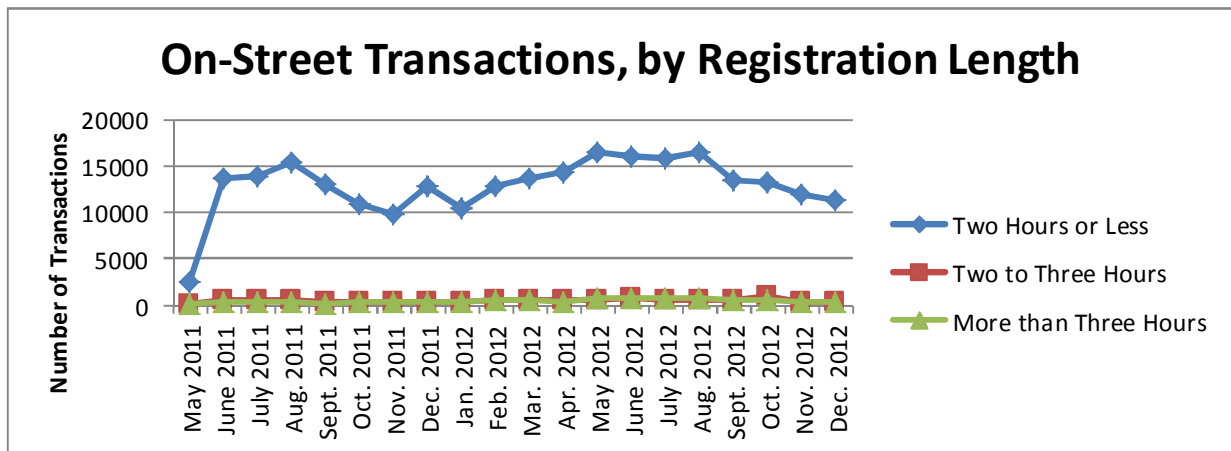
By sharing collected data and explaining how changes to management affect parking use patterns, CBJ staff can continue to raise the public's awareness of parking management's purposes, building support for continued change while facilitating good will between the parking community, enforcement officers, and local government. These educational efforts are critical to the success of the parking management program, and the data in this document provides an important tool for building understanding of the system in the public.

Ben Lyman, Senior Planner  
Community Development Department  
January 31, 2013

Goals of the Downtown Juneau Parking Management Plan:

1. Reduce the number of vehicles that are parked all day (long-term) in hourly (short-term) spaces.
2. Ensure that both the Marine Park Parking Garage and the Downtown Transportation Center Parking Garage (under construction) are utilized at or near capacity year-round.
3. Ensure that on-street parking spaces are available near all destinations at all times of the day for use by visitors who only need short-term parking.

Unfortunately, as there was no mechanism in place to track how long any particular vehicle was parked on downtown streets prior to initiation of the on-street parking management system, there is no “before” data to compare “after” data to. Accordingly, only anecdotal evidence can attest to whether or not Goal 1, “Reduce the number of vehicles that are parked all day (long-term) in hourly (short-term) spaces,” is available. The nearly ubiquitous reference to employees moving their cars every hour to avoid parking citations when on-street parking was free for a single hour in any space is therefore the “base” from which to improve. As the chart below shows, the vast majority of on-street transactions are for two hours or less, with only 5-11% of transactions being for more than two hours of parking; this trend holds in months with any number of total transactions. Although no baseline data exists to compare with current data, it appears that Goal 1 is being met.

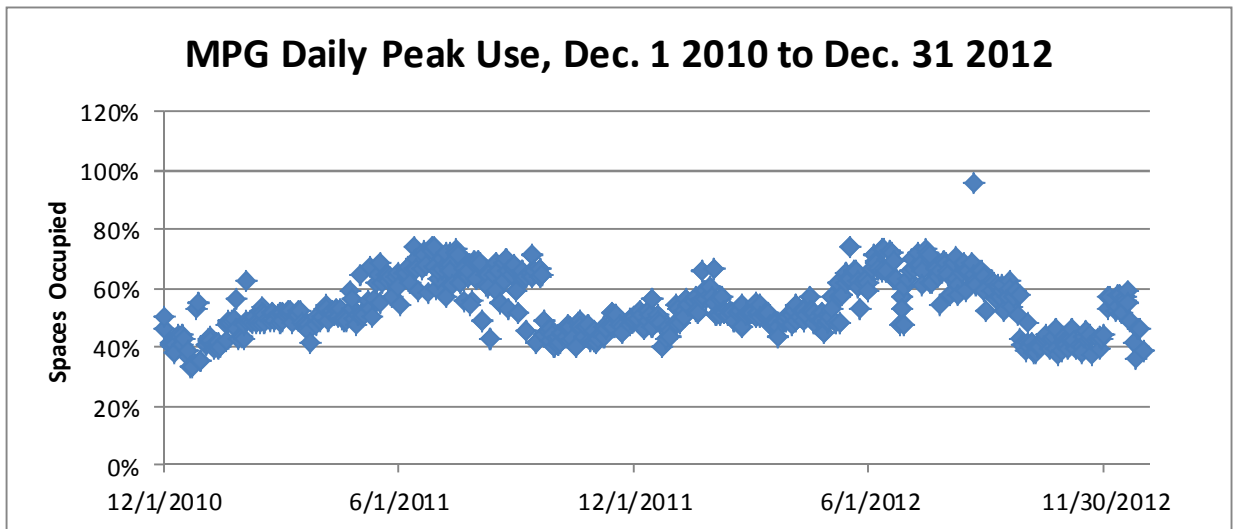
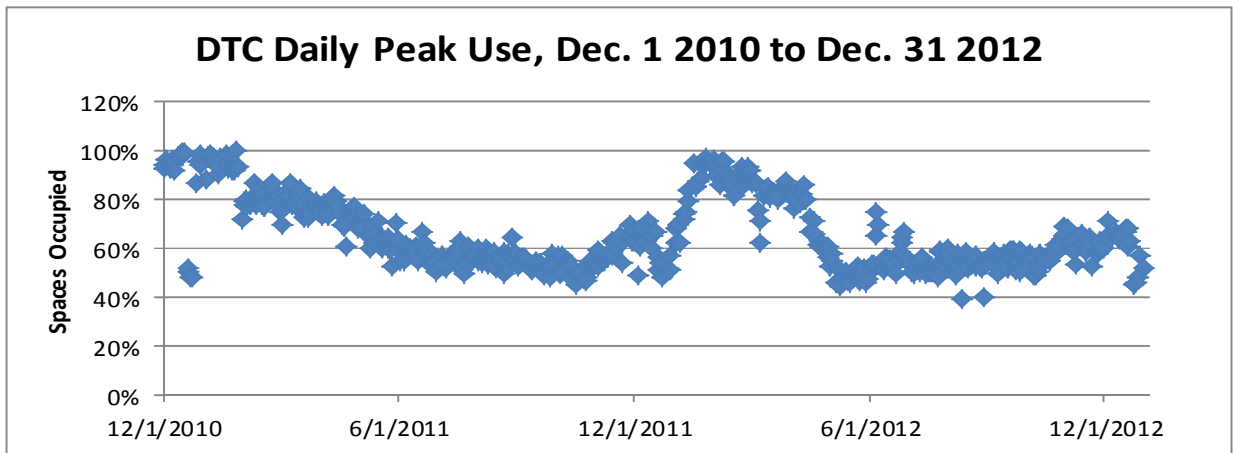


Usage of both the Marine Park Garage (MPG) and the Downtown Transportation Center (DTC) has been far below capacity through most months since the DTC was opened to the public in Dec. 2010; although one facility or the other might be busy during a particular month or season, there is always substantial capacity at the other garage. The charts on the following page show daily peak use for both facilities from Dec. 1, 2010 to Dec. 31, 2012. With few exceptions, use of both facilities has hovered around 40-60% since the DTC was opened. Goal 2, “Ensure that both the Marine Park Parking Garage and the Downtown Transportation Center Parking Garage...are utilized at or near capacity year-round,” has not been met.

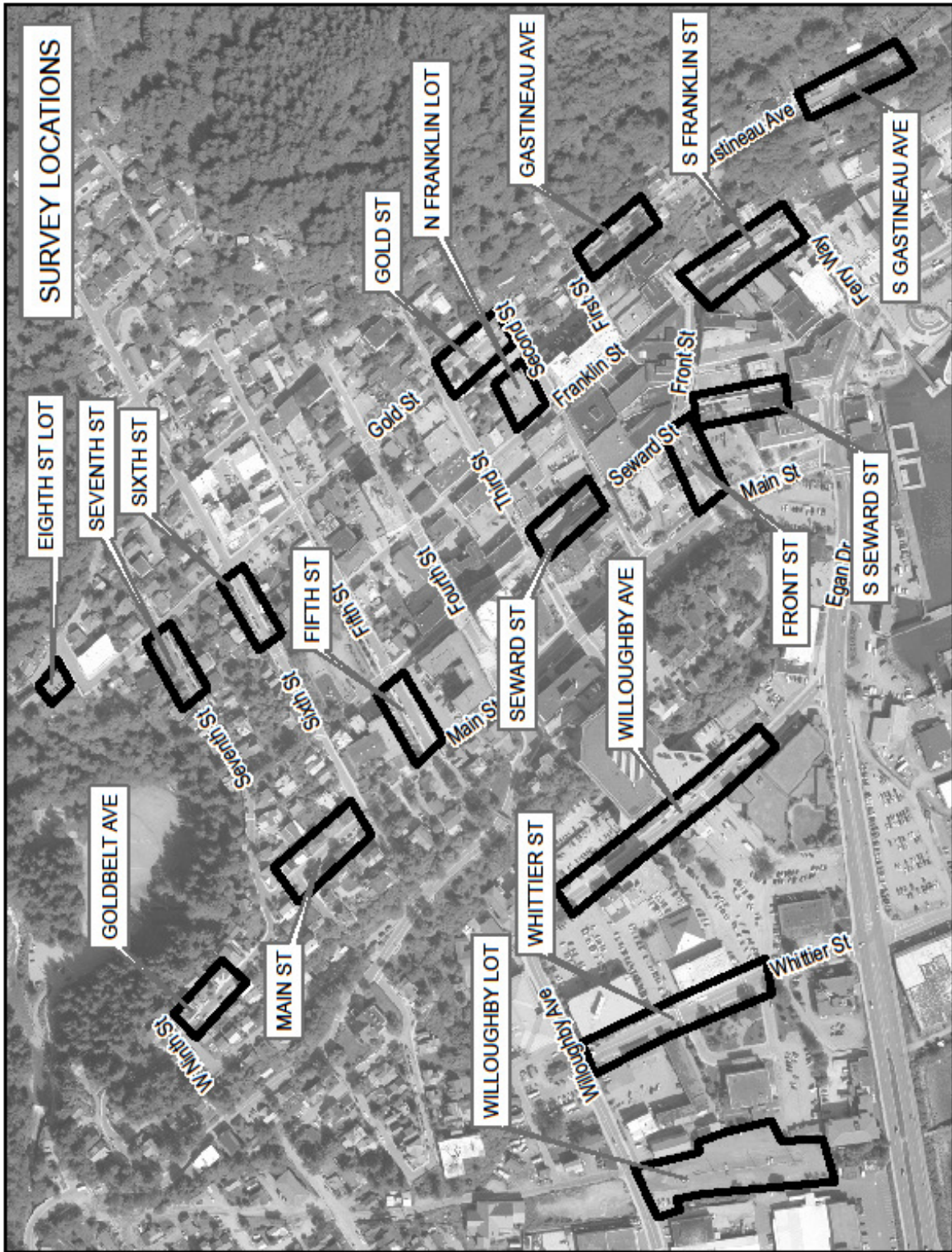
There are two primary ways in which progress can be made towards meeting this goal:

1. Increase demand for existing supply; and,
2. Lower price to shift existing demand due to economics.

With two major parking facilities recently removed from the downtown supply (Willoughby Lot and the Subport Lot adjacent to US Coast Guard Station Juneau) for at least the next four years (the Willoughby Lot will never be re-opened, as it will be occupied by the currently under construction State Library, Archives, and Museum (SLAM), and the Subport is being used for construction staging for that project; plans for the site after construction is completed have not been publicized), the excess capacity at the two CBJ-owned facilities (DTC and MPG) may play a critical part in meeting the shifted demand in the coming years. Accordingly, staff does not recommend pricing changes at the MPG or DTC at this time.



Occupancy rates of particular, representative blocks have been tracked since before on-street parking management went into effect, and the Parking Use Survey's *Usage Patterns* Report (this document) has published this data in several editions since on-street parking management began. This edition, like its predecessors, is composed primarily of charts displaying usage trends and related discussion. This data relates directly to Goal 3, "Ensure that on-street parking spaces are available near all destinations at all times of the day for use by visitors who only need short-term parking." Although there are certainly peak periods when no parking is available on some block faces, the data collected in the Parking Use Survey shows that peak use is often limited to relatively small areas at any given time, such as only one or two survey blocks in proximity to each other, and that peak use periods on those blocks do not extend to neighboring survey areas. That is, there may not be an on-street parking space directly in front of a given destination at all times, but there is almost always on-street parking available within one or two blocks of any destination. The existing parking management system appears to be meeting this goal, and staff does not recommend any changes to pricing or time limitations related to meeting this goal.





The 2010 *Downtown Juneau Parking Management Plan* (DJMPM), adopted as an addendum to the *Comprehensive Plan of the City and Borough of Juneau* (CBJ) in Ordinance 2010-21, describes a Parking Use Survey to be conducted as part of Juneau's parking management program. That Parking Use Survey was initiated on April 29, 2010 with eight survey blocks; in the 32 months since it was initiated, staff has expanded the survey to include six additional blocks and three off-street parking lots (shown on map on previous page); one of those lots has subsequently been dropped from the survey due to changes in management. Data is also collected on use of the CBJ's two parking structures, the Marine Park Garage (MPG) and the Downtown Transportation Center (DTC), as well as the North Franklin Lot (managed as part of the DTC) by the contracted enforcement firm for those facilities, Bootlegger Parking Enforcement.

As some blocks have been added to the survey after its initiation, long-term usage trends, as well as before- and after-parking meter data is not available for some facilities. All available data is used in calculating the usage trends shown in this document; in some cases, since only post-parking management change data has been collected, limited conclusions can be drawn from the data. Long-term usage data for the MPG is available, since this facility has had hourly occupancy counts conducted in it for many years; for the sake of comparing recent parking trends, no MPG data pre-dating July 2010 is used in this document, even though it is available.

All data in this document is shown as a percentage of occupancy of the given facility. Thus, a block determined to have a capacity of seven standard vehicles will show 85.7% occupancy if six cars are parked along it, and 114.3% if eight cars are parked along it. Motorcycles are counted as a single vehicle, so blocks can be listed as over-capacity (anything over 100% occupancy) while still functionally having an available space. Although this situation is possible, over-capacity events typically result from vehicles being parked very closely together, having vehicles at block ends hang over into yellow-curbed areas, or simply from illegally parked vehicles that are functionally parked within the survey area; having even a single motorcycle parked on the block does make over-capacity counts more likely. For example, all over-capacity counts of the Eighth Street Lot are the result of a motorcycle and a car or truck sharing a single parking space.

The data shown in this document makes it clear that the implementation of paid on-street parking, which occurred on Monday, May 23, 2011, has affected parking behavior in downtown Juneau. Many downtown core streets that were often parked near, if not at, capacity are now fully utilized only at peak periods or outside of enforcement hours (8:00 am to 6:00 pm Monday through Friday); residential or other peripheral streets without paid on-street parking and with no time limits for free parking have seen changes as well, in some cases with increased occupancy rates and in other cases with decreased occupancy. All references to "before" and "after" in this document refer to this transition, with all survey periods prior to 5/23/11 listed as "before" and all those on or subsequent to 5/23/11 listed as "after."

Although some changes in parking behavior can be directly attributed to changes in parking management, factors that have affected parking enforcement have mitigated those effects to a large degree. Some parkers did immediately change their behavior upon installation of on-street parking meters; other parkers returned to old habits (or developed new habits) when they realized that parking enforcement was not occurring consistently until late October 2011. After technical start-up problems were resolved and the enforcement system was tested and found to be operating correctly in late October, enforcement efforts resumed, and many parkers had to re-learn how to follow "new" parking management rules that they had been ignoring for five months. Accordingly, many of the changes in parking behavior that were evident in the first few months after on-street parking meters went live were lost as parkers grew accustomed to ignoring parking restrictions. Intermittent communications failures between the pay stations, the hosting server, and the handheld enforcement devices again led to a suspension of enforcement in the fall of 2012. This is problematic not just because of lost citation revenue, but also because parkers who are not using the system correctly do not receive feedback and can become accustomed to using the system improperly; when enforcement is resumed after prolonged periods of suspension, parkers can be confused as to why they are "suddenly" receiving citations when they thought they were using the system correctly for a period of time.



Staff expects that as parking management matures in downtown Juneau, new blocks will be added to the parking use survey; it may happen that some survey blocks are found to not return useful data, and those blocks may need to be stricken from the survey so as to dedicate resources to other survey blocks. If survey blocks are considered for removal from the survey, special attention should be paid to whether or not other survey blocks represent the special circumstances of the block considered for removal from the survey. It is preferable to reduce the number of surveys conducted on a given block or facility to eliminating it from the survey altogether, since long-term data requires long-term collection.

In order to ensure the efficient allocation of finite resources, it is occasionally appropriate to suspend surveys of a given area or facility. For example, during the first weeks after parking meters went live in the downtown core, surveys typically skipped the Phase 2 Parking Management Area (Willoughby Lot, Willoughby Ave., and Whittier St.) in the interest of time; similarly, surveys of State Employee parking permits displayed on vehicles parked in the DTC were conducted occasionally in the winter of 2010-11; these counts were suspended until after on-street parking meters had gone live, when they were conducted two more times, after which they were suspended again until a single “status check” count in December 2011, and another in December 2012. These spot checks allow for comparison of trends over the course of many years without demanding very much staff time.

Additionally, changing management of a facility may warrant changes to survey blocks. The Willoughby Lot, which is owned by the State of Alaska, was managed as a public parking lot by the CBJ for several years, but this arrangement was terminated effective November 20, 2011. Accordingly, this facility was dropped from the parking use survey as its use was restricted to vehicles displaying a valid State of Alaska Employee parking pass. Construction of the new State Library Archives and Museum on this site has begun, and no public or state employee parking is available on this site currently.

The particular blocks or facilities that are surveyed are not the only changes to the Parking Use Survey that can be expected over time; the ways that collected data is viewed and organized will also change over time. The December 2011 edition of this document included new charts showing parking peak use at the MPG for each particular week day for each survey month; this view of the data explains otherwise anomalously large ranges between low and high occupancy counts at that facility for some months of the year. As this example shows, a particular view of the available data may result in new questions that in turn lead to new ways of organizing and viewing the data, which may result in additional questions that require yet another new way to view the available data.

The January 2013 edition includes, for the first time, transaction data collected by the multi-space pay stations. With approximately 20,000 transactions each month (combined on- and off-street parking), this is a rich data source that staff only gained access to and began to explore in the last months of 2012. This data will doubtless tell many stories about the parking management system when it is reviewed, but in this edition the data is used primarily to document how parkers are using the on-street system. The data shows a clear need for additional work educating the public about how to use the system, as well as indicating possible revisions to system operation to improve the user’s experience.

Readers are encouraged to view the data presented in this document with a critical eye, and to forward any questions or requests that they have for particular views of data to Ben Lyman, Senior Planner, at the CBJ Community Development Department, 155. S. Seward St., Juneau, AK 99801, or by email at [Ben\\_Lyman@ci.juneau.ak.us](mailto:Ben_Lyman@ci.juneau.ak.us).

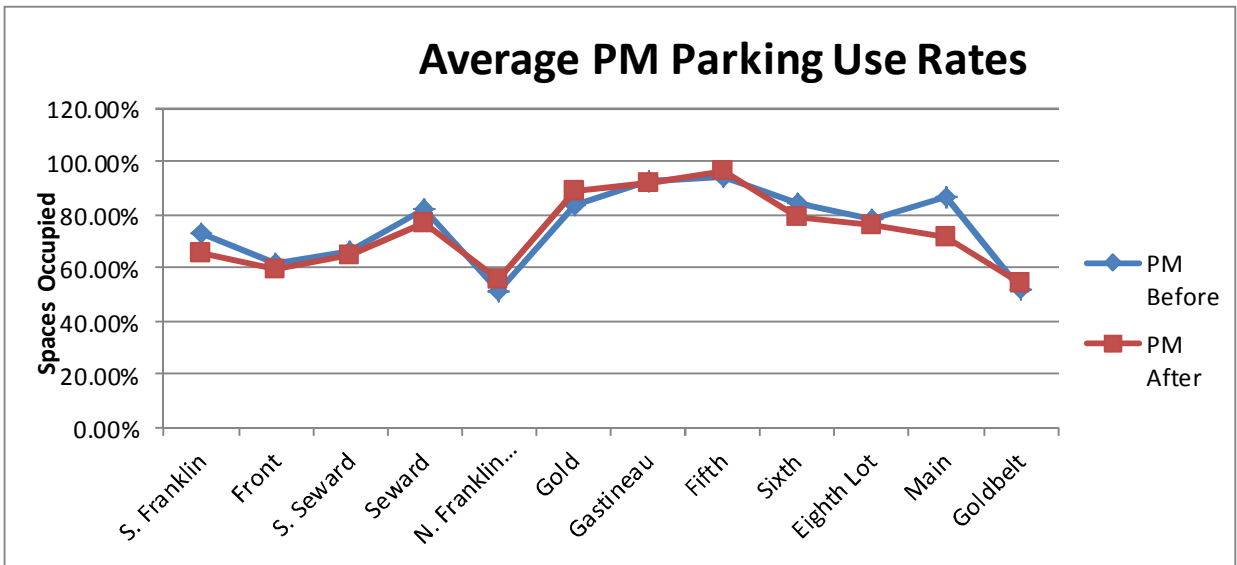
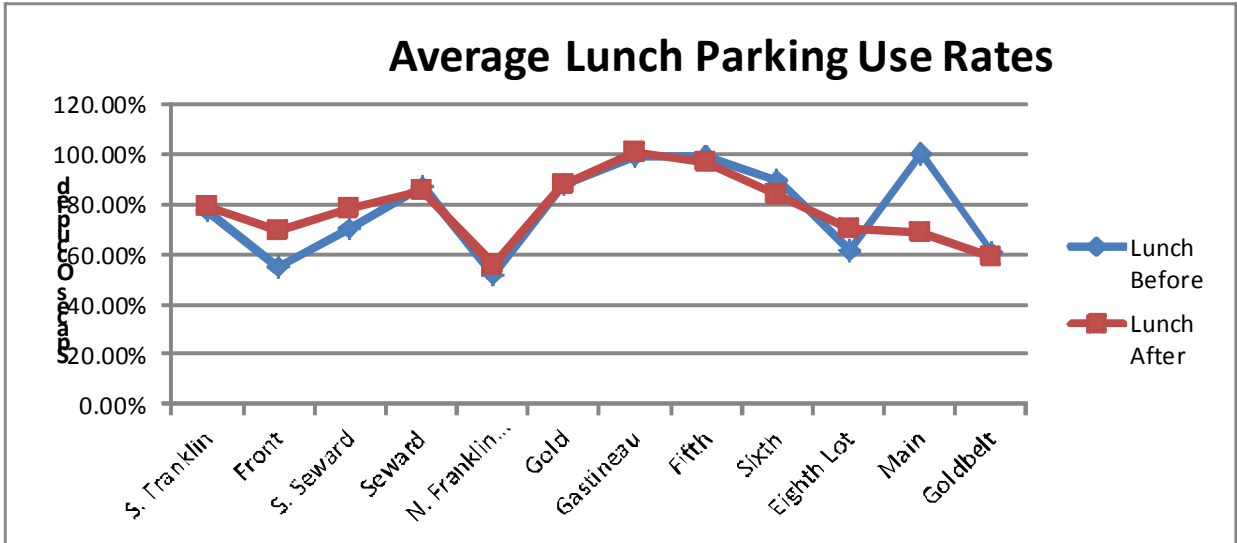
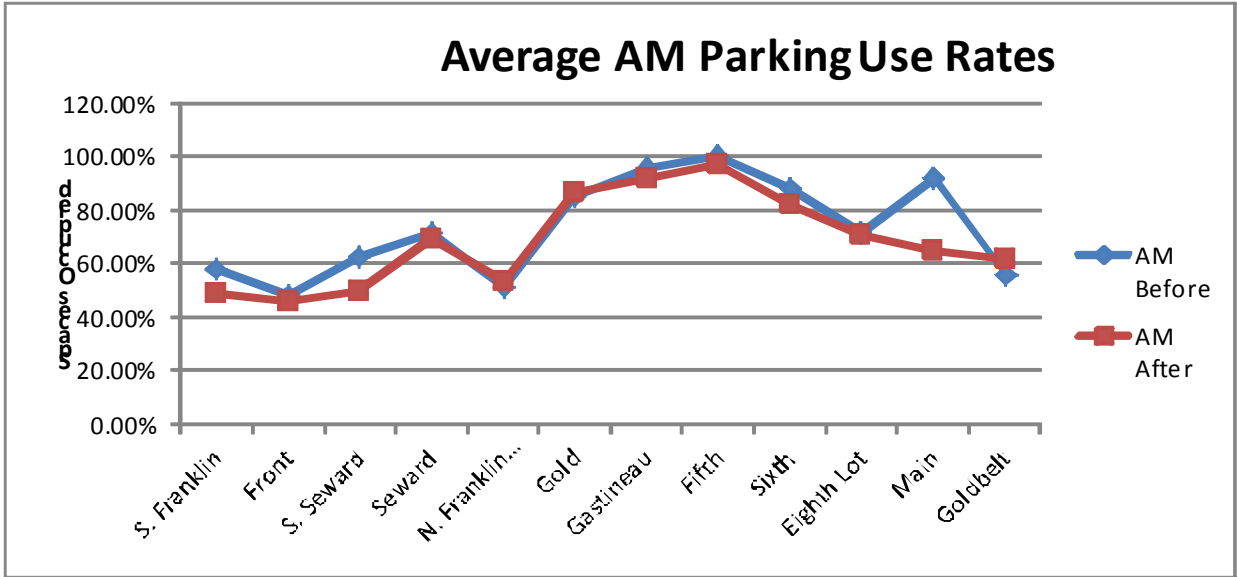
The first set of charts in this document show before and after average use rates for survey blocks during three time periods: AM surveys are conducted between 8:00 am and 12:00 pm (8:00 to 12:00); Lunch surveys are conducted between 12:00 pm and 1:00 pm (12:00 to 13:00); and PM surveys are generally conducted between 1:00 pm and 4:30 pm (13:00 to 16:30), although a small number of night-time surveys conducted primarily on residential streets are also in this group.

The survey streets are roughly organized from those in the central business area on the left to the peripheral streets and finally to the furthest residential streets from the commercial area on the right. The commercial streets, S. Franklin, Front, S. Seward, and Seward (left side of each chart) showed a high degree of volatility in use before and after the installation of on-street parking meters when data was first reviewed comprehensively in August 2011, but as parkers learned that the CBJ was unable to enforce adopted parking regulations over the course of the late summer and fall of 2011, many returned to old habits and parked their cars for extended periods of time without paying or registering for their time. Accordingly, the “after” occupancy data was not nearly as different from the “before” data in December 2011 as it was in August 2011. By December 2012, the average “after” data was nearly identical to the “before” data.

The streets on the periphery of the metered area, Gold, Gastineau, Fifth, and Sixth—where management was not changed and time-unlimited free parking is still available—have seen almost no change in occupancy rates with the implementation of paid parking in the downtown core. The more removed residential streets, Goldbelt Ave. and the Eighth Street Lot, show relatively little change throughout the day. Main Street has seen the greatest change in use, with a reduction in use of 25% in the AM and of 31% during the Lunch period; PM surveys found much less change in behavior, with only a 15% reduction in use. In December 2011, Goldbelt Ave. had very little change in use during the AM and Lunch period, but PM use rates increased by approximately 8%. By December 2012, average use patterns had changed on Goldbelt Ave., with no significant change in use during Lunch and PM periods, but with a 6% increase in AM use. This is the single greatest increase in utilization of any residential street following the installation of parking meters in the downtown core, but with average utilization of just 60% after this increase, Goldbelt Ave. is still not used to capacity.

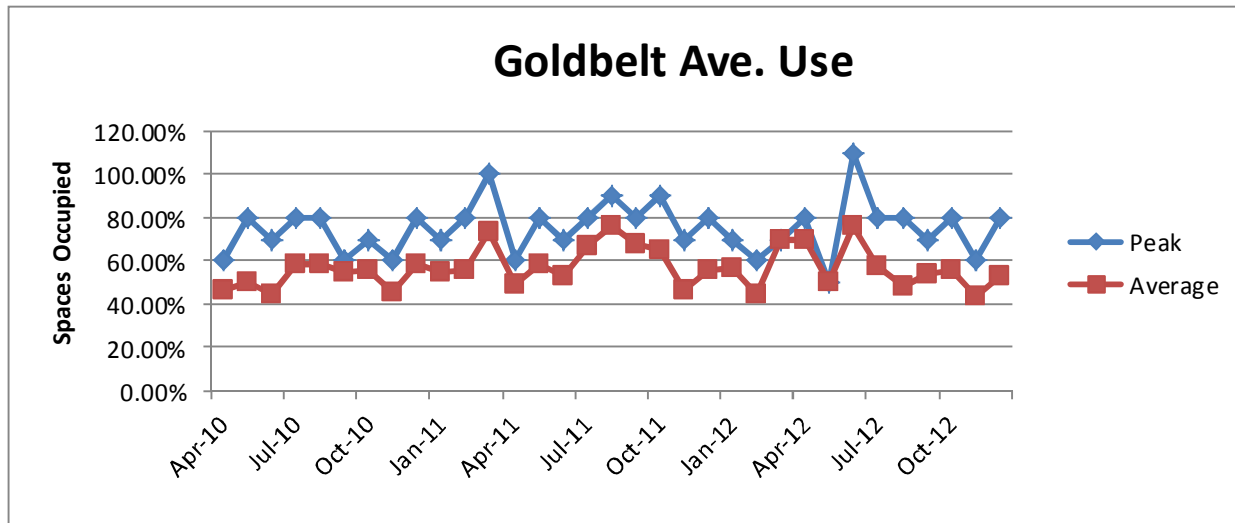
For residents in areas with average usage rates that hover near 100%, the new on-street parking management system may appear to be making parking more difficult to find, but with uniformly high usage rates both before and after meter installation, the problem appears to be one of simply too many residents with too many cars and too few spaces; spillover effects from the metered area cannot alone explain these consistently high occupancy rates, as they pre-date the use of on street parking meters.

The North Franklin parking lot, which was generally understood to be unavailable for public parking previously, was opened to public use on Monday, May 30, 2011. At that time, its already-low occupancy levels plummeted, as those who had used the facility previously no longer had exclusive rights to their parking spaces and apparently did not take advantage of the now-public spaces; additionally, the general public was not aware that the long-underused lot was now available to them. In the months since that change, use of the N. Franklin Lot increased steadily through November 2011, with peak use remaining steady until a sharp decline in peak use in December 2011 and average use November and December 2011. In January 2012, average and peak use climbed sharply, and throughout 2012 the N. Franklin Lot saw average use at 60-80% of capacity, and peak use at 90-100%. Even with increased utilization, this facility is often capable of accommodating vehicles that can't find parking spaces on the Gold St. and Gastineau Ave. survey blocks, especially during night-time hours.

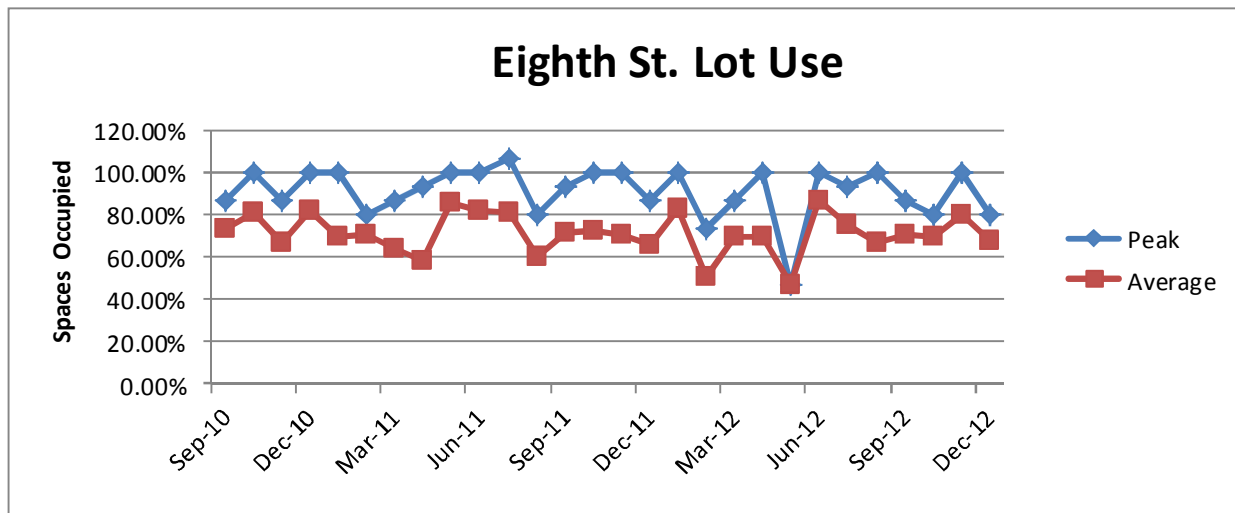


Goldbelt Avenue and the Eighth Street parking lot are the two residential survey blocks that are farthest from the pay/register to park area. The four blocks between these survey areas and the pay/register to park area are steep, and destinations are far enough from these blocks that they are rarely used by workers or other non-residents, although neighbors report that Legislative parking overflow affects the area. The data does not bear out a winter (legislative session) spike in parking use; other than the peak use of 100% in March 2011, discussed below, there is no indication that increased parking demand is placed on these survey blocks during the legislative session, January—April.

The data below shows that in 33 months of surveys, Goldbelt Ave. has only been parked at capacity during two months, first when street cleaning and construction related parking restrictions closed portions of Main Street, Seventh Street, and all of Dixon Avenue to parking in March 2011, with another uncharacteristic spike in use in June 2012. Average occupancy is generally below 60%, but has reached nearly 80% during a few months.

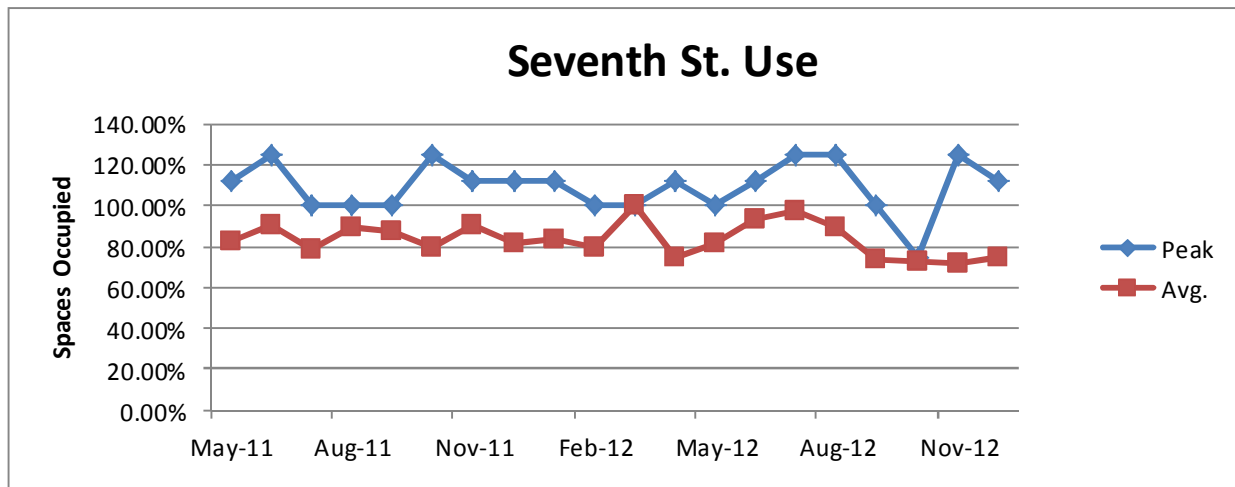


The Eighth Street Lot is often parked at capacity, and the presence of a single motorcycle in a corner of a space in the lot resulted in over-capacity counts in July 2011, when the space was occupied by both the motorcycle and another vehicle. Even though the lot is often full, its average occupancy is generally at or below 80%. The uncharacteristically low peak and average count in May 2012 is the result of only a single survey being conducted at this facility that month; anecdotal evidence (the author lives adjacent to the facility) suggests that use of this facility was typical in May 2012.

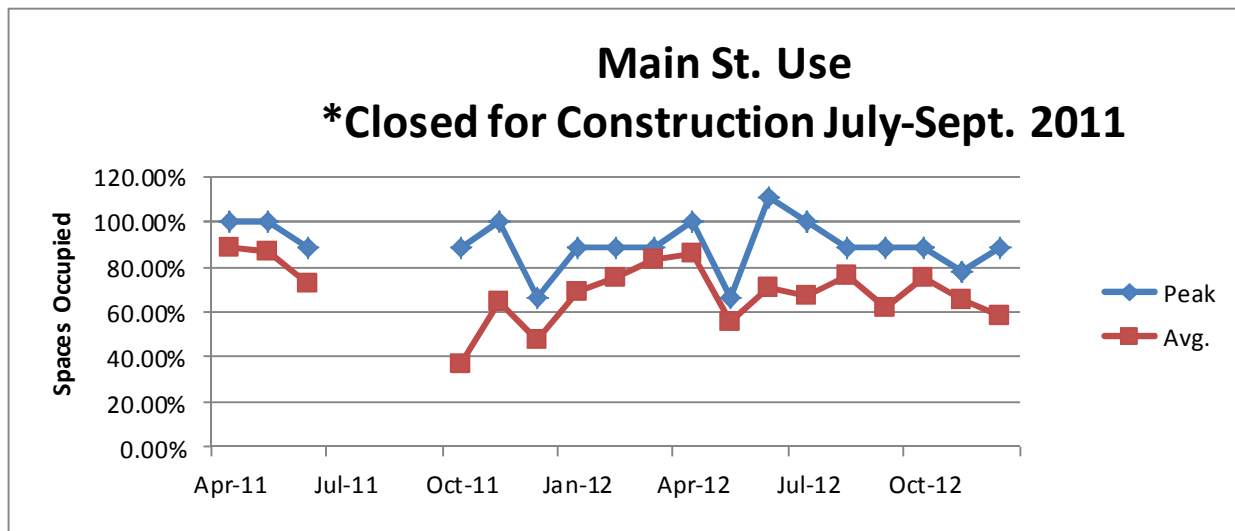


Some residential streets were added to the Parking Use Survey after on-street parking in the downtown core began requiring payment or registration; these facilities, with 20 months of data collected, can only be used to see current conditions and recent changes in behavior, as there is no “before” data to compare to “after” data. Seventh Street, between Gold Street and the N. Franklin Street stairs, is one such residential street. Main Street between Sixth and Seventh Streets was added as a survey block in April 2011, one month before Seventh Street was added to the survey; after data had been collected for just three months, this block was closed to parking and underwent reconstruction that lasted until October 2011.

Seventh Street parking use data shows that although the facility is full or parked over-capacity on a fairly regular basis, on average there are parking spaces available on this block. Even so, with 33% of counts finding the block to be parked at 100% of capacity or more, and 56% of counts finding that one or fewer parking spaces are available on the block, this survey block should be considered to be operating at capacity.

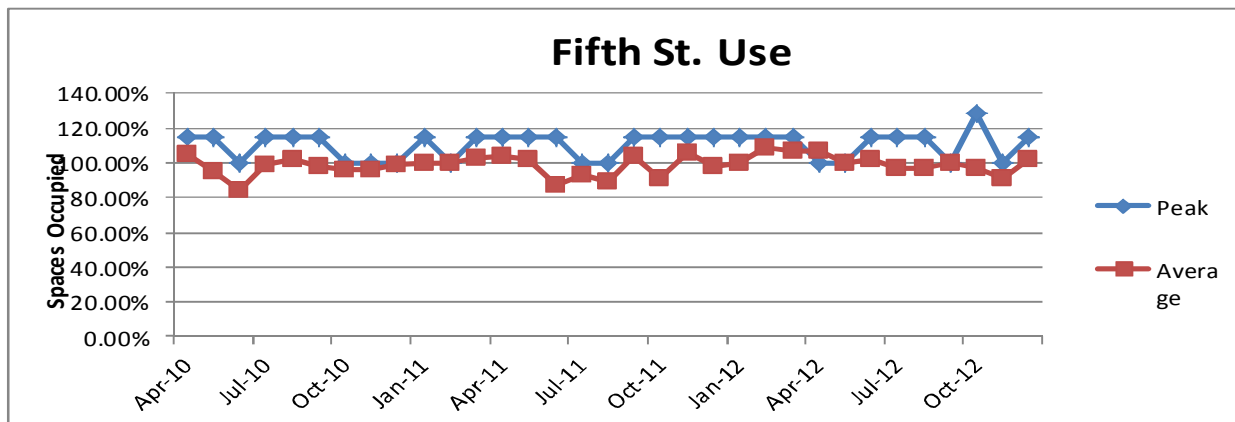


The Main Street survey block was added in April 2011, and was conducted for three months before Main Street was closed for construction from Fifth Street to Seventh Street. Surveys were resumed when the block was reopened for parking in October 2011. However limited data on use of this survey block is, it does provide some insight to neighborhood parking dynamics when compared to nearby survey blocks. All but one of the over-capacity peak parking events on Seventh Street could have been mitigated, for example, if neighbors had utilized the capacity that was available on Main Street at those times. Only in one survey period were both facilities parked at capacity simultaneously.

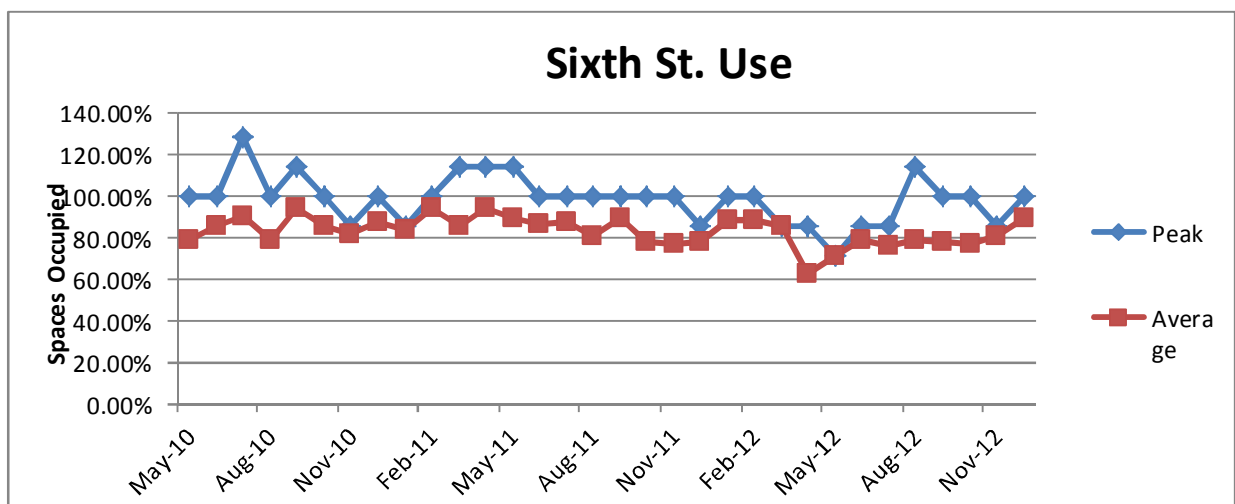


Fifth and Sixth Streets are heavily used by both residents and workers, with major employment destinations directly adjacent or within a few blocks, and the pay/register to park area only one or two blocks away. With time-unlimited parking, these blocks attract commuters with unrestricted free parking—and these streets both display very high occupancy rates as a result of these pressures.

Fifth Street has the highest typical peak occupancy rates of any survey block, and its monthly averages routinely top 100%. Because the block was regularly parked over-capacity before on-street pay stations were installed, no additional spillover could take place onto this block—there simply wasn't any capacity for increased usage. However, any increase in demand is likely to translate to shorter periods of time when any parking is available on this survey block. June 2010 and 2011 saw the lowest average utilization of this block of any of the 33 months surveyed. All months have had peak counts of 100% or more, and average monthly counts dip below 95% in only five months; June 2010 and 2011, as well as July, August, and October 2011 are in this group. It is interesting, if somewhat counter-intuitive, that four of these five “record-low average” months were after on-street parking meters began to be used just a few blocks away.

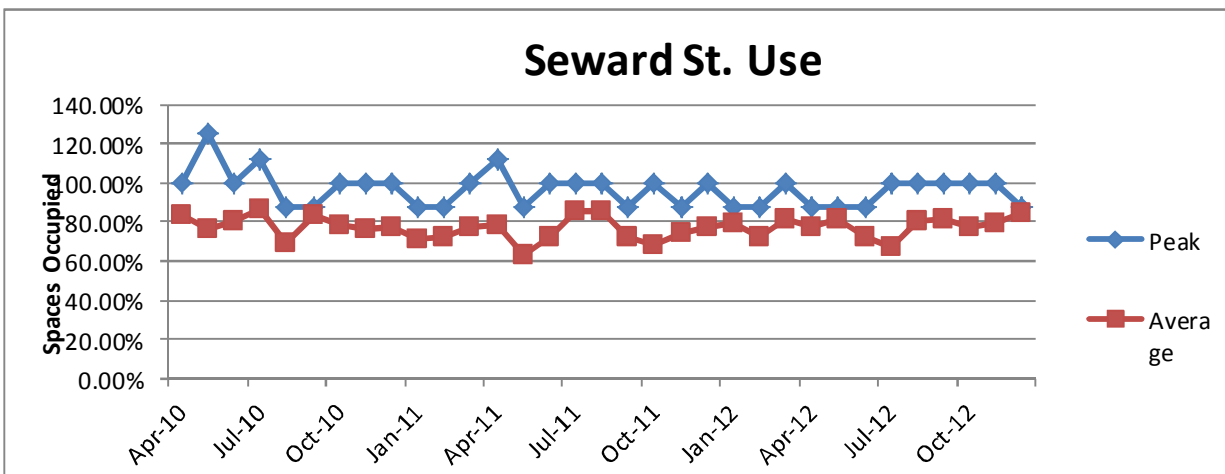


Sixth Street routinely experiences over-capacity peak parking use, but its average use is typically between 80-95% of capacity. The location of this survey area one block further up the hill from downtown destinations than the Fifth Street block appears to translate to reduced demand, as would be expected. Although average usage tends to be fairly consistent throughout the year, observed peaks in usage are lower during winter months than during the rest of the year; this is counter-intuitive, as the winter months bring the Legislature to the vicinity, and residents typically complain that on-street demand peaks during the Legislative Session. Use of this block reached record low levels of average use (less than 78%) in October and November 2011, again against expectations.

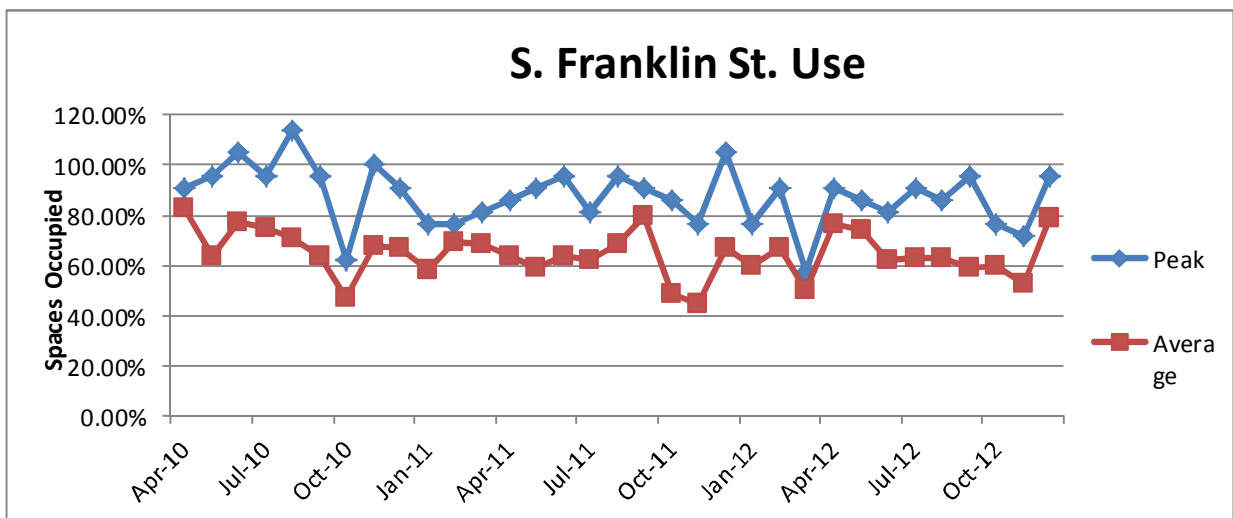


Seward Street and Franklin Street are the two commercial area streets that have been included in the Parking Use Survey from its inception. Peak use on both of these survey blocks is high in most months, with no apparent correlation between when peak use occurs on one street or the other; for instance, Seward Street’s peak usage occurred in May and July of 2010 and in April of 2011, while Franklin Street’s peak usage was in August of 2010 with another peak in December of 2011. There do not appear to be seasonal trends that explain parking behavior on these streets, as there is no clearly discernible difference between parking behavior in winter, spring, summer, or fall months when data for multiple years is compared: For example, compare the May 2010 peak of 125% occupancy and the May 2011 dip in peak rates to 88% on Seward Street; on S. Franklin St., compare the October 2010 record-low peak of 62% and more typical peak of 86% in October 2011, followed by a peak use of 76% in October 2012.

Seward Street’s average and peak use dropped by approximately 10% with the installation of on-street parking pay stations, but July 2011 saw that modification in behavior evaporate. This may be a result of parkers opting to ignore un-enforced parking regulations, which is why it is important to remember that enforcement of the new parking regulations did not really begin until November 2011, and that it will take some time before parkers adjust their behavior to the “new” rules.



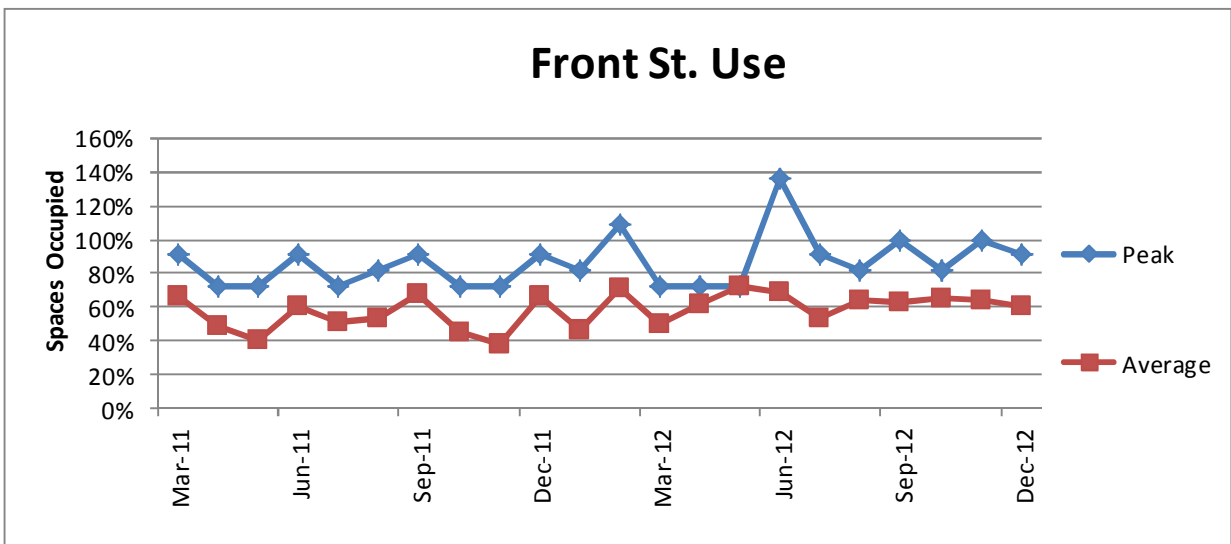
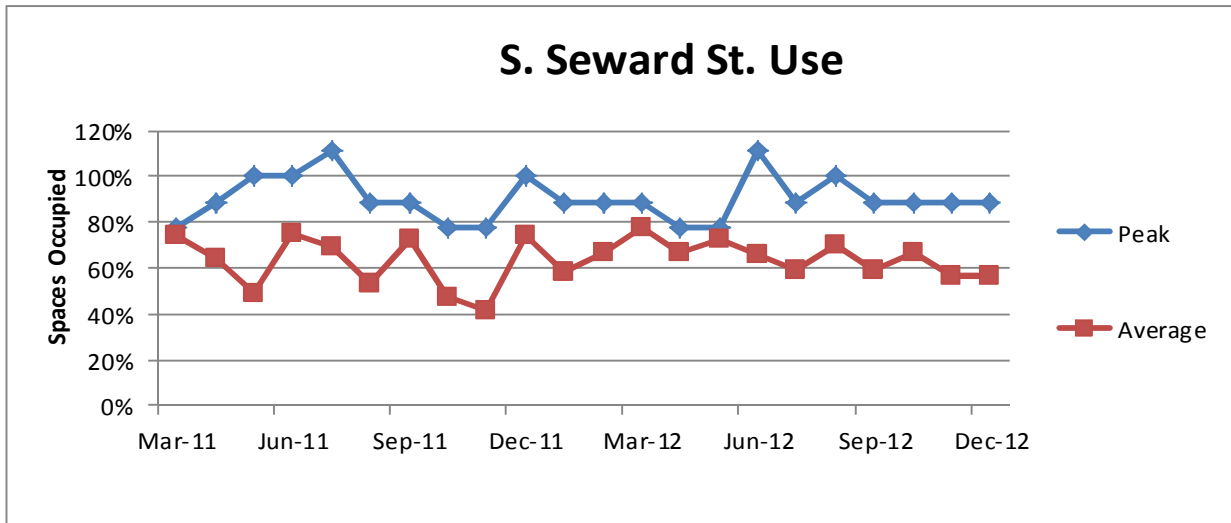
South Franklin Street’s usage over time is very volatile, with peak use often varying by 10% or more from month to month, and occasional changes of as much as 30-40% in a single month. The record-low peak use documented in March 2012 is likely the result of a small sample size; only two surveys were taken in that month, both in the AM period, when use of this block is typically lowest. Peak use occurred in August 2010, with approximately 115% of available spaces occupied; typical peak use ranges from around 75—95%; average use typically ranges from 60—80%, with some months seeing average use rates in the neighborhood of 45%.



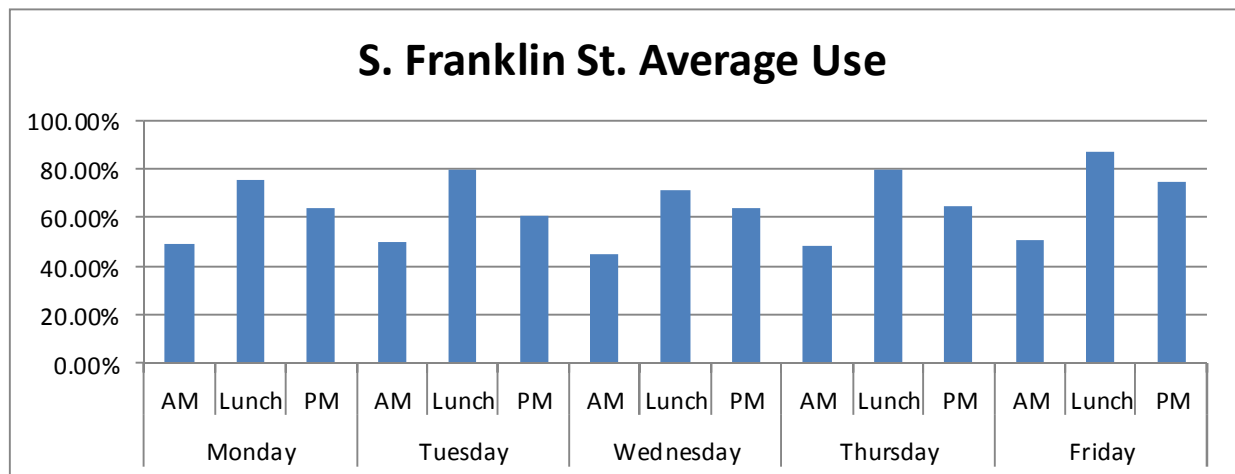
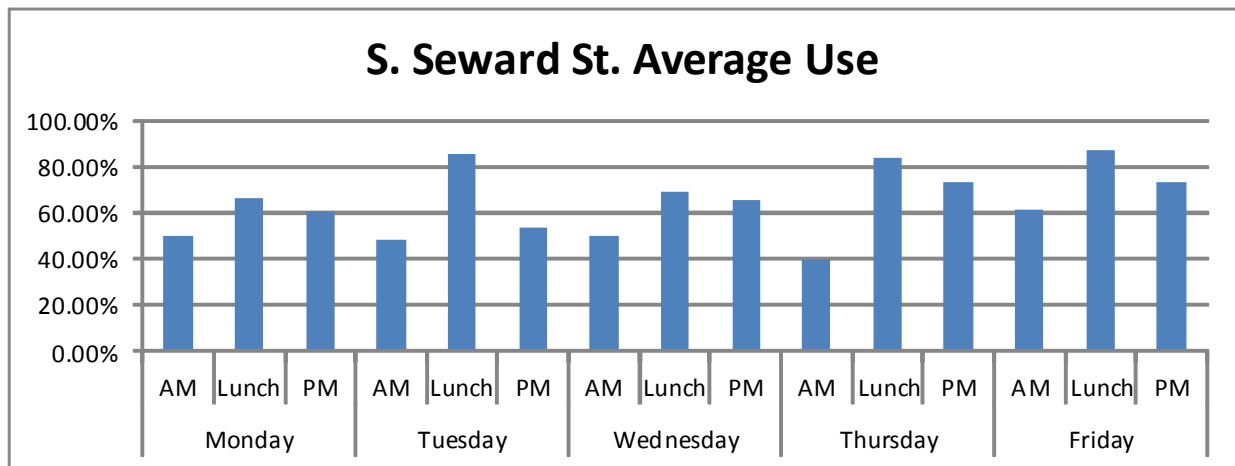
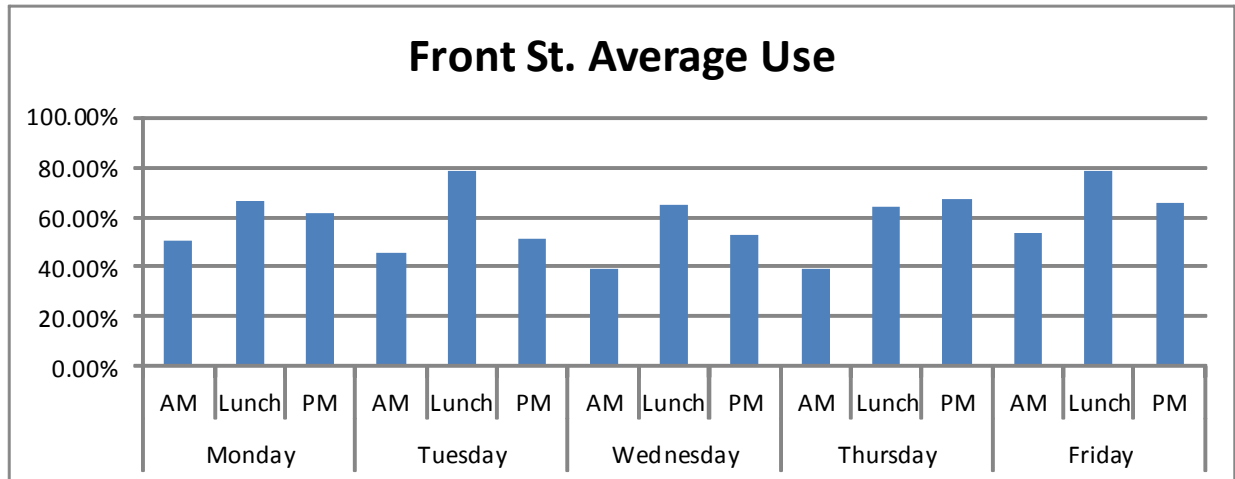


Parking use data collection did not begin on the South Seward St. or Front St. survey blocks until late February 2011, almost a year after the survey began on other streets. These streets were added to the survey in order to fill what was perceived by staff as a hole in the survey; although the two streets are adjacent to each other and share an intersection at one end of each segment, they are often parked at different rates, and staff perceived that collecting data on both streets could prove informative. In retrospect, after two years of data have been collected, it is clear that the two segments experience very similar average and peak use, with trends in use between the streets being very similar although not identical.

Fall use of both streets appears to be lower than in other seasons, with peak use occurring during summer months. Typical peak use of both streets is 80-90%, although capacity and over-capacity events do occur. The fact that these record peaks are generally documented during months with fairly low average use (50-60%) indicates that they are not the norm, and that spaces are available on these blocks the majority of the time.



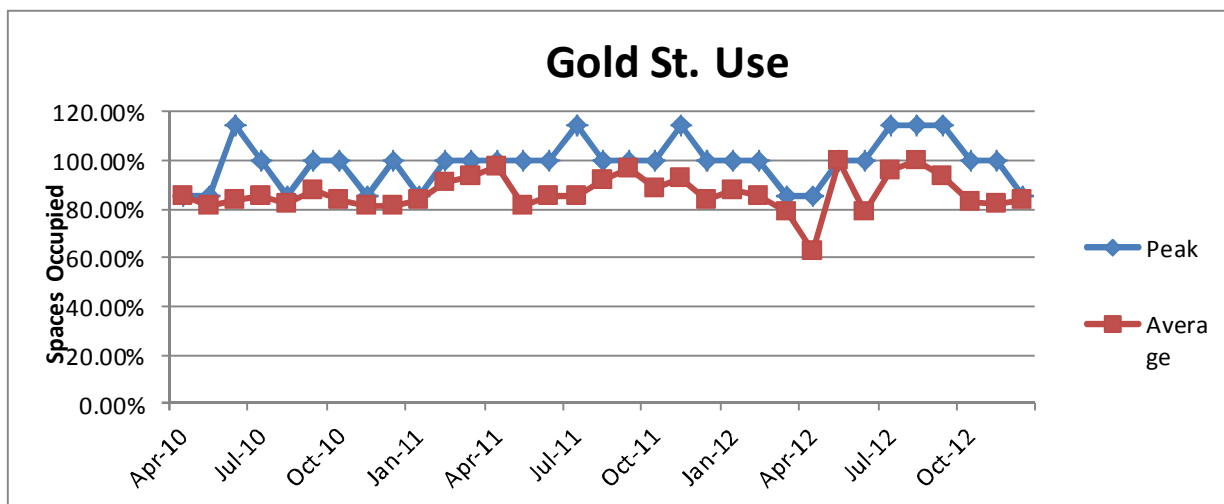
The parking survey blocks in the “downtown core,” S. Franklin St., Front St., and S. Seward St., show very similar use patterns by day part and day of week. With the sole exception of Thursday PM on Front St., all three survey blocks experience higher average use during the lunch survey period than during any other day part on any given day. Mondays and Wednesdays experience the lowest average use, with Fridays experiencing the highest use. Tuesdays and Thursdays are generally utilized at an intermediate rate. All of the data shown on this page is for the period after parking pay stations began to be utilized on downtown streets.



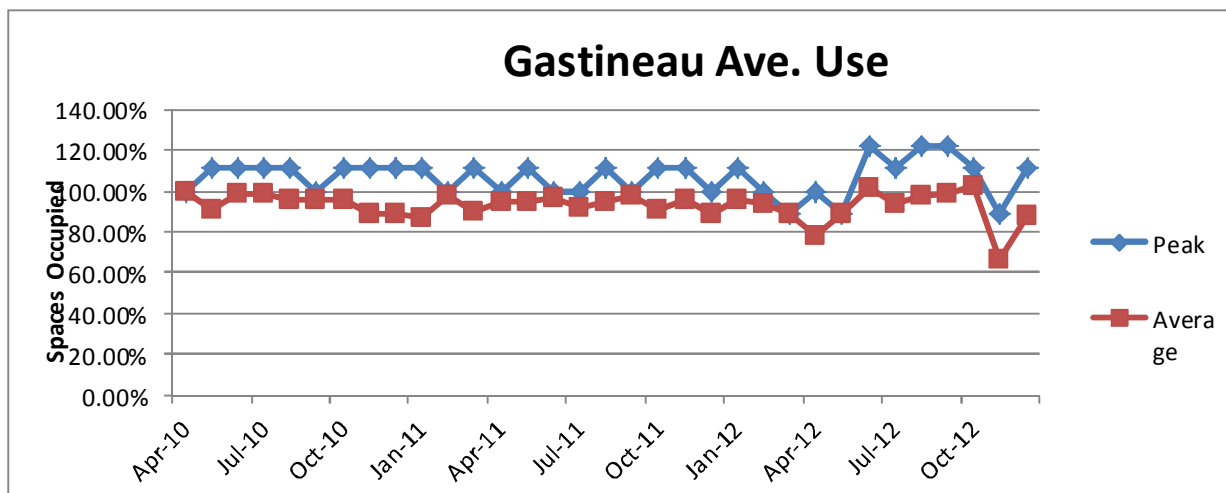
Gold Street and Gastineau Avenue are time-unlimited, free parking streets that are directly adjacent to paid/time limited parking. They are the parking use survey blocks most likely to be impacted by spillover from retail and downtown core office workers. Both blocks are typically parked at capacity at all times of the day and night, excepting that the handicap-designated space on Gold Street is often vacant and thus brings down both average and peak occupancy data for that block, as 85% occupancy generally means that all spaces except the accessible space are used.

Although both of these blocks experience high peak and average use throughout the year, the proximity of the under-utilized North Franklin Lot (discussed on the following page) shows that capacity exists in the neighborhood, but that parkers are likely unaware of the availability of this facility.

Gold street is actually parked over-capacity on a frequent basis, as vehicles will park blocking driveways, as well as partially or fully within yellow-curb no-parking areas, including a fire hydrant. The fact that the handicap-accessible space is often vacant causes this over-capacity use to be obscured in the data. CDD staff have interviewed staff at the adjacent offices, and they state that the accessible space is used frequently and should not be removed.

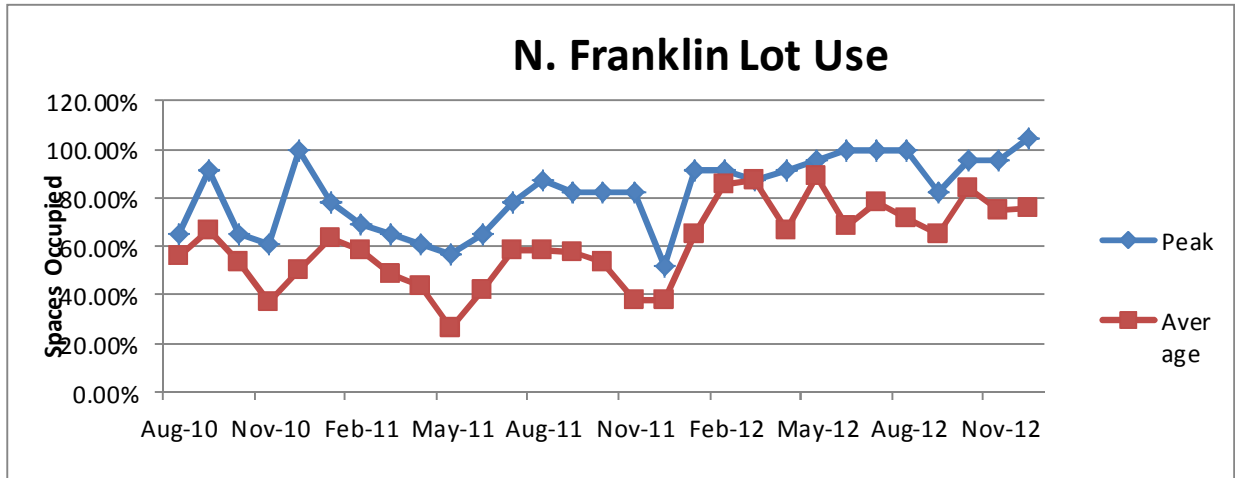


Gastineau Avenue experiences extremely high peak use on a routine basis, with over 60% of all peak counts coming in over 100%; all other peaks are at 100%. Average use is also very high, but indicates that there is turnover and that vacated spaces are typically used by another parker shortly after they become available. The record-low peak and average counts in November 2012 are not the result of a small or biased sample size, and appear to be valid, although inexplicable, data points.

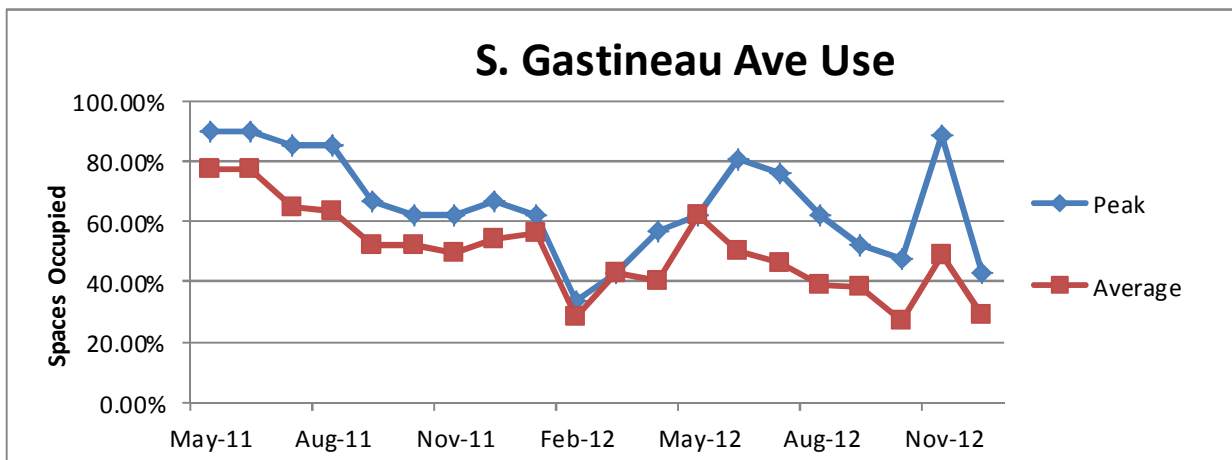


The North Franklin Lot was a sore point in downtown parking management for years. Prior to May 2011, this facility was managed with a combination of permanently-reserved Legislative parking, monthly permit parking, and occasional (seasonal) public use of some spaces. Now the entire lot is managed as a part of the Downtown Transportation Center, and can be used by any vehicle permitted or registered to park at the DTC.

Average use of the North Franklin lot was very low through the end of 2011, with a typical range of 40-60%, and a monthly low of approximately 25% in May of 2011, when almost no parkers knew that its management had been changed. One month later, average use had climbed to over 40%, and average use has surpassed 60% in every month in 2012, and even approached 90% in several months. The decline in average use seen in October and November 2011 is likely the result of seasonal trends, as a similar dip in occupancy occurred in the fall of 2010; this trend was not repeated in 2012, a sign that parking behavior at this facility may no longer be related to the seasons.



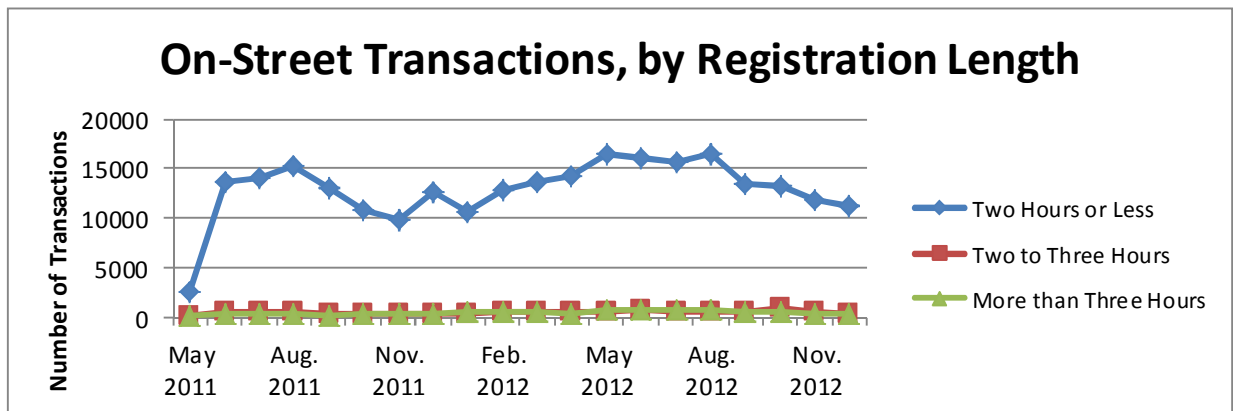
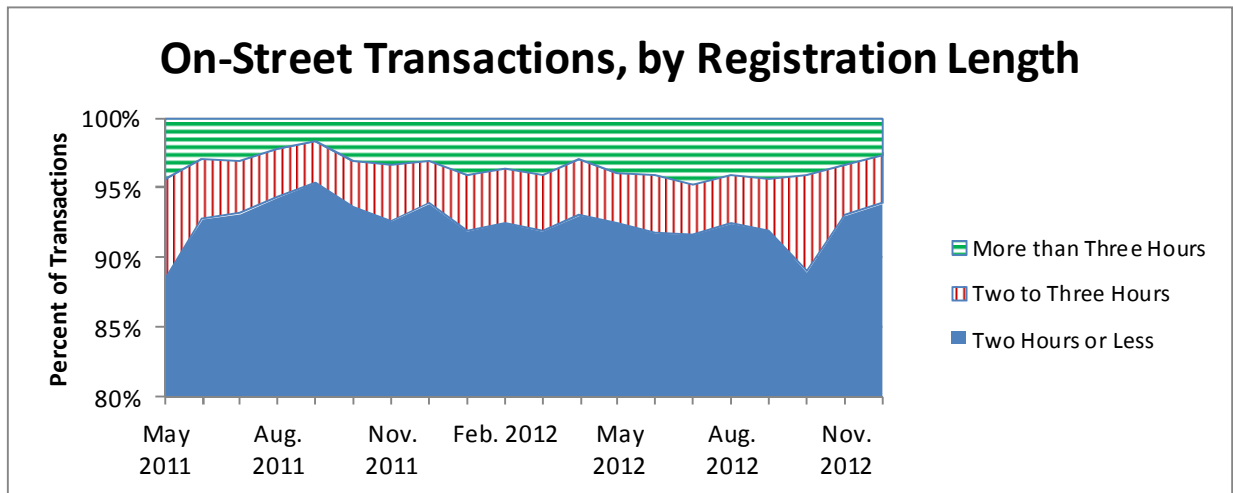
The South Gastineau survey block was added after staff determined that the consistently high occupancy rates of the Gold St. and Gastineau Ave. survey blocks indicated that staff was not looking far enough from the downtown core to be able to see variation in parking behavior resulting from changes in parking management in the core. This realization came too late to allow for “before” data collection; available data shows that capacity remains available for more parkers at the south end of Gastineau Avenue even during peak occupancy periods in summer months, and that this block is utilized at 50%-60% of its capacity in the fall and early winter. The cause of the unseasonal increase in peak and average use in November 2012 is unknown, but appears to have been short-lived, with December 2012 occupancy rates dropping back to near-record lows.



The CBJ does not monitor or track the presence of vehicles parked on- or off-street over time; enforcement officers conduct point-in-time queries to determine if particular vehicles are registered to park at the time of the query, but the vehicles queried are not documented over time. This means that evidence of how long a given vehicle is parked within a given facility (on-street, DTC, or MPG) can only be tracked through the time that vehicle is registered to park. Although this data is not definitive, as vehicles likely park for shorter (or perhaps longer) periods of time than they are registered for, it is assumed that trends in vehicle registration time will be reflected in actual parking time. That is, vehicles registered to park on-street for more than two hours are likely to have been parked for at least two hours, but vehicles registered for only two hours were likely parked for less than two hours. Similarly, vehicles that were registered for more than three hours were likely parked for most of the time that they were registered for, as drivers are unlikely to pay \$2/hr. for parking that they do not intend to use.

The first question investigated with this data is: “how are the pay stations being used, in terms of the amount of time that individual parkers are using on-street parking?” This is directly related to determining if the CBJ is meeting goal 1 of the *Downtown Juneau Parking Management Plan (DJMPM)*: “Reduce the number of vehicles that are parked all day (long-term) in hourly (short-term) spaces.” Unfortunately, no data regarding the number of vehicles that were parked all day in hourly spaces was collected prior to the installation of on-street multi-space parking pay/registration meters, so any comparison must be based on the anecdotal evidence that was documented in the DJMPM, namely, that many if not most vehicles parked on-street in one-hour parking spaces were moved every hour to avoid citations prior to the installation of multi-space meters. Transaction data from those meters tells a very different story about current use, where only 3-5% of monthly transactions are for more than three hours of on-street parking, and 89-95% of all on-street transactions are for two hours or less.

The data shown below also indicates that on-street parking demand peaks in the summer months; although December 2011 saw an increase in demand for on-street parking compared to the months preceding and following it, that peak in demand was not repeated in December 2012.



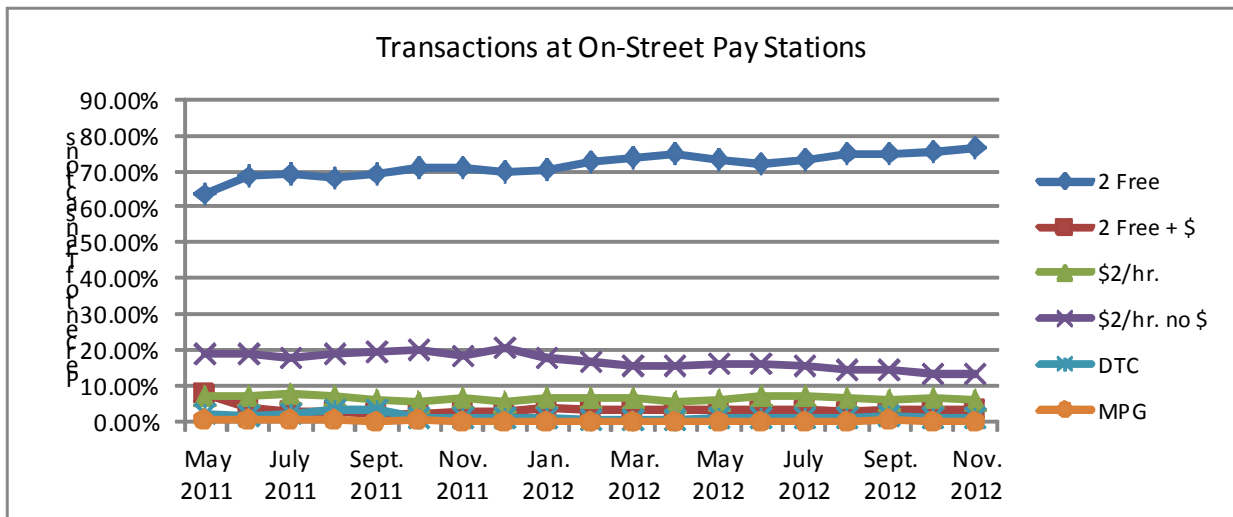
Beyond alluding to the length of time that individual vehicles are parked on the street at a given time/per visit to downtown, pay station transaction data also tells a story about the experience of the parker at the pay station itself, and how they are using the system.

The vast majority of transactions at on-street pay stations is registration for two free hours of on-street parking; each vehicle is permitted to park for up to two consecutive hours for no charge, but must pay \$2/hr. for each additional hour or portion thereof in a calendar day. Registration for periods of longer than two hours, or multiple periods per day, can be accomplished in several ways. First, a parker can register for paid and free parking in separate transactions; the number of this type of transaction has not been calculated due to the amount of effort that would be required to correlate license plate numbers with each other over time, although these figures could be calculated, given adequate staff resources. Accordingly, multiple transactions throughout the same day are shown here as multiple transactions, and do not reflect the cumulative time a given vehicle was registered for in any given day.

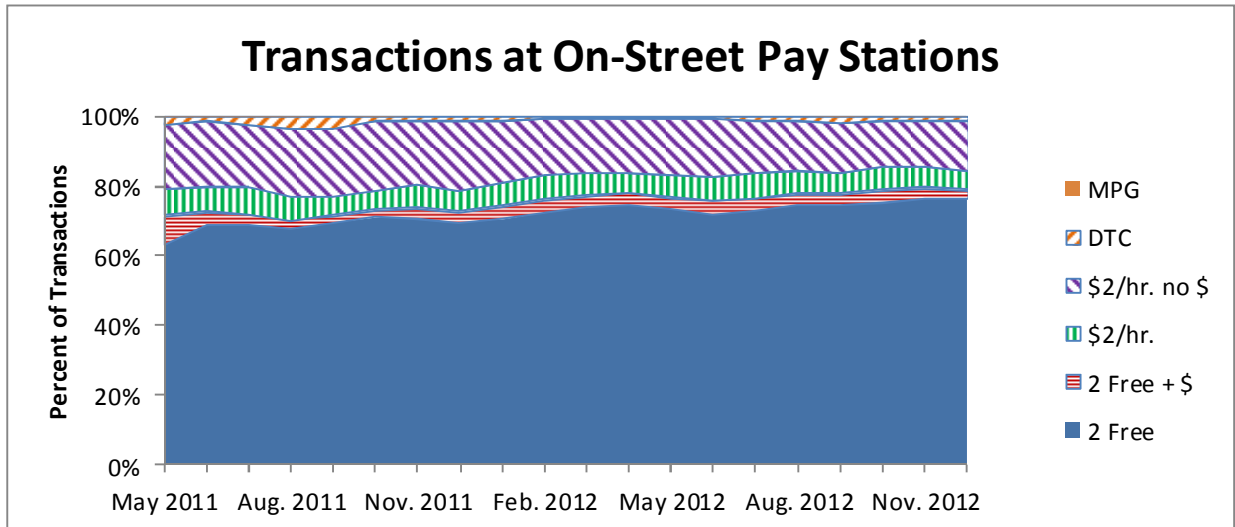
Second, parkers can register for free and paid parking in a single transaction; this transaction type, shown in the chart below as “2 Free + \$,” ranges from a low of 1.95% of transactions (September 2011) to a high of 7.77% (May 2011), with an average of accounting for 3.26% of transactions. The high and low percentages are each statistical outliers, with this type of transaction ranging from 2.19% to 3.67% in all other months.

When parkers have already used their two free hours of on-street parking, or plan on parking for a longer period of time later in the day, they may choose to pay \$2/hr. in a transaction without obtaining any free parking in that transaction. This type of transaction accounts for 6.56% of transactions, on average, with relatively small variation from month to month (5.44—7.86%).

The most worrisome type of transaction, from a system management perspective, is the “\$2/hr. no \$” transaction. This type of transaction takes place when parkers select the \$2/hr. tariff at the pay station and register their vehicle without submitting payment. This results in a typical vehicle registration of one minute, which is printed on the receipt that the parker receives when they register. The receipt states “Paid Rate” at the top, instead of “2 Hrs. Free” (as is printed on receipts for the 2 free hour tariff). Although the number of this type of transaction is diminishing over time, from highs of over 20% of transactions in October and December of 2011 to lows of 13.28% to 14.51% in period of August—December 2012, the fact that nearly one in eight transactions at on-street pay stations are completed incorrectly is very worrisome, as it means that many parkers have not learned how to use the system successfully after nearly 19 months. This indicates a strong need to educate the public about how to use the system successfully.



CBJ staff have developed new instructional signage and are working with Aparcs, the company that supports the pay stations, to modify the order in which various transaction types (tariffs) are made available to parkers. The intent of these changes is to substantially reduce, if not eliminate, the “\$2/hr. no \$” transaction type. These changes are anticipated to be rolled out in early 2013.

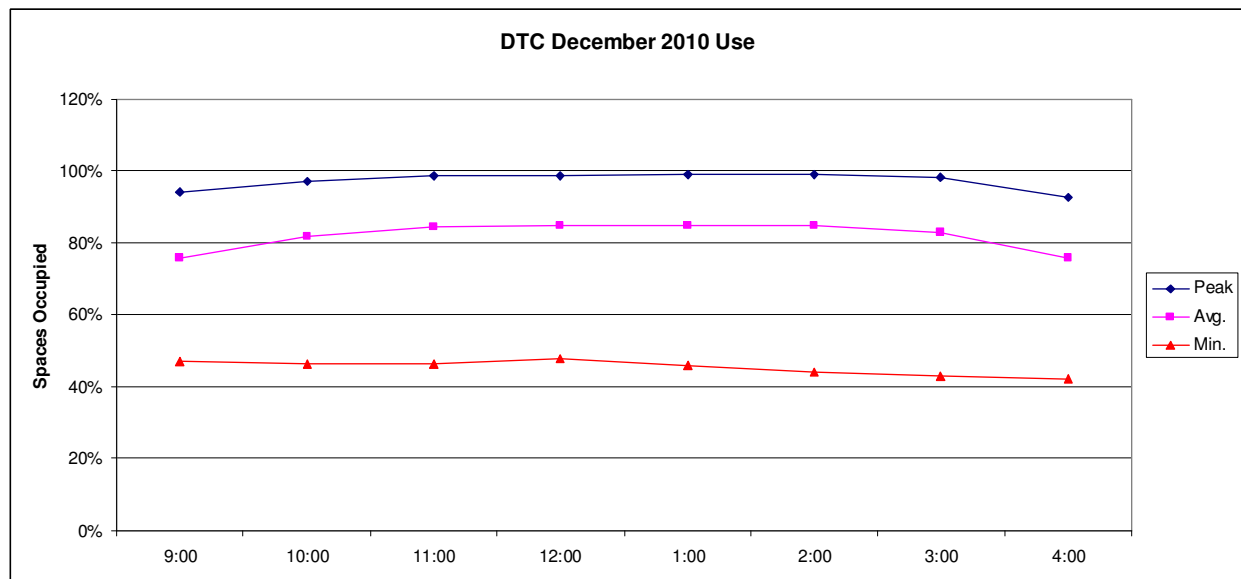




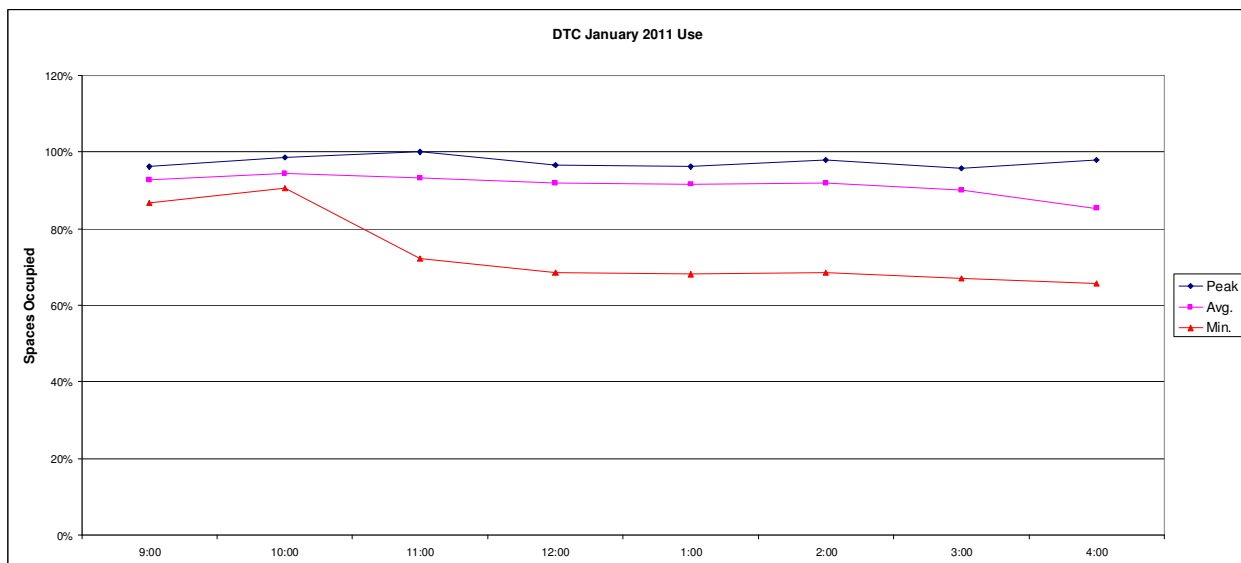
The Downtown Transportation Center (DTC), which opened December 1, 2010 at 100 Main St., added 270 spaces to the parking supply in downtown. In its first two months of use, the parking garage was free for public use, with the exception of the third floor (61 parking spaces), which was reserved for use by authorized legislative staff. Use of the reserved 3rd floor of the DTC is reviewed in its own section of this document; this portion of the document looks at parking use of the DTC as a whole, and investigates changes to usage levels for causes.

The first views of data show monthly average, maximum, and minimum use by hour. Additionally, this data shows longer-term trends as usage changes from month to month.

In December of 2010, when the facility opened with free public parking, very high usage occurred on a fairly regular basis. As the facility was brand new, and drivers were still familiarizing themselves with the new parking landscape downtown, there was a fairly large gap between peak use, which was between a high of 90-100% occupancy during some days and a low of 40-50% occupancy throughout other days. Even with some days that saw very little use of the DTC, average use was around 80% occupancy.

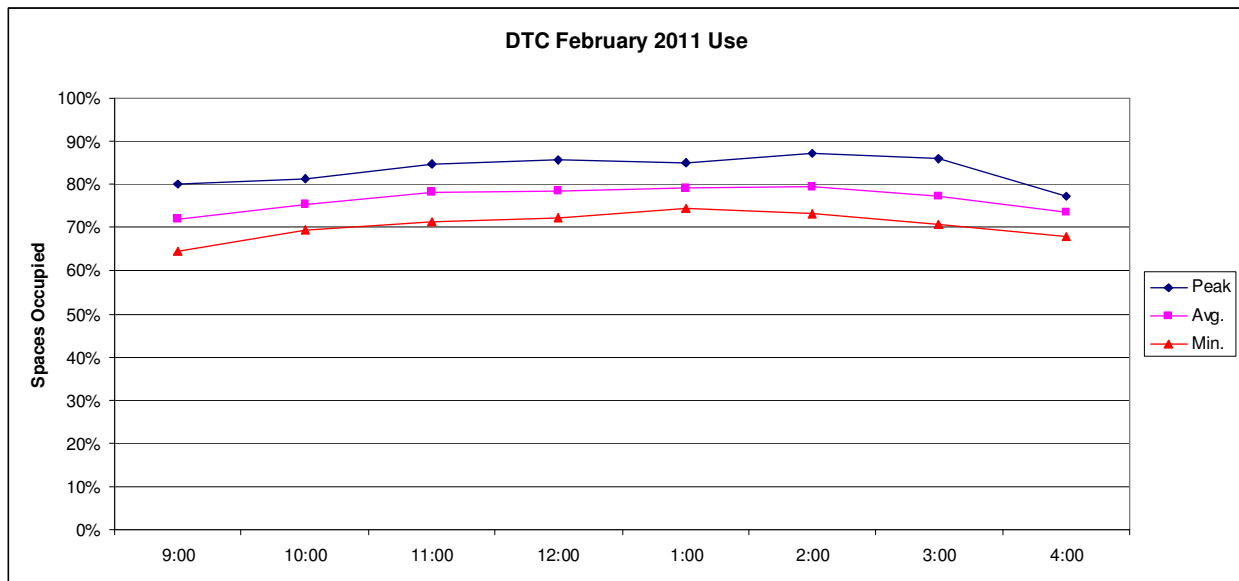


January saw more parkers taking advantage of the free parking offered at the DTC, with minimum use rising to around 70% with a morning surge at 9-10 am of approximately 90% as the monthly low for that time period. Average use rose in January with occupancy averaging around 90%.

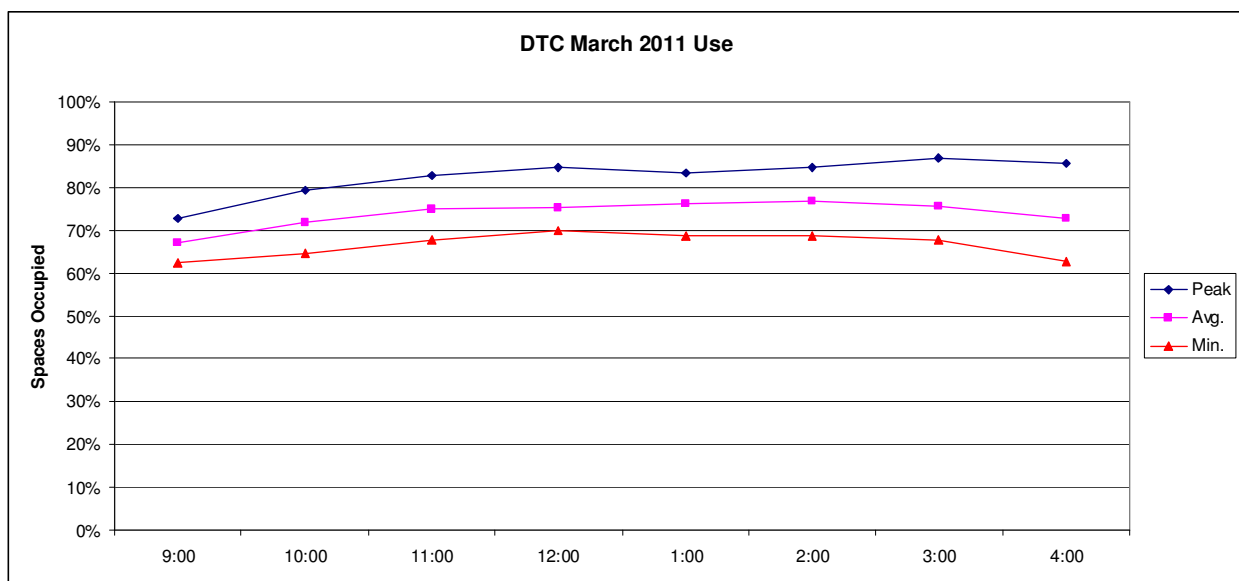


In February of 2011, the DTC changed from a free facility to a pay-to-park facility. The hourly rate of \$0.75 was priced higher than the \$0.50/hr. rate at the nearby Marine Park Garage (MPG) due to anticipation that its location would be considered more desirable, and that its price should be therefore be higher. With a daily rate of \$7.50 (ten hours of parking), weekly rate of \$20, and monthly rate of \$65.00, occupancy levels were expected to change when free parking ended, and change they did.

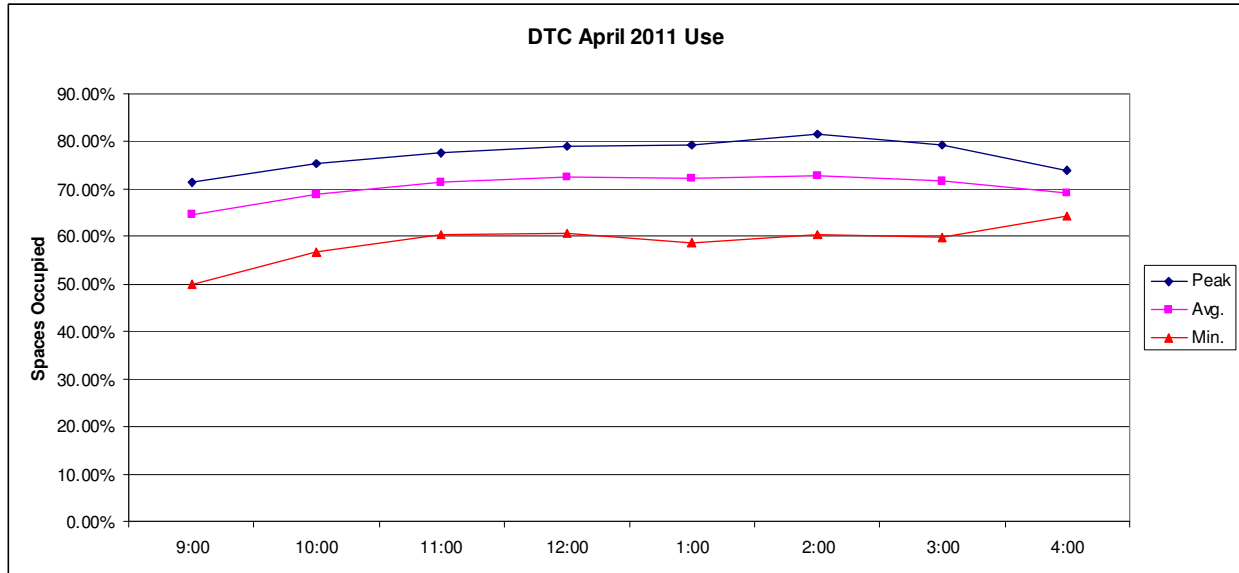
February saw parkers begin to adopt new travel patterns that held throughout the month, and that were consistent throughout the day. Although peak usage was still during mid-day and early afternoon hours (11 am—3pm), the maximum and minimum occupancy counts converged, with occupancy only ranging from a low of near 65% to a high of under 90%, a range of just 25% over the course of the month.



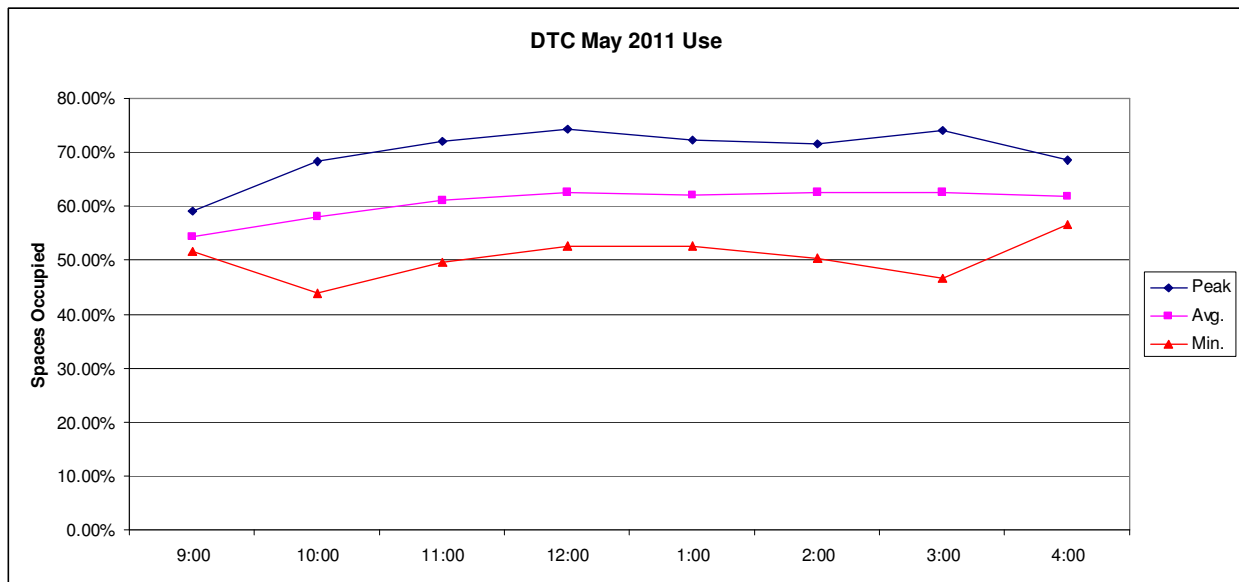
March 2011 saw very similar use to February, with slightly lower use in the mornings and slightly higher use in the afternoons; peak use was essentially the same in March as in February, but mid-day low counts were lower than comparable times in February were.



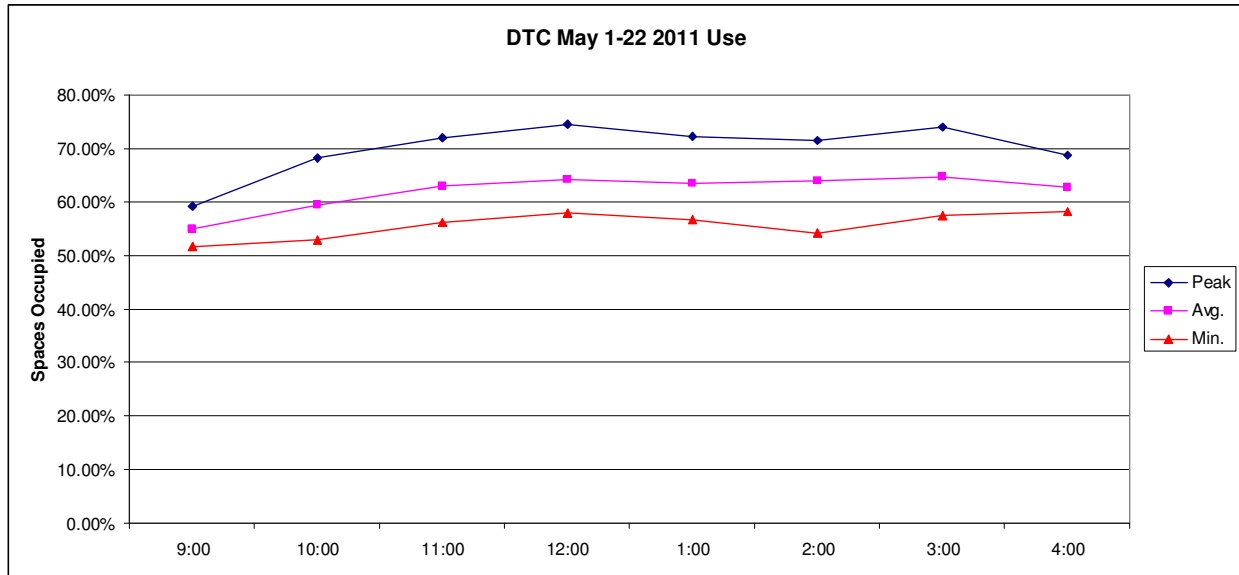
April saw an increase in the range between low and high occupancy counts, with morning lows dropping to near 50% and highs approaching 85%, a range of nearly 30%.



In May, 2011, overall use of the DTC continued to decline, with low counts of between 45-60% and high occupancy counts ranging from 60-75%. On May 23, the CBJ began using multi-space pay stations to manage on-street parking in the downtown core. This change to on-street management was intended to encourage long-term (commute) parkers to park off-street where pricing is cheaper than the on-street rate. As the next three charts show, this goal was not immediately achieved—at least not as evidenced by increased use of the DTC.

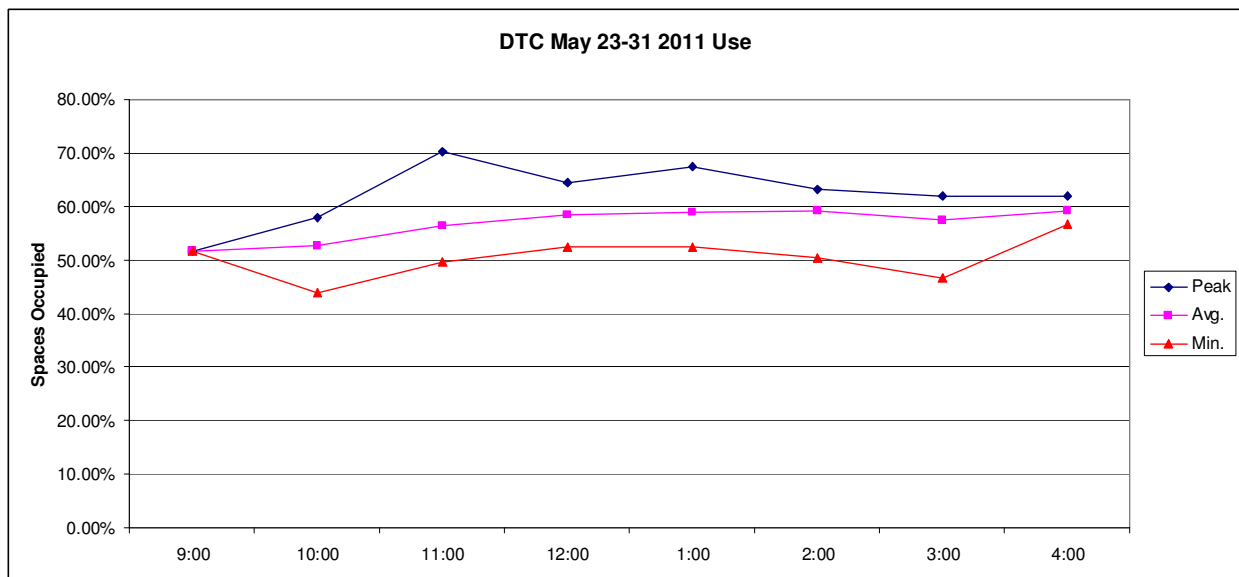


The first three weeks of May experienced fairly typical, albeit slightly lower than previously documented, peak use of around 70% occupancy. Average use hung near 65% from 11:00 am through to 4:00 pm. 9:00 am counts were consistently lower than other count periods, a trend that holds true for other survey months.

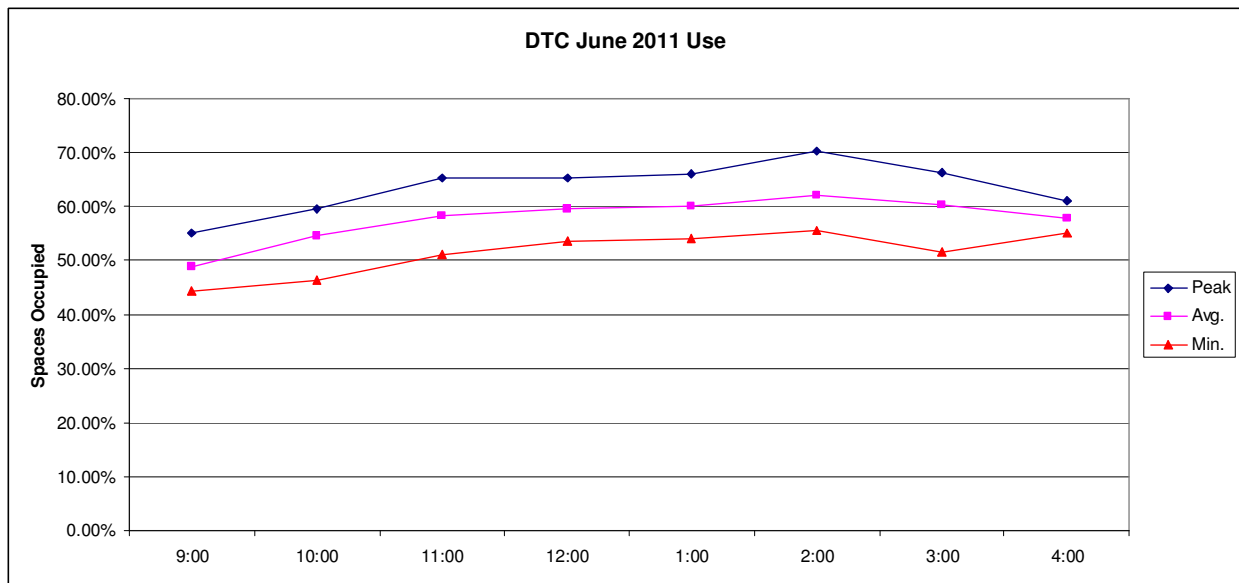


On Monday, May 23, however, usage changed dramatically. With only one 9:00 am count during this portion of May, useful parking data begins at 10:00 am, which saw a low occupancy count of approximately 45%, a rate that was again documented for the 3:00 pm count period. Average occupancy stayed between 50% - 60%, a reduction of 5% from earlier in the month. Peak use only hit 70% during the 11:00 am count period, with most peak counts consisting of occupancy figures between 60% - 70%, a reduction of 5% - 10% from earlier in the month.

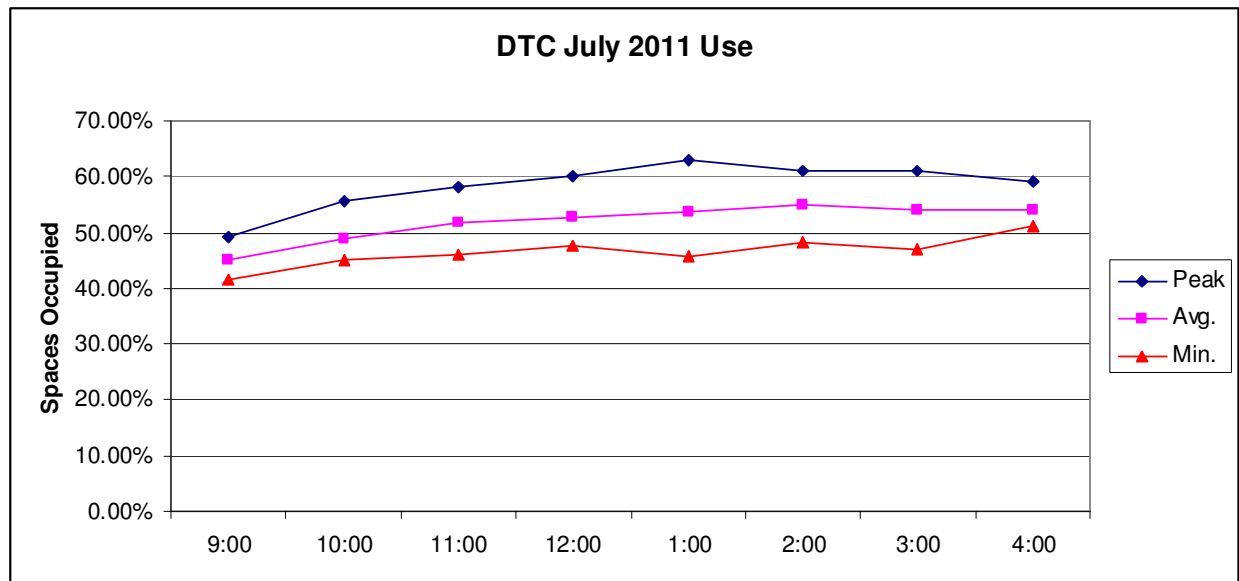
While it would have been easy to explain an increase in usage of the DTC that followed the initiation of paid on-street parking, it is difficult to explain this change in the opposite direction. One possibility is that as more parking spaces became available on-street, some parkers who had previously relied on the DTC to meet their parking needs were now able to use on-street parking that they could not count on being available prior to on-street payment go-live. An increase in use of the Marine Park Garage, as shown in charts on pages 42 and 43 as an increase in the minimum and average number of vehicles using that facility during count periods, may account for some of the “missing” parkers who stopped using the DTC at this time. The shifted demand that accounts for the decline in use of this facility at this time is not, however, shown in the available data.



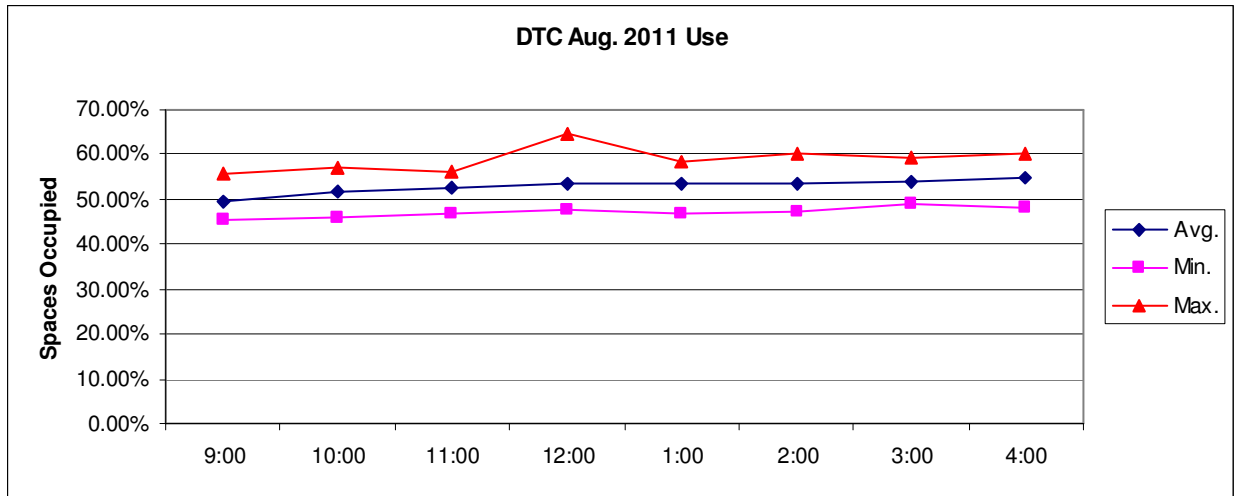
Occupancy rates at the DTC continued their decline in June 2011, when peak occupancy only hit 70% during 2:00 counts, and average usage rates ranged from a little under 50% to just over 60%. Interestingly, with a low count of approximately 45% and a peak count of 70%, the range of occupancy during June was still 25%, indicating that even as overall use declines, it declines uniformly throughout the day and over the course of the month.



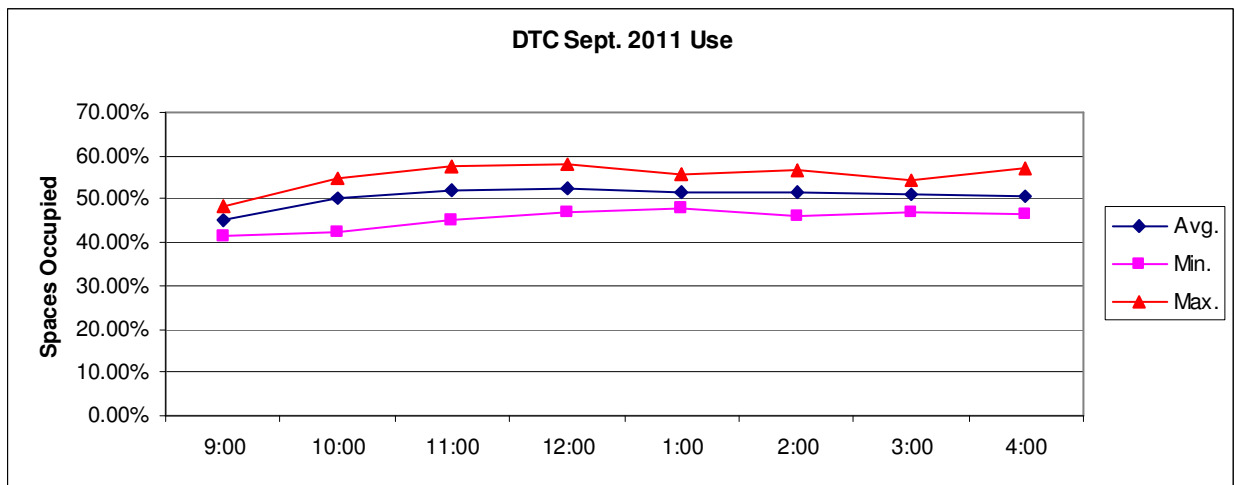
July 2011 continued the trend established in prior months, with declines in minimum, average, and peak occupancy of approximately 5% during all time periods other than the 4:00 pm peak, which only declined 2% from June.



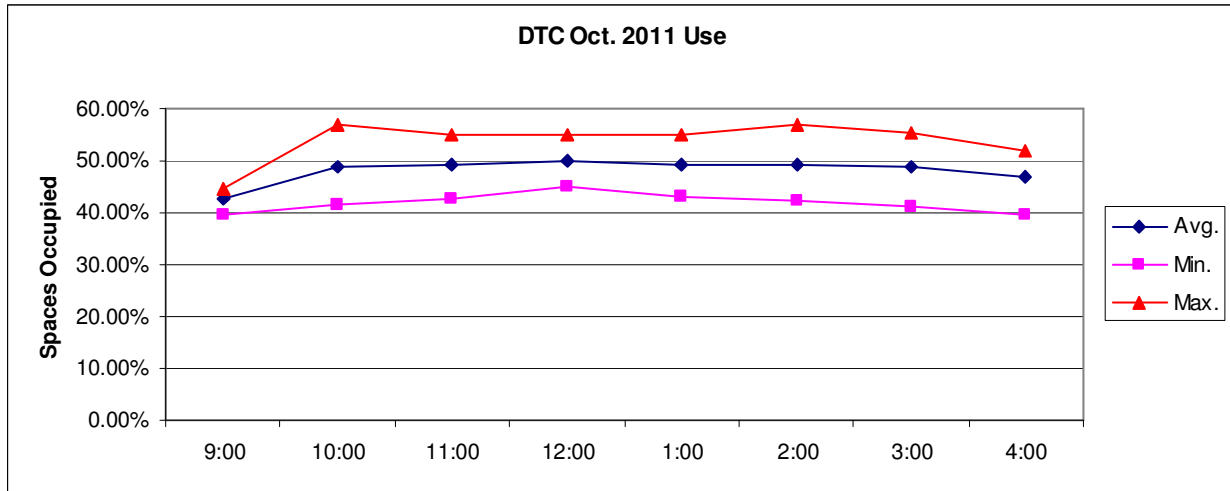
August 2011 maintained peak use at levels at or near 60% occupancy for the afternoon, but minimum occupancy levels were lower than those in July.



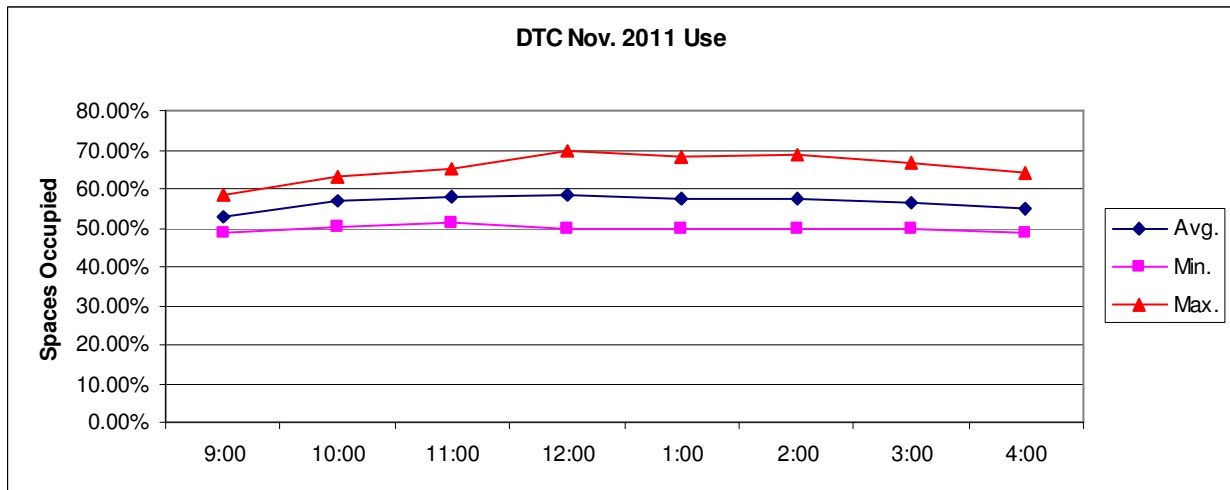
September use of the DTC was slightly lower than August use, but other than an anomalously high noon peak in August that came down by 6% in September, the rest of the decreases in peak use were only 1 or 2% reductions. With the end of the summer tourist season, it would be reasonable to expect a much larger reduction in peak use than just 1-2% between August and September. Based on the low variation between peak use in these months, it is safe to assume that the majority of DTC summer users are not using the facility to park during tourism-related business, and are instead year-round users.



October 2011 saw slight decreases in use from September, roughly on the same order as those experienced in September from August, or roughly 1-2% reductions in minimum, average, and peak use of the DTC. Typically considered the “shoulder season,” October is traditionally associated with a time of quiet and calm in downtown Juneau, when neither tourists nor legislators are in town, and when Juneauites have the town to themselves. With this in mind, it is reasonable to expect that October utilization of the DTC would be lower than that during any other month of the year, with the possible exception of November.

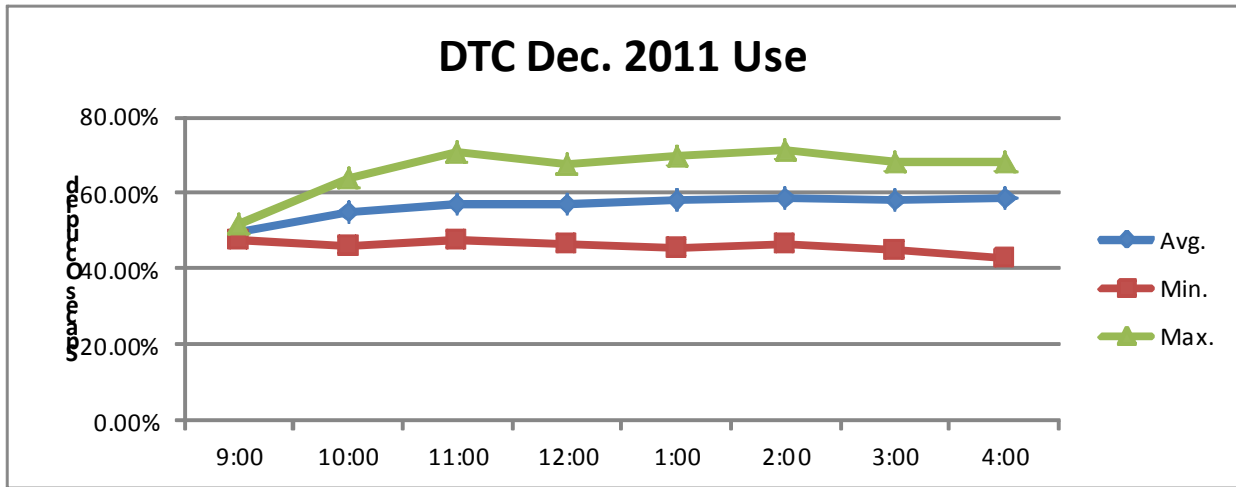


November 2011 did not, however, follow this expectation: instead of experiencing similar utilization levels to those in October, November saw increases in peak use of 5-15% throughout the day, with most peak counts increasing by roughly 9% over October peaks. Minimum occupancy levels in November, which hovered around 50% occupancy throughout the day, were 5-10% higher than minimum occupancy levels in October.

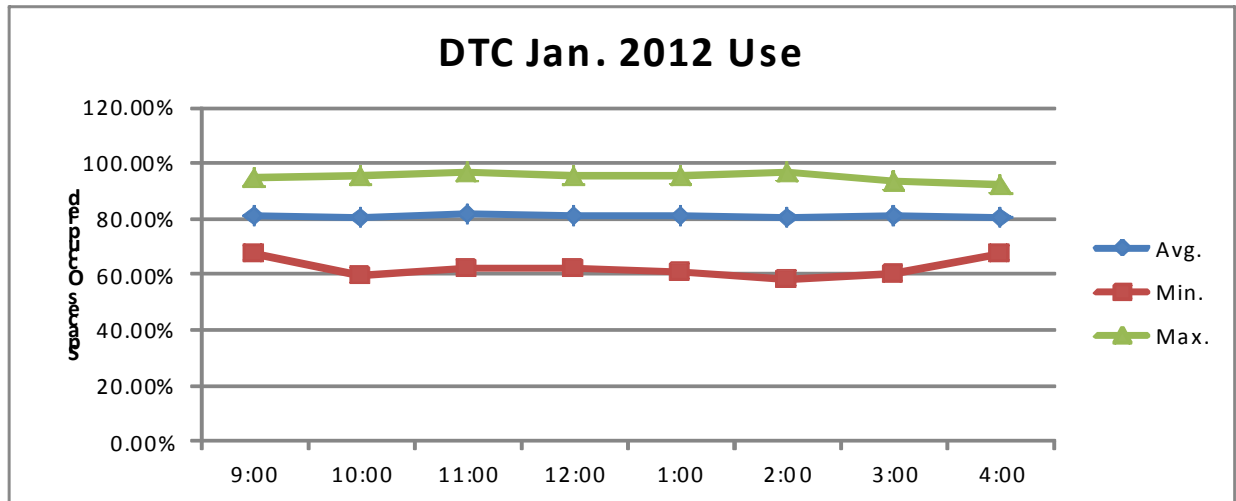




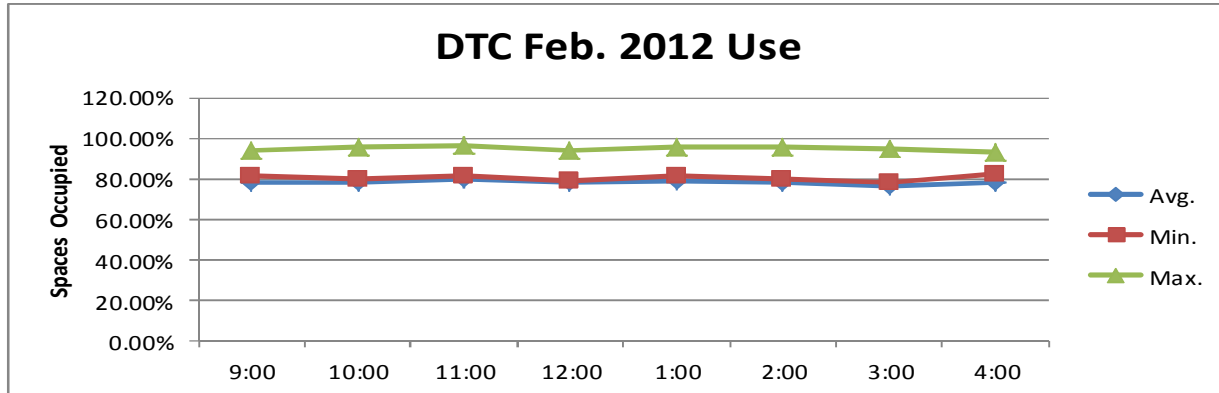
December 2011 usage of the DTC was very similar to that of the previous month, with lower minimum occupancy counts throughout the day but similar peak use. As expected, the lack of free parking in Dec. 2011 resulted in lower usage rates than Dec. 2010; peak use was down almost 30%, and minimum use dropped by about 5%.



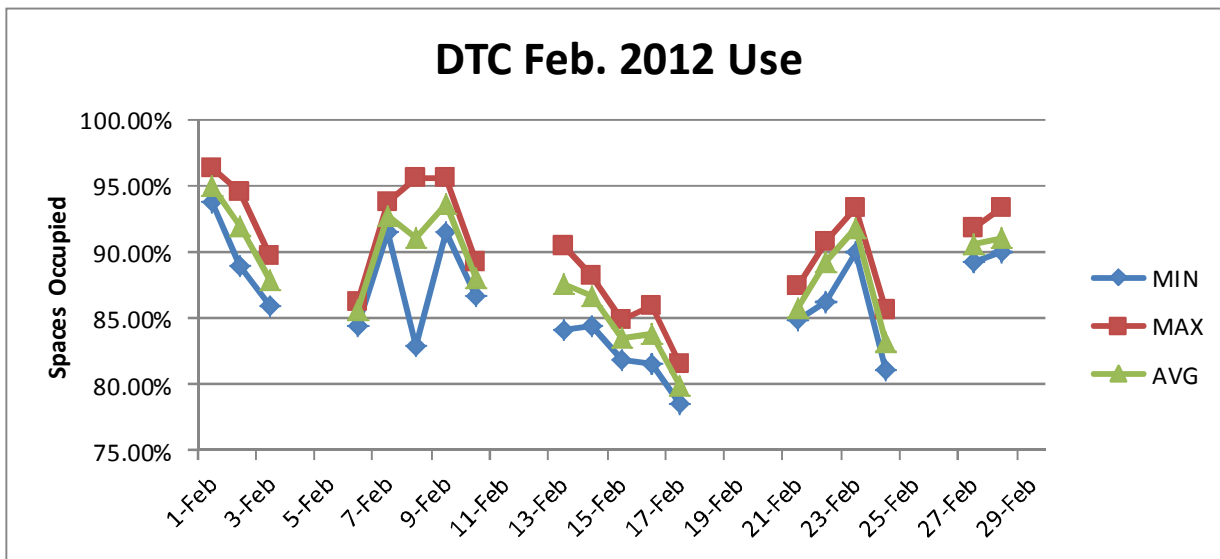
Use of the DTC picked up again in January 2012, which saw the return of the Alaska Legislature to Juneau, and with it the reservation of the entire third floor of the DTC for legislative parking. Minimum use levels rose by approximately 15% from the previous month, and peak use rose by approximately 30%. Compared to the previous January, during which parking at the DTC was free, peak use was nearly identical, although average use dropped from being consistently over 90% in January 2011 to 80% in January 2012.



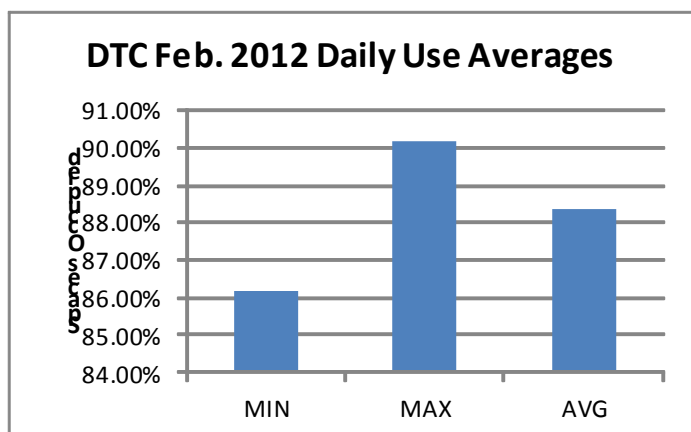
Use of the DTC in February 2012, when displayed in the manner that other months data has been presented, appears to be of questionable validity; the peak use of approximately 95% is consistent throughout all day parts, but the minimum and average counts are nearly identical throughout the day, hovering around 80%. This is slightly higher usage than was experienced at the DTC in Feb. 2011, when utilization ranged from 65-90% throughout the day.



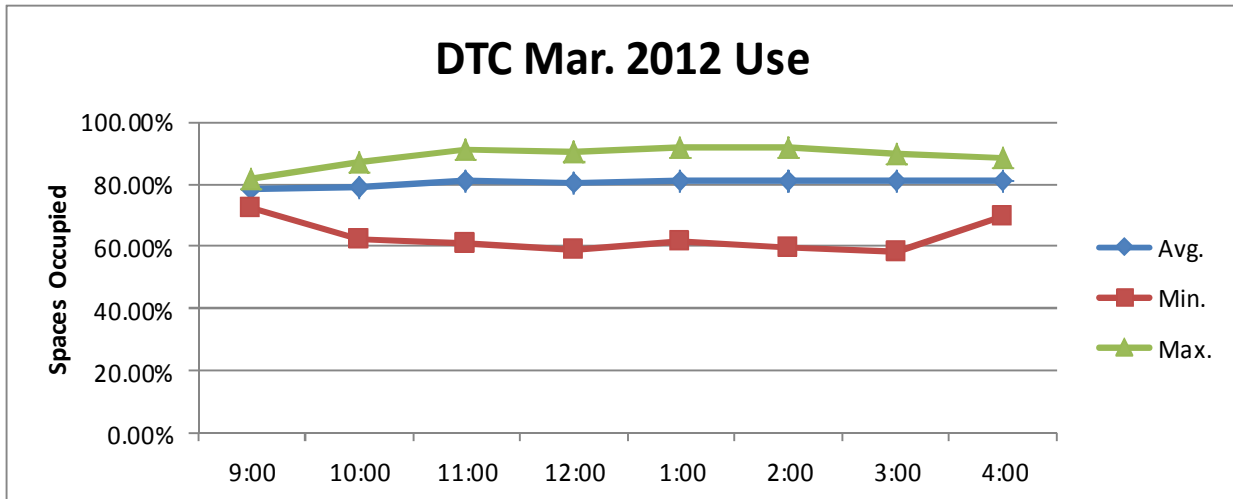
Both perplexed and intrigued by the use pattern shown in the chart above, staff turned to other ways of viewing the data to explain the relatively wide gap between peak use (approximately 95%) and minimum and average use (both approximately 80%).



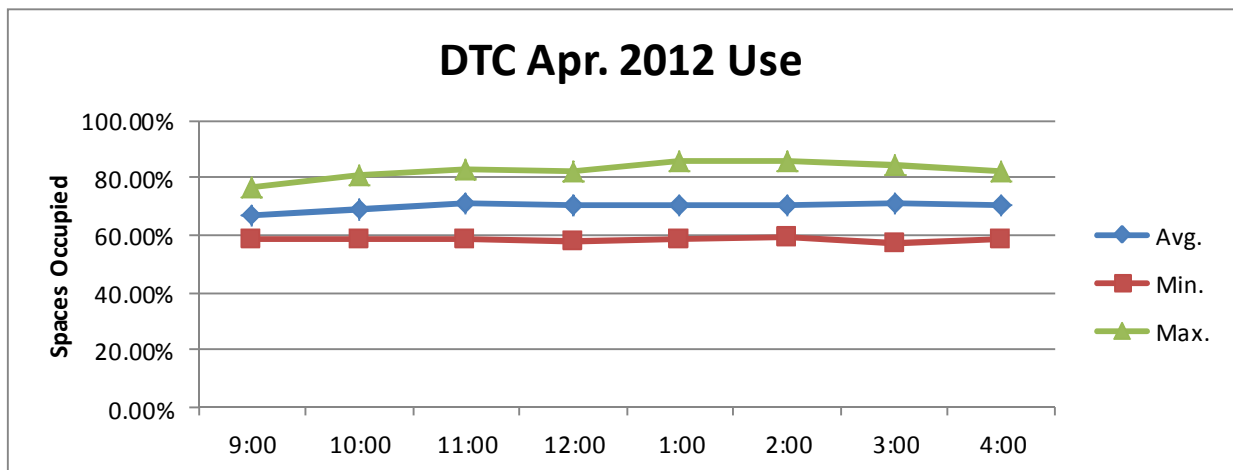
As the chart above shows, use throughout almost every day (February 8, with a 13% difference between minimum and maximum use, is the single exception to this rule) was very consistent, while use between different days or even weeks varied considerably. When daily use levels (min./max./avg.) are averaged across the month, the data ceases to look so strange (chart at left), and it is clear that use was actually fairly consistent throughout the month, with average minimum use of 86% only four percent below the average maximum use of 90%.



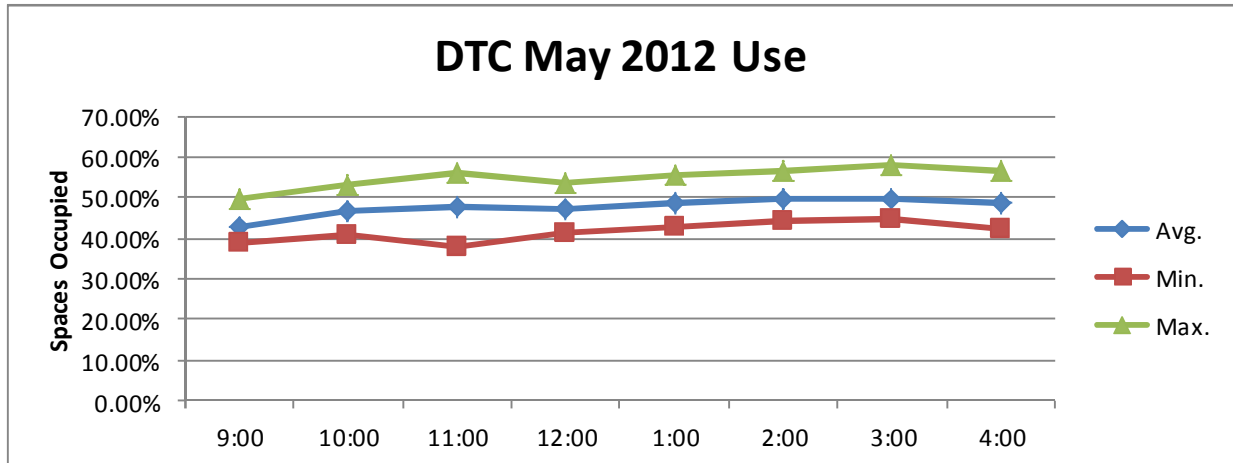
Minimum use levels dropped in March 2012, although maximum and average use levels remained similar to those experienced in February. Minimum use levels in March 2012, at around 60% occupancy, were lower than the 65-70% levels documented in March 2011, but average and maximum use levels were both higher in 2012, with average and peak use up by approximately 5% from March 2011 levels.



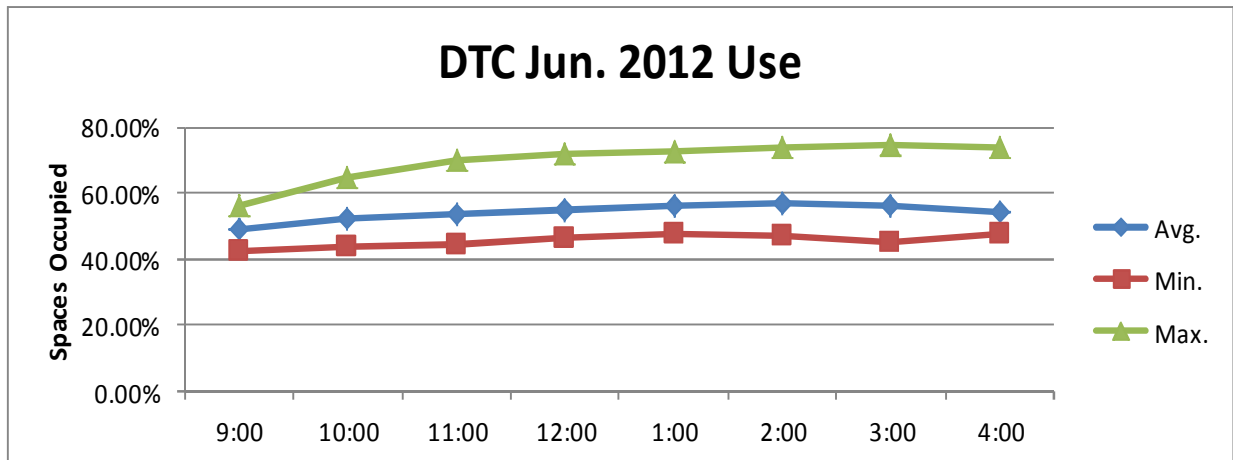
Use of the DTC in April 2012 was nearly identical to that of April 2011, although peak use grew slightly in 2012 from just under 80% in April 2011 to 85% in April 2012. April use was slightly lower than March use, with most of the change coming during peak use periods and minimum use levels remaining near 60% through most of the day in both months.



Use of the DTC declined significantly in May, with peak use never breaking 60% of capacity, and minimum use consistently below 50% and occasionally below 40%. Compared to May 2011, which was the month in which on-street parking became metered, the DTC had lower occupancy levels in May 2012 than in either pre- or post-meter May 2011. The peak occupancy rates for May 2012, at 50-60%, are comparable to the pre-meter minimum use rate from May 1-22, 2011, and to the average post-meter use rate from May 23-31, 2011.

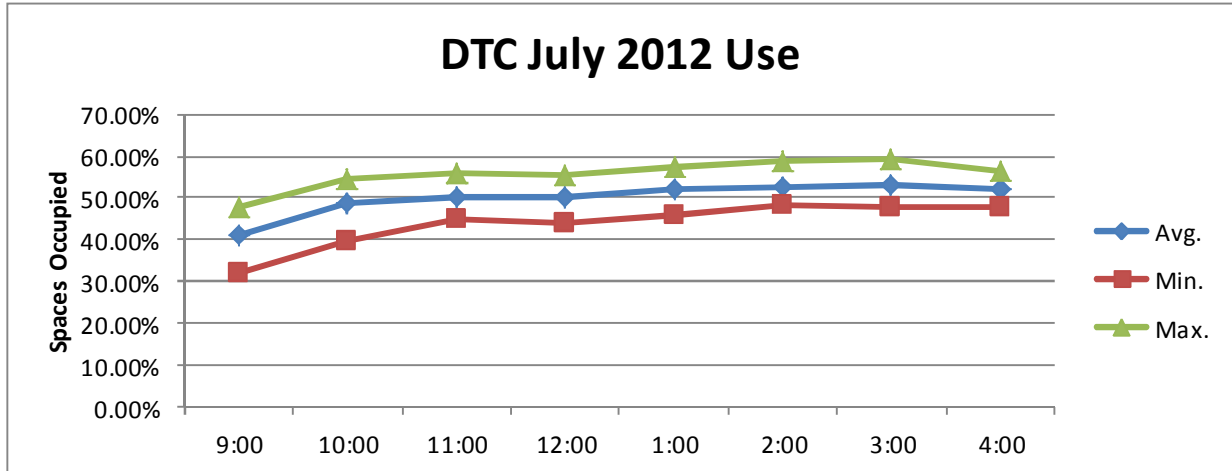


June 2012 brought increased peak use (around 75%) of the DTC over June 2011 (60-70%), but minimum counts were approximately 5% lower in 2012. Usage increased throughout the day from the prior month, with June peak use approaching a 20% increase over May peaks.



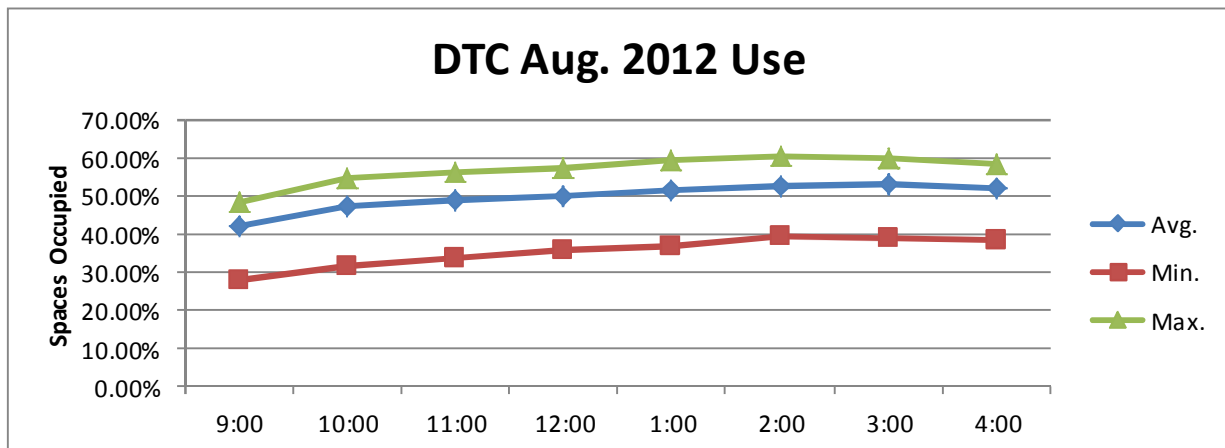
The temporary and unusual increase in utilization of the DTC in June 2012 was short-lived, and in July peak use dropped back to the familiar range of 50-60%. With the exception of 9:00 and 10:00 count periods, minimum occupancy stayed above 40% through the day. The range between minimum and maximum use was roughly 15% throughout the day, showing consistent utilization of approximately 50% of the spaces available in the facility.

Use dropped approximately 2-5% through all survey periods when comparing July 2011 to July 2012.



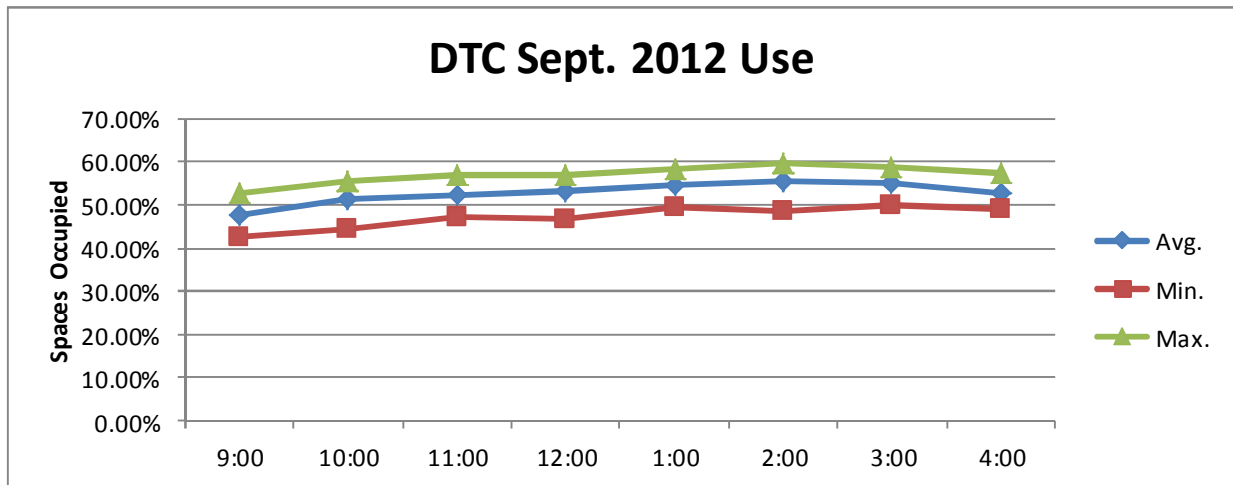
August 2012 experienced similar peak and average use to that documented in July, but minimum occupancy counts were approximately 10% lower during all survey periods other than 9:00 in August.

Compared to August 2011, peak use was slightly lower in 2012, but minimum use was significantly lower in 2012; minimum use hovered between 45-50% in August 2011, but ranged from under 30% to just barely 40% in 2012, a reduction of 10-15%.

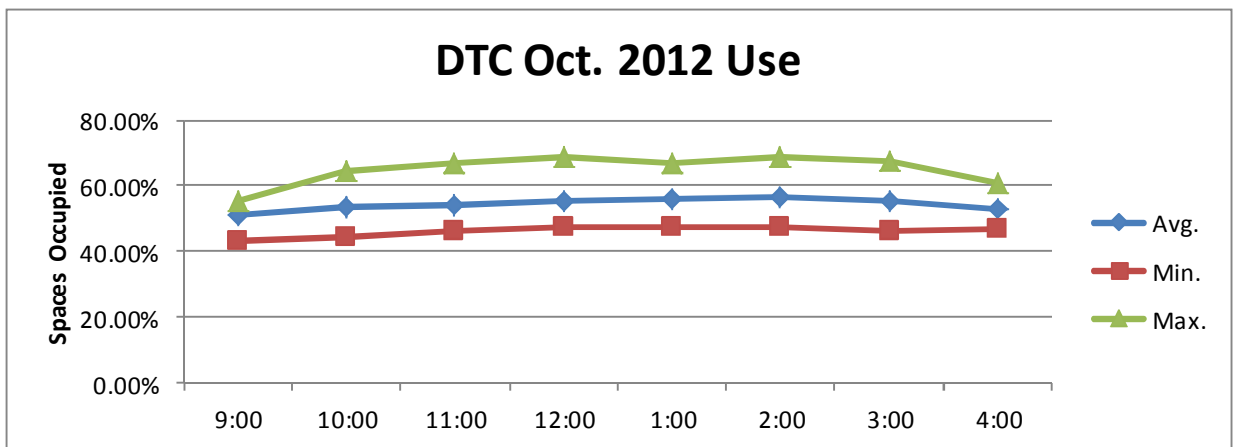


Peak use remained relatively stable from August into September 2012, and minimum occupancy counts rose by approximately 10% in September, back into the range of 40-50%. The trend of having relatively little variation between minimum and maximum counts continued in September, with approximately 10% variation between high and low occupancy counts in all survey periods.

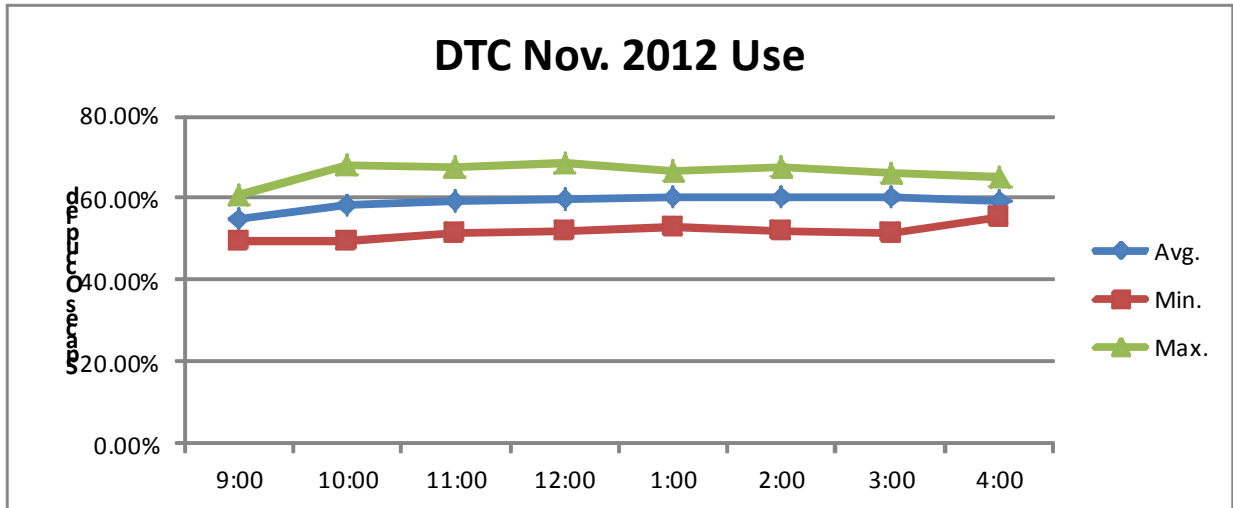
Count profiles were nearly identical between September 2011 and September 2012; the most noticeable deviation was a change in when the peak use (just under 60% in both months) took place during the day. In September 2011, peak use was documented during the 11:00 and 12:00 survey periods, with an afternoon lull in demand and a rebound during the 4:00 survey. By contrast, the September 2012 peak took place during the 2:00 survey period.



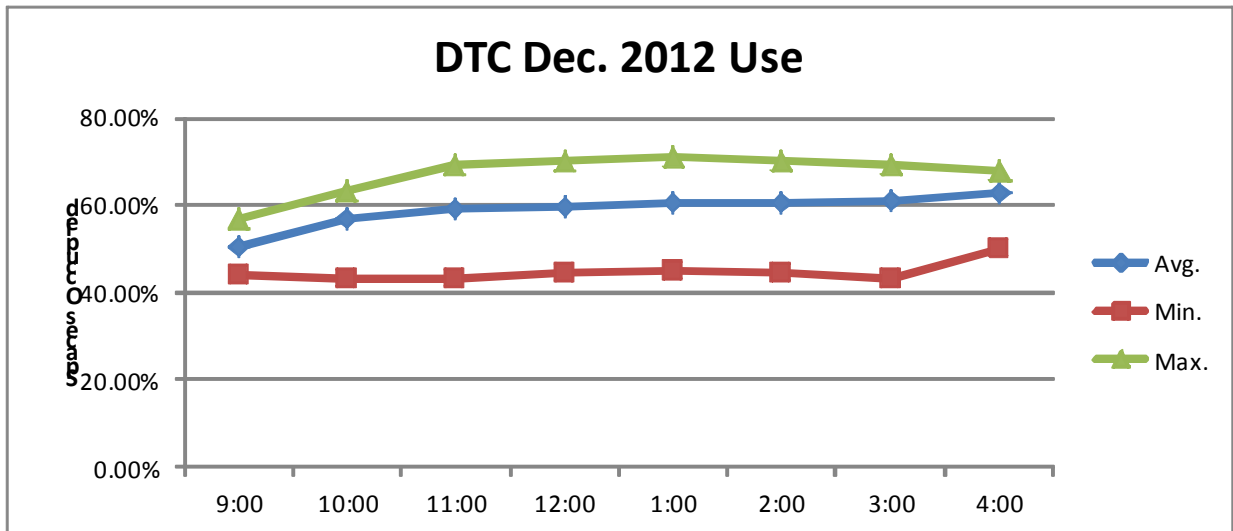
October 2012 saw marked increase in peak utilization over October 2011, with increases in peak use of 10-15% throughout the day. Minimum use rates in October increased by 3-5% from 2011 to 2012, with average use rates increasing 5-6% in the same comparison. Although minimum use was slightly higher in September than in October, peak use increased in October, by as much as 10% during most survey periods.



Use increased slightly in November from October use rates. Average use rates increased in November 2012 when compared to November 2011 rates, but peak use rates were fairly similar between the two years.

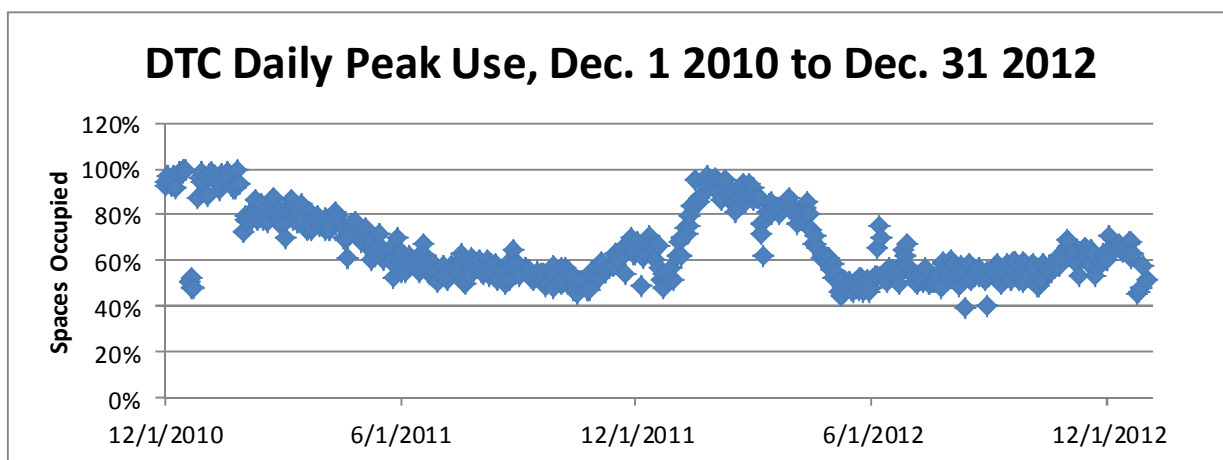


There is very little difference between use rates in December 2012 and 2011. The minimum occupancy rate declined in December 2012 from the previous month, but both average and peak use were largely unchanged from November.





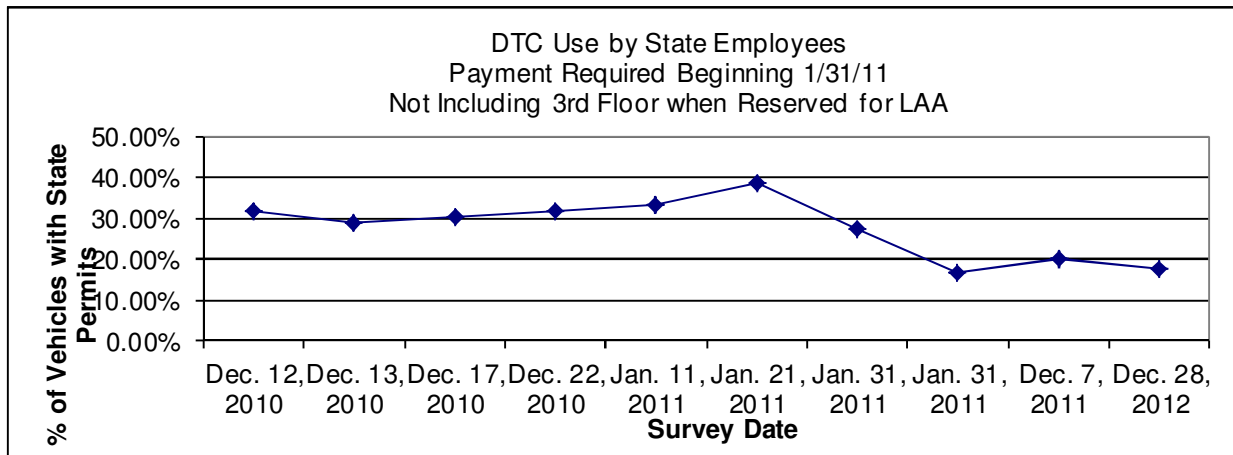
The first two months of parking at the DTC were free for the public, and the facility saw very high utilization rates during that period. The facility was routinely over 90% occupied, and there were occasions when only a few spaces, if any, were available. When paid parking requirements went into effect in February 2011, peak occupancy dropped by approximately 10% immediately, with 80% - 90% occupancy rates during peak periods in February through early April. Through April 2010, the trend continued, with peak use dropping another 10% to 70% - 80% occupancy by May. June 2010's peak use dropped again, albeit with scattered peaks of 70% occupancy; most peak counts were in the 50% - 60% range. Although the decline was less precipitous in July, peak occupancy rates did continue to decline and only rarely surpassed 60% in July 2011, with subsequent continued declines in use in August, September, and October. Late November 2011 saw the first occupancy of over 70% since May 2011. Use dropped by approximately 20% through December, but climbed to near-record levels by the middle of January 2012 (the beginning of the legislative session). With the exception of three unusually low peak counts in early March, use of the DTC stayed above 80% through early April (the end of the legislative session), with a steady and precipitous decline in peak use through early May; in this month-long period (April 7 through May 5), peak use declined by half, from over 80% of capacity to just over 40% of capacity. These low usage rates increased steadily over the next six months, and had climbed to 69% of capacity by the end of December 2012.



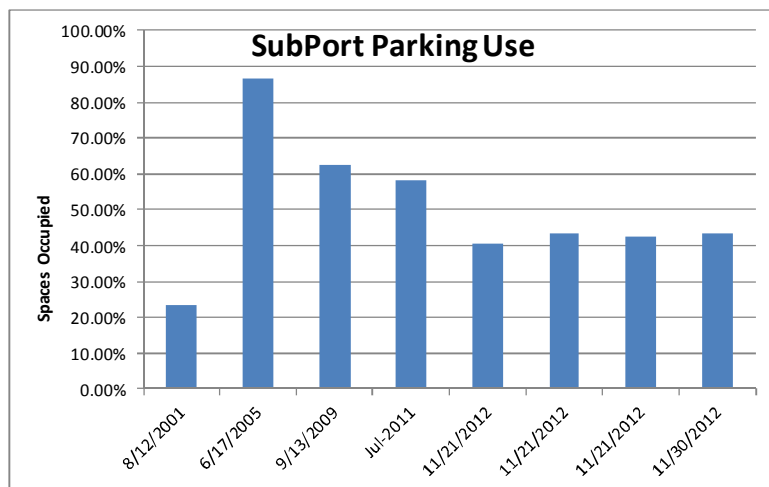
In contrast to December 2010 and January 2011, free weekday parking was not offered at the DTC in December 2011 or January 2012. This change in management resulted in lower utilization rates of the DTC in December 2011 and 2012 than in December 2010.

The data indicates that the DTC experiences seasonal variation in occupancy, with peak use during winter and spring months/legislative session (January through early April) and the lowest utilization of the facility taking place in the summer, fall, and early winter months of June through December.

One possible explanation for the lower number of vehicles using the DTC lies in one of the largest populations of commuting parkers: employees of the State of Alaska. When the DTC was first opened to the public, and was available for free parking with no time limit, vehicles displaying State of Alaska employee parking permits accounted for over 30% of all vehicles parked in the facility. When the 3rd Floor of the DTC was put off-limits to public parking, and was available only to vehicles registered through the Legislative Affairs Agency (LAA), the combined LAA/3rd Floor vehicles and other vehicles displaying State of Alaska parking permits still accounted for almost 35% of all vehicles parked in the DTC. On January 31, 2011, the day that payment for parking at the DTC began, the morning survey found that 28% of vehicles parked at the DTC displayed state permits or were parked on the third floor; by that afternoon, word had spread that payment was required to park at the DTC, and the number of vehicles displaying a state parking permit had plummeted to 17%, more than a 20% reduction from just ten days previously. At the end of the 2011 Legislative Session, the 3rd Floor was returned to public parking. A year after the DTC opened, vehicles displaying State of Alaska parking permits had risen to 19% of the vehicles parked at the DTC. This use rate appears to be fairly consistent, with 17.5% of parked vehicles displaying state parking permits in December 2012.



It is worth noting that the use of the DTC by state employees remains low even after the elimination of free public parking at the SubPort, a lot owned by the Alaska Mental Health Trust that had been widely used by commuting downtown workers. This facility, which provided 136 spaces, will be unavailable for at least four years while the neighboring State Library Archives And Museum (SLAM) is being constructed. The SubPort, although not officially available for public parking, was seen by many as a critical facility in providing adequate parking for downtown. Parking surveys were not conducted on the SubPort property for two reasons: first, as a non-CBJ-owned facility, the CBJ had no management authority; second, staff at the Trust Land Office had expressly asked that the facility not be included in parking plans or surveys, as they anticipated putting the lot to another use in the near future. When the Trust Land Office announced that the facility would be closed to public use, CBJ staff immediately began collecting use data and scouring aerial photography to establish a baseline of use data and to estimate the demand that would need to be accommodated. This limited data shows that although the facility was used consistently, it was generally around half-full, with 50-60 vehicles using it on most weekdays. The DTC and MPG have more than adequate capacity to accommodate this level of increased use; however, when paired with peak use of the DTC during the 2013 Legislative Session, peak parking events can be expected to be more frequent and to be closer to capacity at the DTC in January and February 2013.

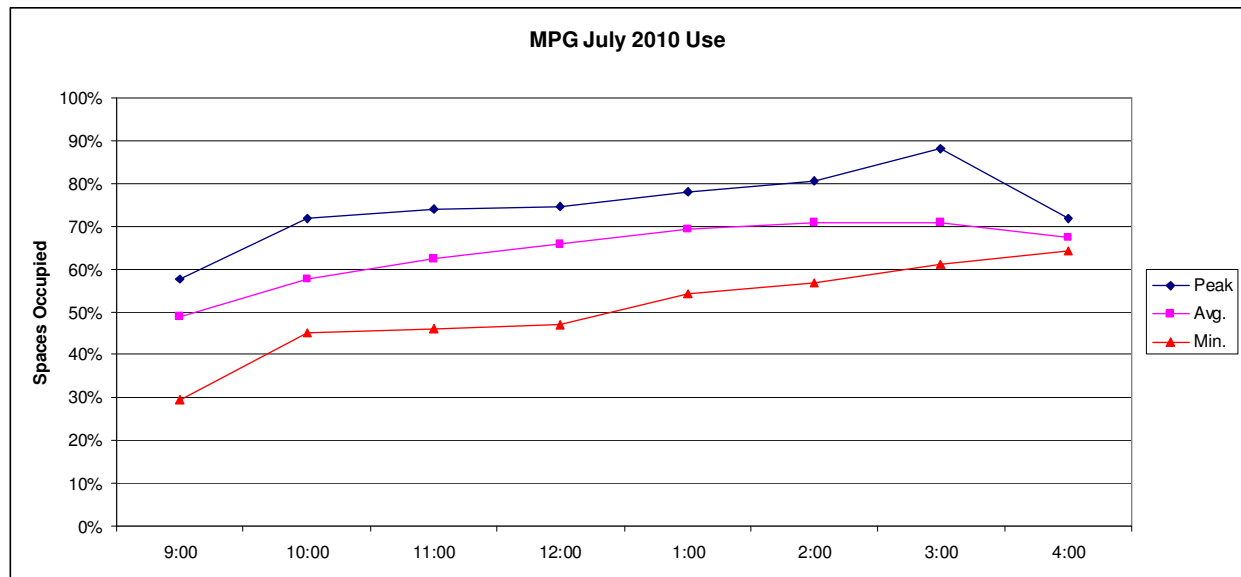


The Marine Park Garage (MPG) was the City and Borough of Juneau’s first public parking garage in the downtown area. With 300 spaces, it is still the larger of the two off-street parking garages owned and operated by the CBJ. This facility is on the opposite side of the downtown core from the DTC, so most drivers coming in to town must pass both the DTC and their destination to arrive at the MPG. Accordingly, the pricing structure at this facility is lower than that at the DTC, with hourly parking costing just \$0.50, daily permits \$5, weekly permits \$15, and monthly permits \$50. Changes to management of the MPG in December 2010 include the elimination of a prohibition against parking in the same space for more than four hours, even after paying the \$0.50/hr. price to park. Additionally, the demarcation between hourly/coin parking and monthly/permit parking was removed so as to facilitate more efficient use of the facility.

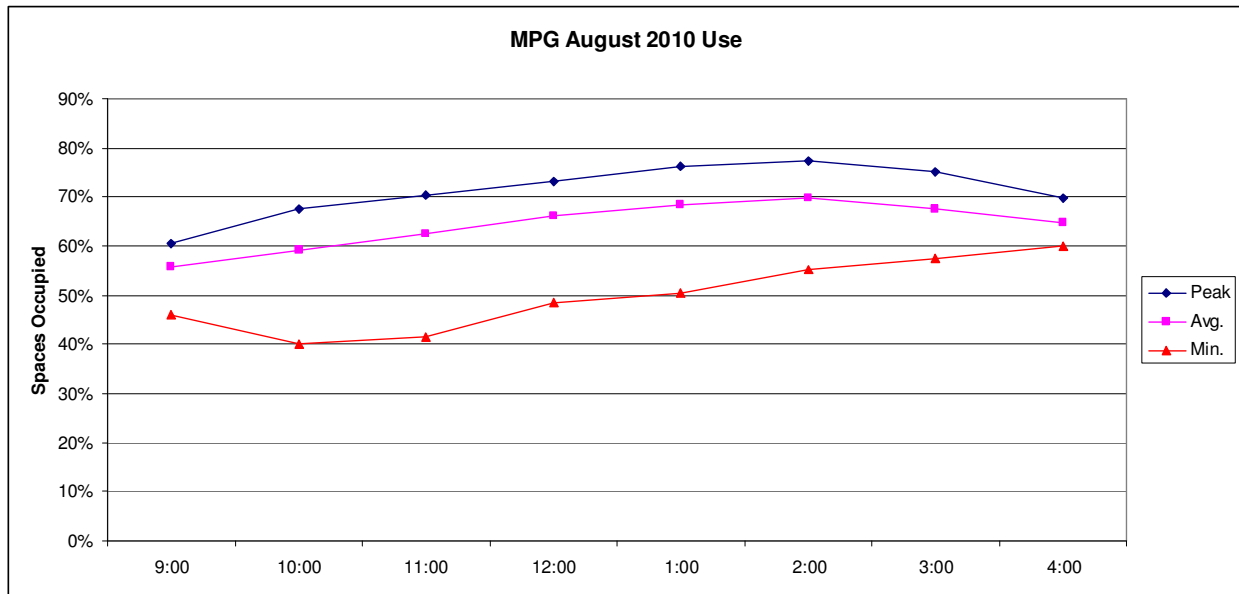
23 of the 300 available parking spaces in this facility are managed by the Juneau Public Library for its patrons, who may use these spaces for free if they register their vehicle at the front desk of the library. These spaces are not included in the usage data provided here.

Usage data for the MPG has been collected by contracted parking enforcement staff on an hourly basis for a number of years; data presented in this document begins in FY11.

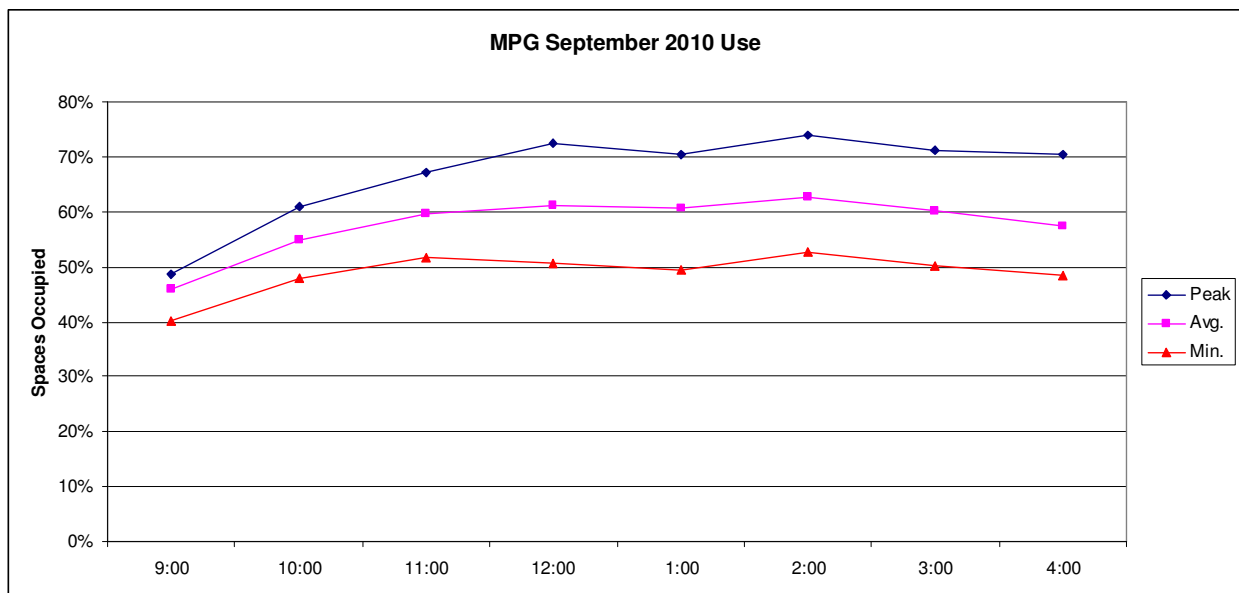
July 2010 saw use of the MPG starting at an average occupancy of approximately 50% at 9:00 am, and rose throughout the day to an average high of approximately 70% occupancy from 1:00—4:00 pm. Peak occupancy took place during the 3:00 pm count period, but never reached 90%. The lowest documented occupancy was 30% during a 9:00 am count; the highest occupancy for that time period was just under 60%.



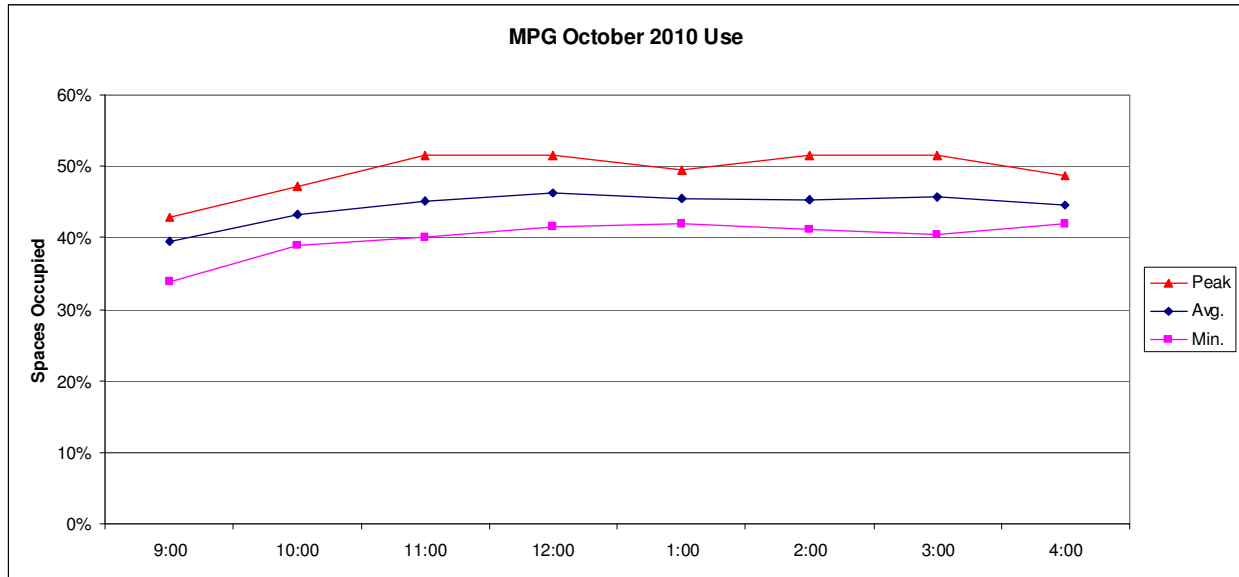
August 2010 had similar use patterns to July 2010, with the lowest counts in the morning and the highest counts in the mid-day and afternoon hours. The morning low count rose approximately 10% from July to around 40%, but these low counts moved to the 10:00—11:00 am hours. Peak use dropped to around 75%, with peaks of 70% or more from 11:00 am—4:00 pm. The range between high and low occupancy counts was nearly 30% in morning counts but less than 10% during 4:00 pm counts. This indicates that late afternoon use is consistent throughout the month, but that mid-morning counts see a relatively high degree of volatility in the use of the MPG.



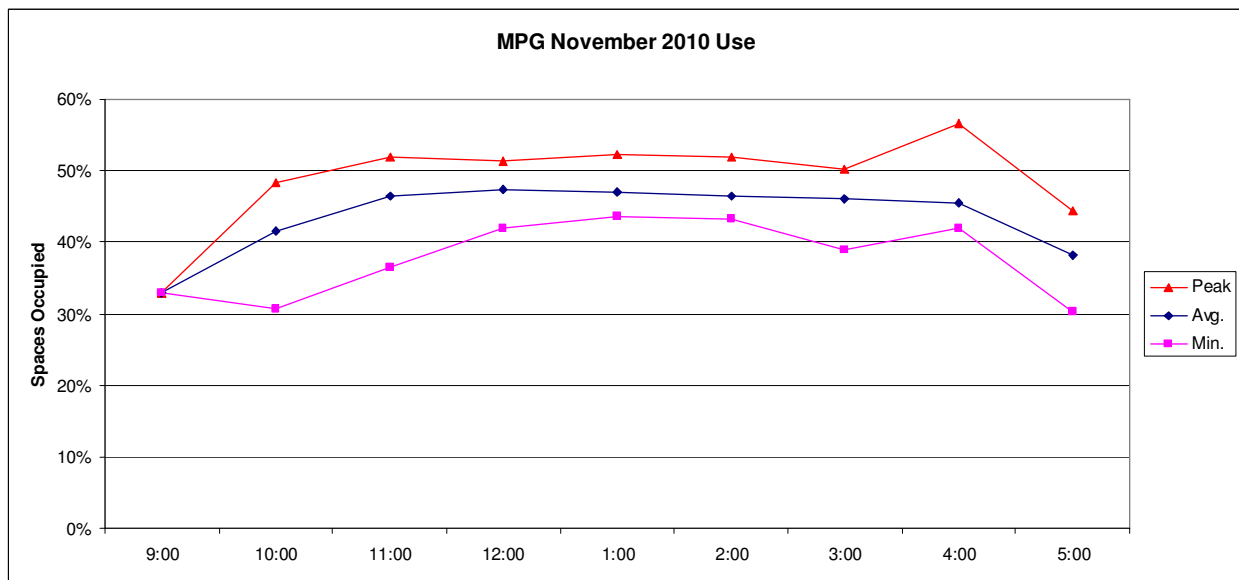
Usage in September 2011 continued trends identified in July and August, with the lowest occupancy taking place in the morning, but these low counts were limited to the 9:00 am count, and to a lesser degree the 10:00 am count. Average, Minimum, and Maximum counts varied little throughout the rest of the day for this month, with peak usage around 70%, average use near 60%, and low use near 50%. With approximately 20% in the range between high and low counts, the data shows a relatively high degree of change in usage between various days in the month.



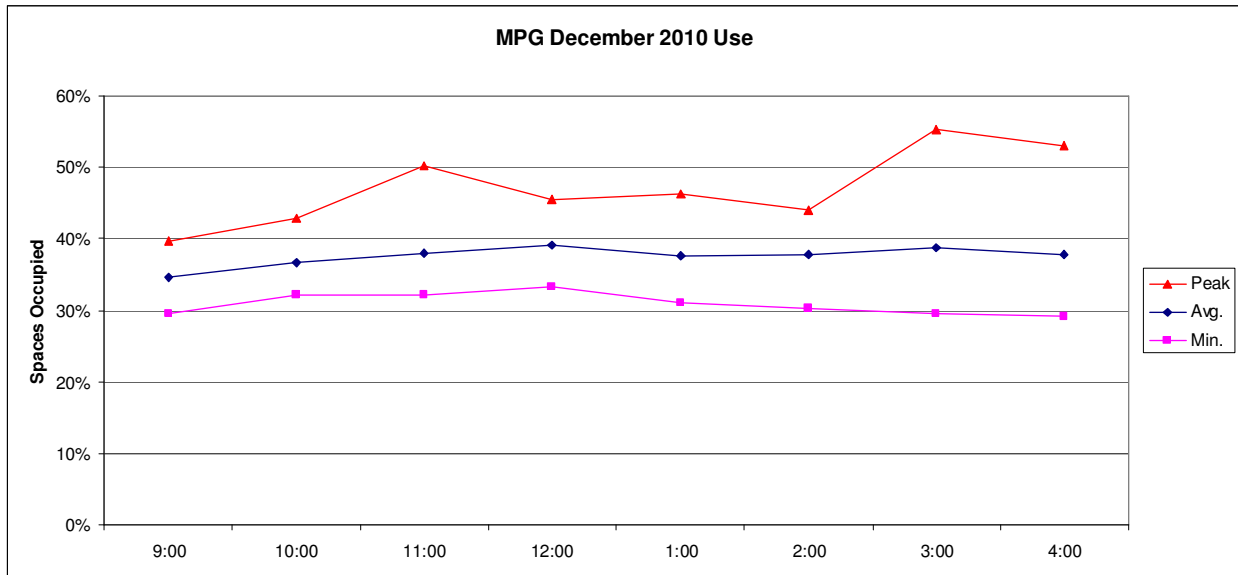
October 2010 had similar use trends throughout the day to previous months of that year, in that 9:00 am counts were the lowest of the day, and that by 11:00 am peak utilization had typically begun, and would continue through the rest of the day. With the end of the summer cruise/tourist season, occupancy numbers dropped significantly throughout the day, affecting all day parts equally. Peak usage had hovered at, around, and even above 70% from July 2010-September 2010, but in October 2010 plunged 20% to near 50% occupancy. Minimum usage was near 40% throughout all day parts; the range from low occupancy to high occupancy was only 10%, and indicates consistent use throughout the month.



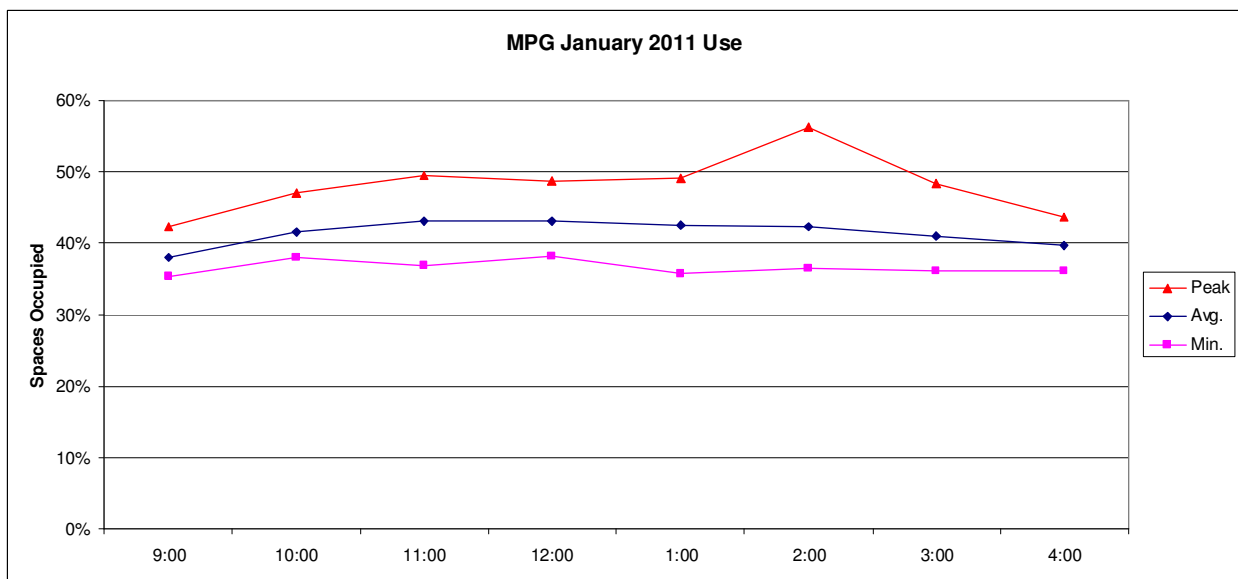
November 2010 counts show changes in parking behavior from previous months, with overall use staying at low non-cruise-season rates first encountered in October. The single data point for average, minimum, and maximum occupancy rates at 9:00 am is the result of a single count during that period in November; other time periods display more typical ranges of 10-20% between high and low occupancy counts. A late afternoon spike, with a maximum count of approximately 55% occupancy, was the most anomalous event during the month, which otherwise saw typical daily patterns of lower morning use, consistent use from 11:00 am—4:00 pm. November 2010 is the only month in FY11 for which 5:00 pm counts took place, so the reduced occupancy rate at that time of day cannot be compared to occupancy at this time during other months.



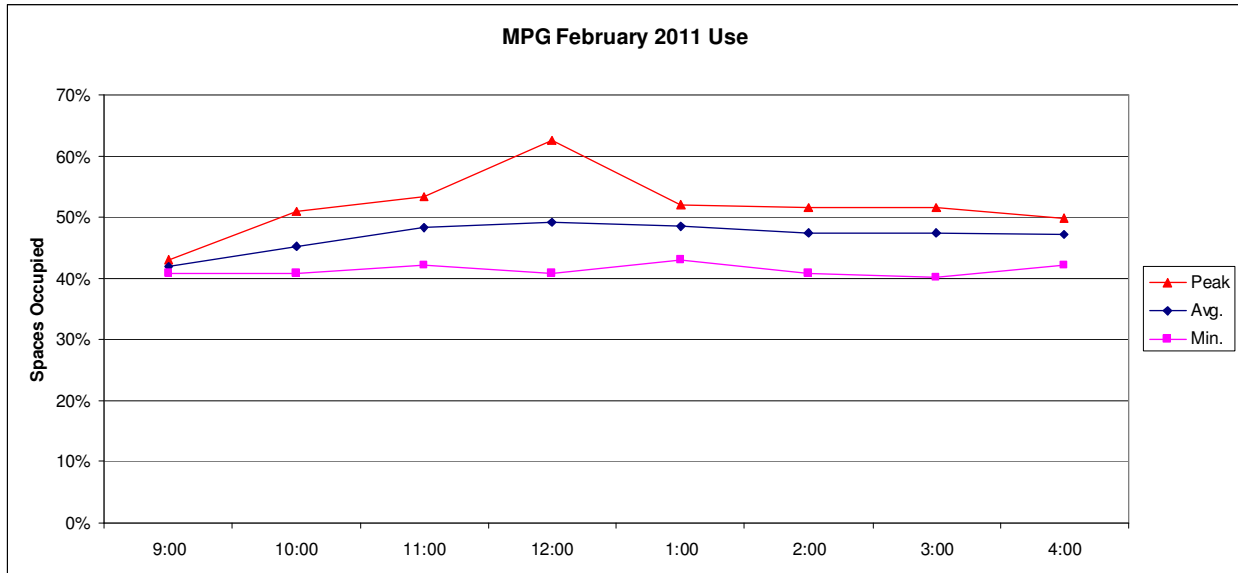
Historically, the CBJ City Manager has decreed that parking at the MPG be free to the public during December; this was the case in 2010, but with the opening of the new DTC that month and providing free parking at that facility as well, allowing free parking at the MPG does not appear to have had much effect on increasing use of the facility. Peak use in December fell from even October and November's low counts, with morning and mid-day peaks of 40-50% and afternoon peak use of approximately 55% from 3:00—4:00 pm. Average use held fairly steady throughout the day, hovering between 35—40%. Low counts were typically around 30% occupancy. The range of variability between high and low counts was as little as 10% from 9:00—10:00 am, but varied from 15—25% during the rest of the day. As in previous months, the highest occupancy rates occurred in the afternoon.



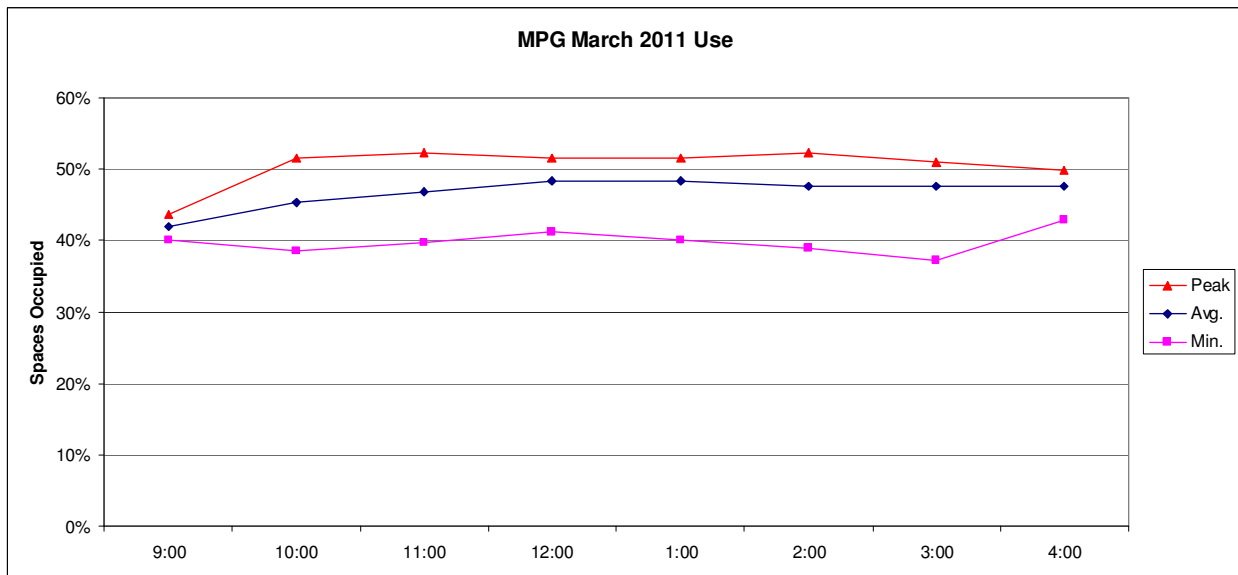
Overall, use increased during January 2011, with peak counts climbing to 50% or more from 11:00 am—3:00 pm, and minimum use climbing to the range of 35—40%. The range of variability between high and low counts decreased, with most hourly count periods only having a 10—15% range between high and low counts; the 2:00 pm count period had the most variability, with a range of nearly 20% between the high (55%) and low (35%).



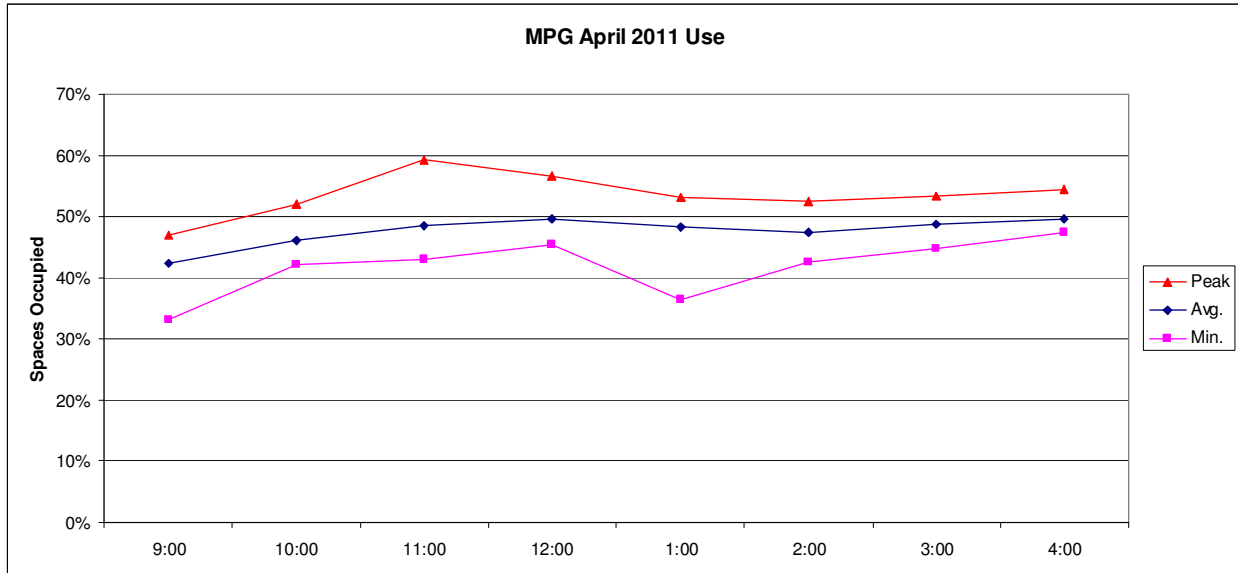
There was very little change in overall use of the MPG in February 2011, except that the high occupancy count period took place at 12:00 pm, significantly earlier in the day than it had been in all previous months. The range between high and low occupancy counts dropped to a little over 10% for most count periods, but the noon hour had a range of nearly 25% between low and high counts. Use of the MPG facility remained low in February, although peak use exceeded 50%, and average use approached 50%, during all but the 9:00 am count period.



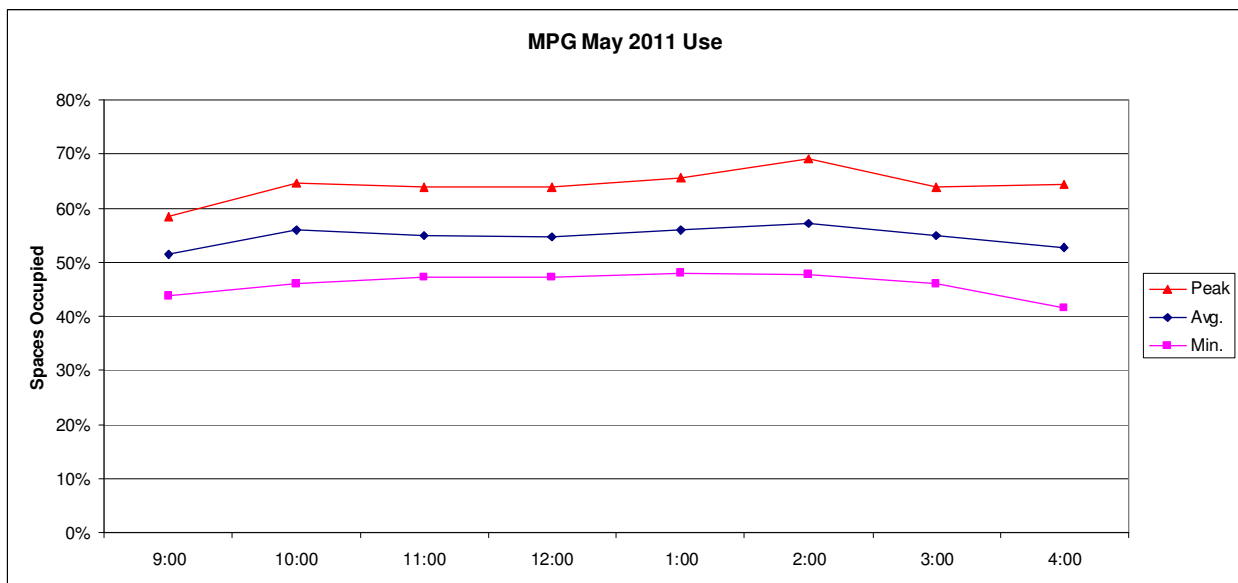
March 2011 had very similar use to that in February 2011, with the exception of not experiencing an anomalous high count. 9:00 am remained the period with the lowest utilization of the facility, but all other day parts saw peak use of 50% or higher, and minimum use only dipped below 40% during three count periods. Average use was fairly consistent, and ranged from just over 40% to just under 50%. Most survey periods saw a range of use of approximately 10% - 15%.



April 2011 experienced more volatility between hourly counts than is typical for the MPG, but overall patterns remained consistent with earlier months. Peak use climbed slightly, with only one peak count below 50%, and another count at nearly 60% occupancy. Low counts ranged from near 30% at 9:00 am to around 45% during the rest of the day; a low of near 35% during a 1:00 pm count was the single outlier to this pattern. Average use was fairly consistent, between 45% - 50% during all counts except the traditionally-low utilization of 9:00 am.

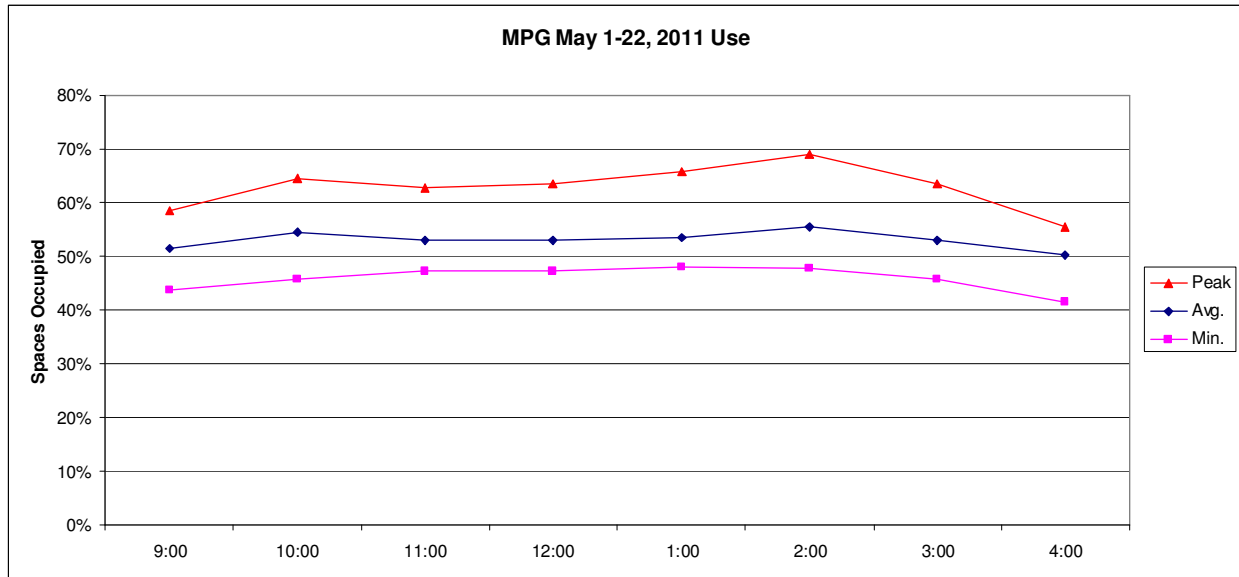


May 2011 occupancy counts show an increase in usage for almost all day parts, with minimum, average, and peak counts all increasing from April 2011. The data for this month is, however, more complicated than data for most months, as May 23, 2011 was when on-street parking meters went live in Juneau. Thus, usage is broken into two additional charts, one showing occupancy data for May 1-22, and the other showing data for May 23-31.

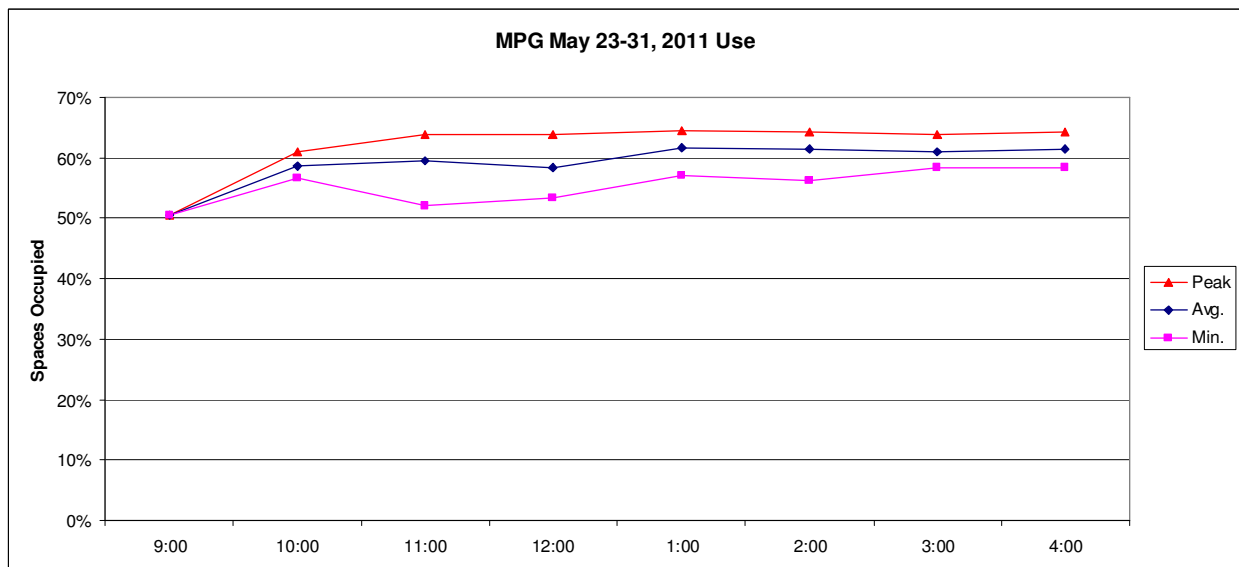




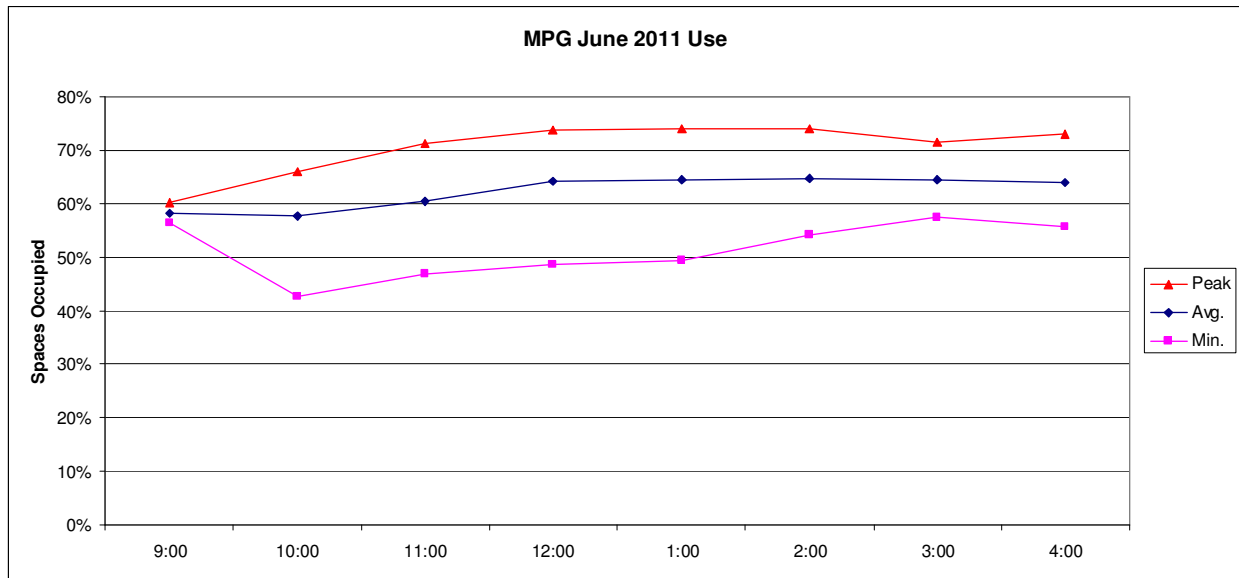
The occupancy data for May, 2011 is perhaps the most interesting data in this document, as it shows the direct impact of changing pricing and time restrictions at one facility (on-street) upon another facility (MPG). Before pay stations were utilized to manage on-street parking, May 2011 usage of the MPG was very similar to previous months, with a slight seasonal increase in peak, minimum, and average use during all count periods; the afternoon counts at 3:00 and 4:00 pm may have declined from mid-day highs more drastically than was seen in previous months, but the usage patterns were, on the whole, consistent with previously identified trends. Peak counts and low counts were typically separated by 15% - 20%.



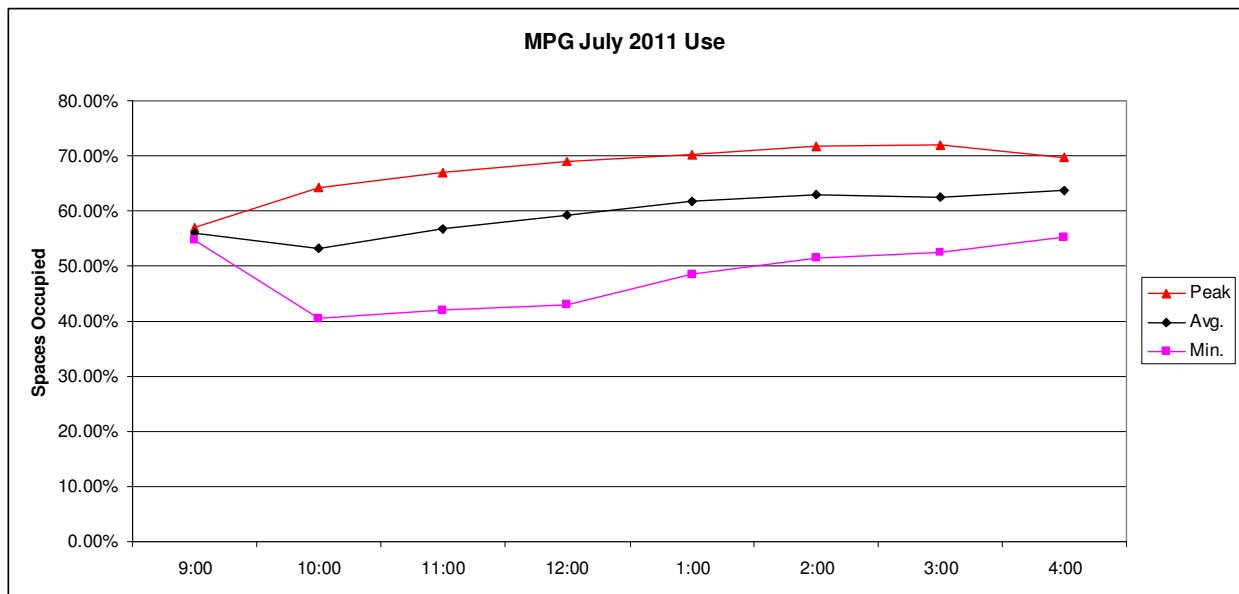
When parking meters were installed on-street, parking behavior changed at the MPG. With only one count at 9:00 am during the period of May 23-31, the near-50% peak, average, and minimum use of the MPG at this time is not a very interesting number, but the very small range between peak use and minimum use for the remainder of the count periods, which was approximately 10% at 11:00 am and 12:00 pm, shrunk to around 5% at 10:00 am and from 1:00—4:00 pm. With peak use at nearly 65%, and minimum use at 50% or higher, late May 2011 saw the highest utilization of the MPG since September of 2010; it may be that this was purely a seasonal change, since summer use has historically been higher than fall, winter, and spring use of the MPG, but the dramatic difference between May 1—22 and May 23—31 counts indicate that the use of on-street pay stations likely played a role in changing parker's behavior, and that seasonal increases in the number of parkers likely does not explain the degree of those changes.



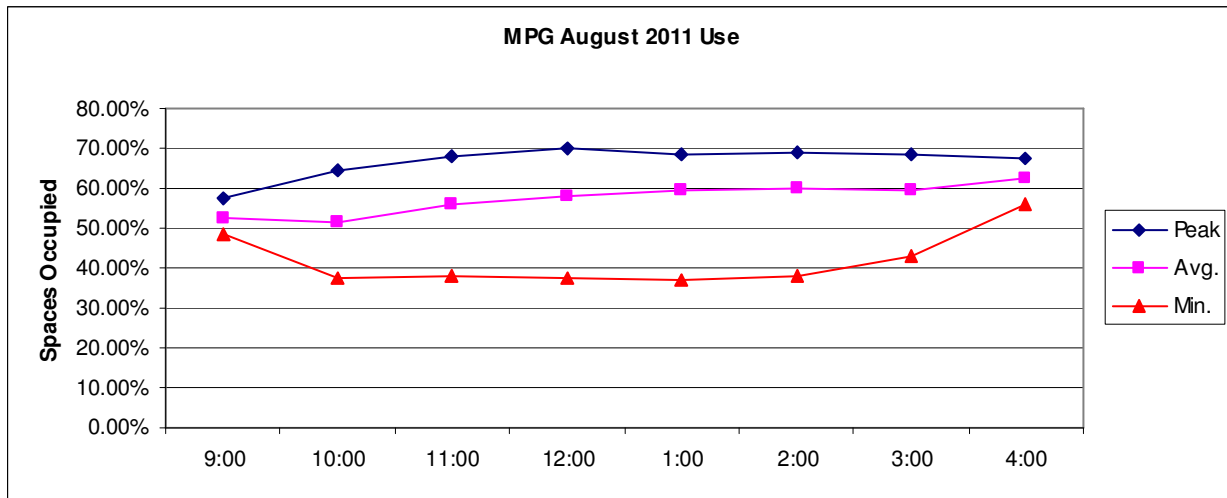
June 2011 saw an increase of almost 10% from even May 23-31 peak use of the MPG, although minimum occupancy counts dipped over 10% at 10:00 am and were near May 1-22 levels during the remainder of the day. Average use, however, was over 60% for the majority of the day, an average rate that had not been seen since July 2010. A wide range of approximately 25% difference between minimum and peak occupancy levels during most of the day shows a high degree of variability in travel or parking patterns; this data is examined on a week-day basis later in this document.



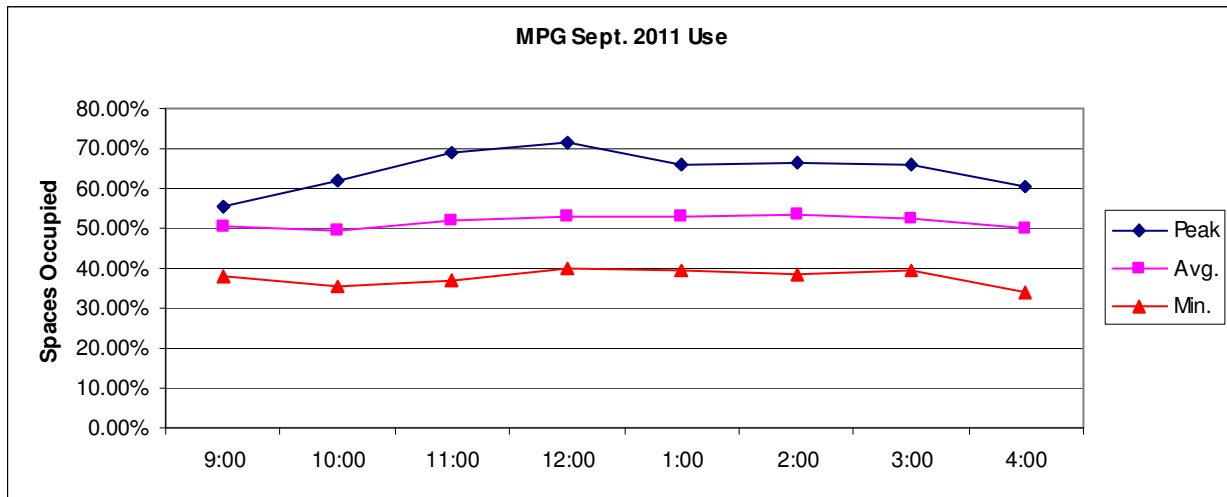
Very similar use trends continued in July 2011, with the lowest counts taking place in the morning hours, averages near 60% throughout the day, and peak counts between 65-72% during the majority of the day. One unusual trend in July 2011 is that minimum occupancy levels were higher in the afternoon than in the morning (except for the 9:00 am survey period, which, with only three counts during the month, does not have an extensive data set behind it). The wide range of occupancy levels during much of the day (10:00 am to 3:00 pm) show a high degree of variation in parking patterns at this facility that may be easier to understand when viewed through a different lens, such as by comparing individual days in the month to each other. This view of the data on a daily basis follows the monthly review in this section of the report.



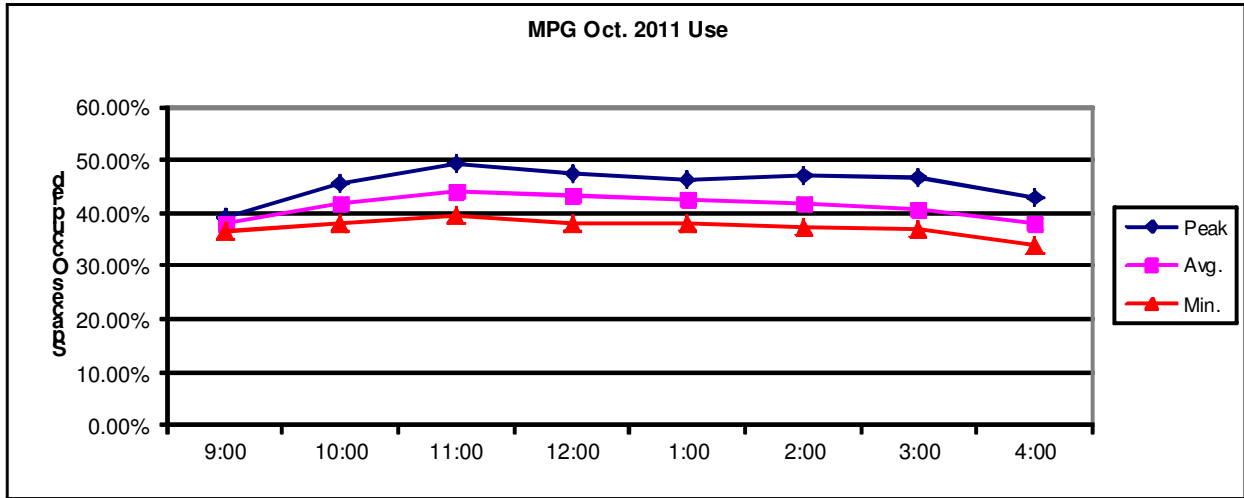
Peak occupancy of the Marine Park Garage was slightly lower in August than in July of 2011, with only the noon hour seeing peak use of 70%, and average occupancy levels of between 50-60% for most of the day. 9:00 am counts, which were of a limited number in August as they are in most months, show a relatively small variation between minimum and maximum counts of roughly 10%. 4:00 pm counts show a similar degree of variation between minimum and peak occupancy levels, with counts across the board of roughly 10% more vehicles than the morning counts. During the majority of the day (10:00 am to 3:00 pm), however, there was a wide range between minimum occupancy counts (generally around 37%) and peak counts (65-70%). This ~30% range between low and high occupancy counts is similar to that seen in June and July data at the MPG, and will be reviewed from a different perspective in the following section of this report.



September 2011 saw a decline of nearly 10% in occupancy during 9:00 am and 4:00 pm survey periods, but use of the MPG did not change that much during the rest of the day, and even increased by almost 2% during the noon hour. As with preceding months, the wide range between the low and peak counts may make more sense when viewed on a day-of-the-week basis, which is reviewed in the following section of this report.

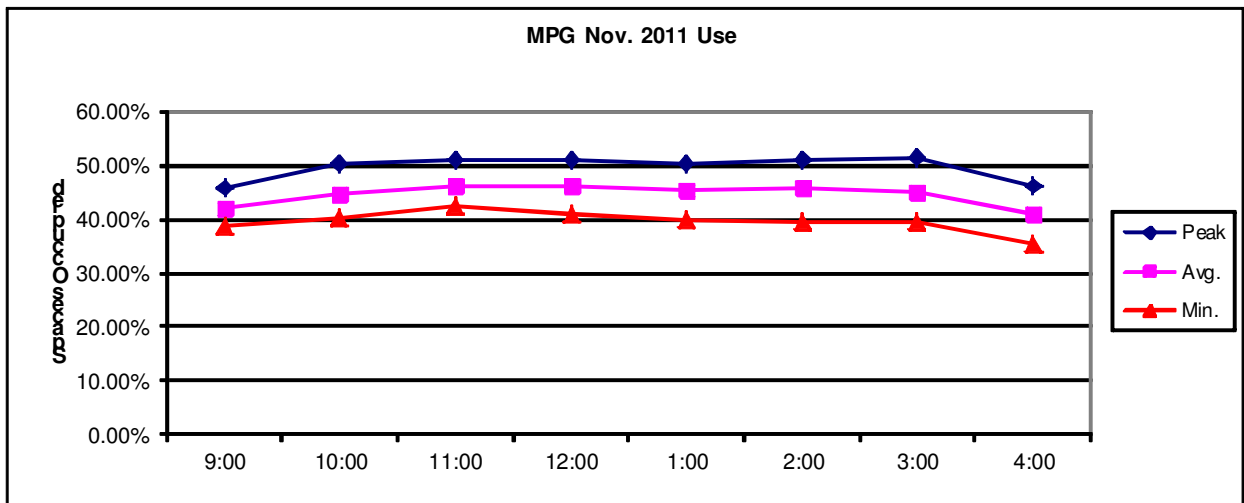


In stark contrast to the preceding months, October 2011 had peak and minimum occupancy levels over a range of approximately 10% throughout the day, showing that there is a low degree of volatility in travel behavior during this month of the year. With summer tourism industry jobs over for the year by the beginning of October, use was fairly consistent throughout the day and across all days in the month. The lowest occupancy levels observed during the month are approximately 15% lower than the highest count, and peak counts for all day parts other than the 11:00 am count period are within about 10% of the lowest observed occupancy levels.

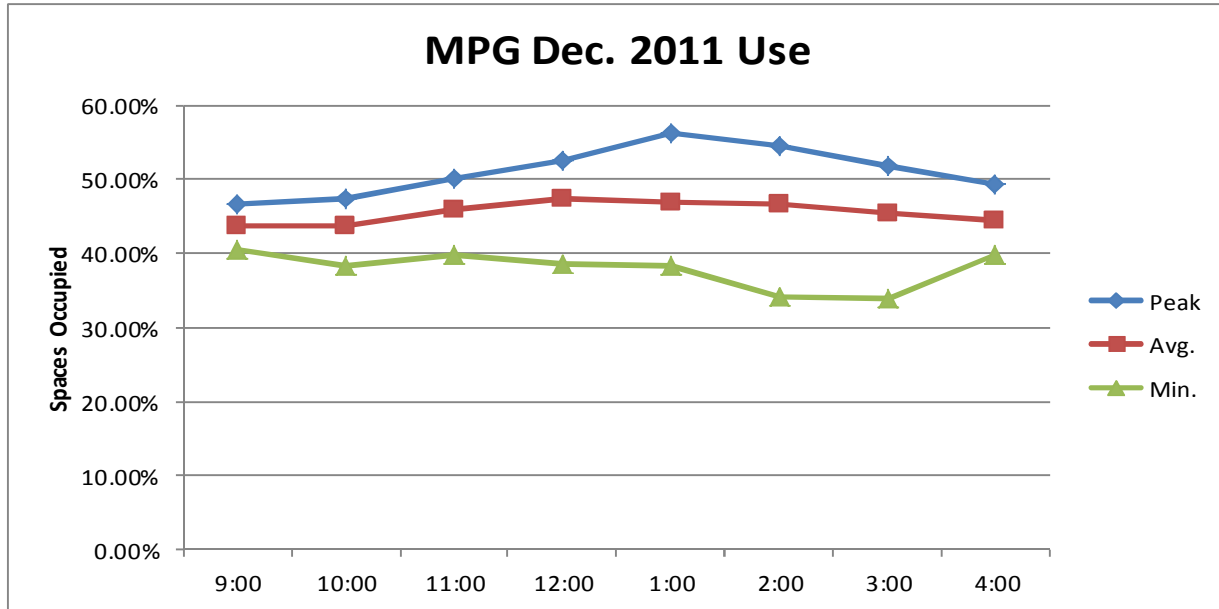


November 2011 had occupancy levels that were very similar to those observed in October; five additional survey periods joined the 11:00 am hour in having peaks near or above 50%, but this constitutes an increase of less than 5% for most count periods. Minimum occupancy levels increased by even less, only 1-2% above October levels in most count periods.

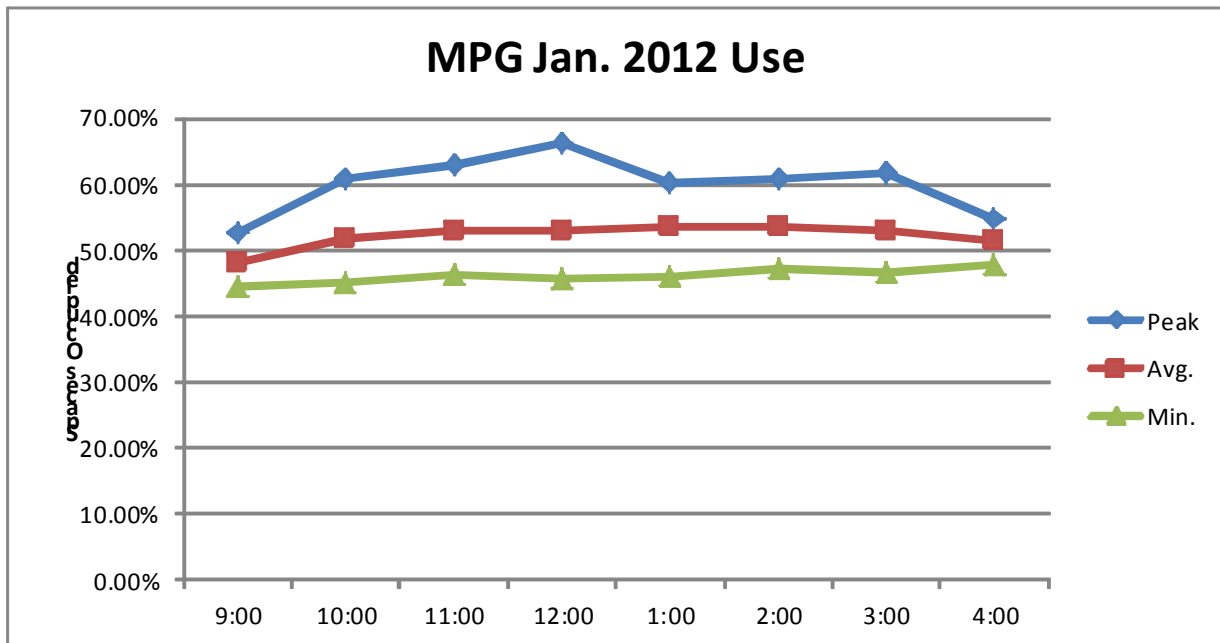
There is no apparent reason for increased occupancy of the MPG from October to November in terms of seasonal destinations or travel patterns, but the slight increase in utilization of the MPG in this period could be explained by increased enforcement efforts for on-street parking. Due to issues with the technology being used to manage on-street parking, there was virtually no enforcement of new on-street parking restrictions until late October 2011. It could be that as parkers became aware of a return to active enforcement of on-street restrictions, parkers began to utilize off-street parking to a higher degree.



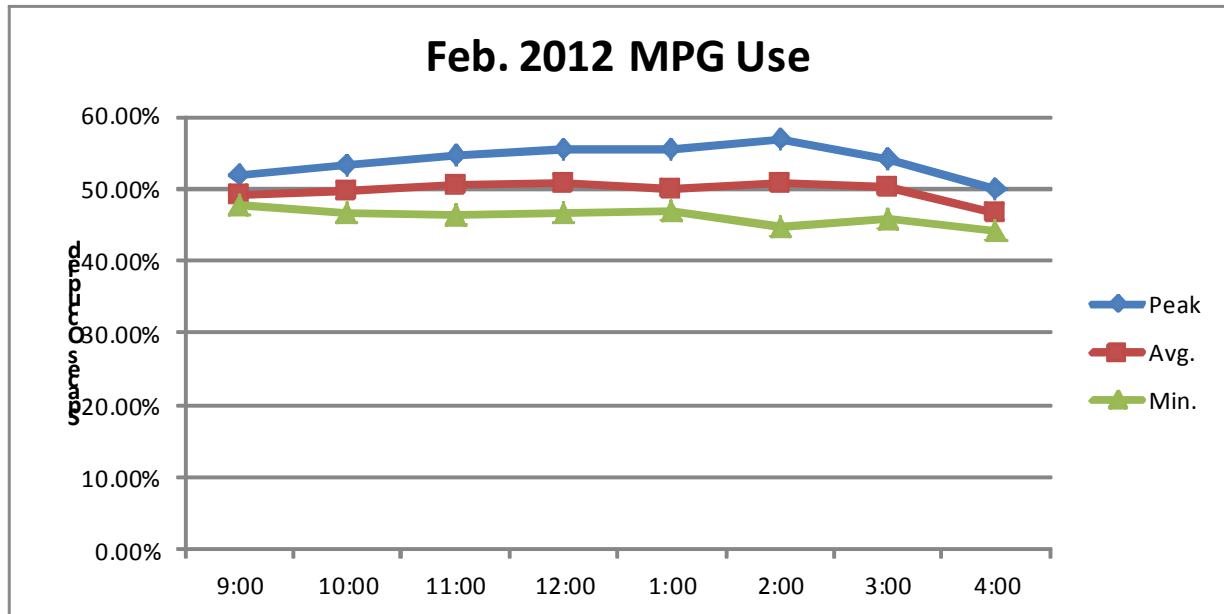
Use of the MPG continued to increase in December, with peak use exceeding 50% during four periods and average use hovering around 45% throughout the day.



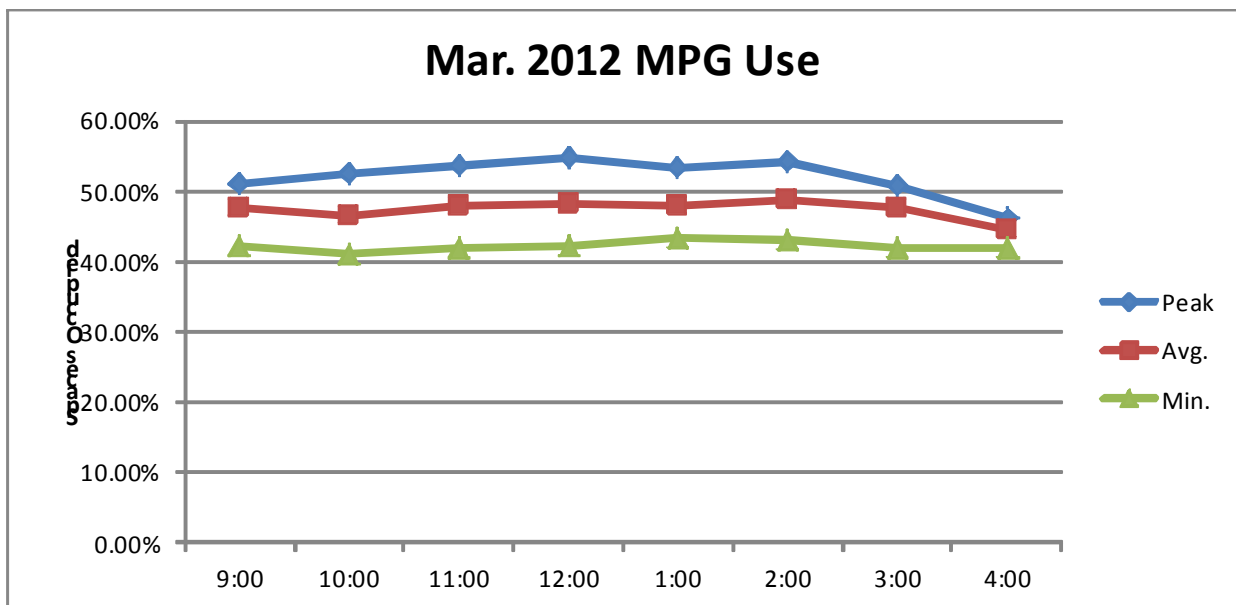
January 2012 saw continued increased utilization of the MPG, with all periods experiencing peaks of over 50%, and six periods at or over 60%. Even minimum counts during January exceeded 40% during all day parts, and average use was at or exceeded 50% at all periods. This is an unusually high utilization rate for this facility, especially during winter months.



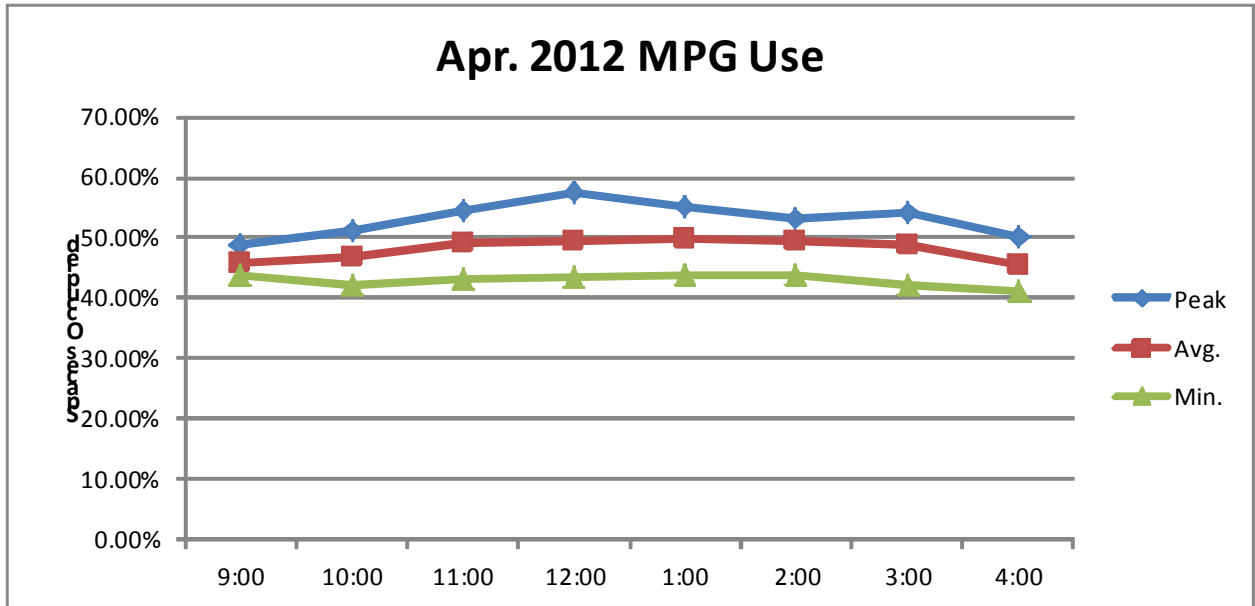
In February 2012, peak and minimum usage counts were in a fairly small range throughout all day parts; a 10% variation in utilization during the 2:00 pm period is the biggest gap between peak and minimum use documented that month.



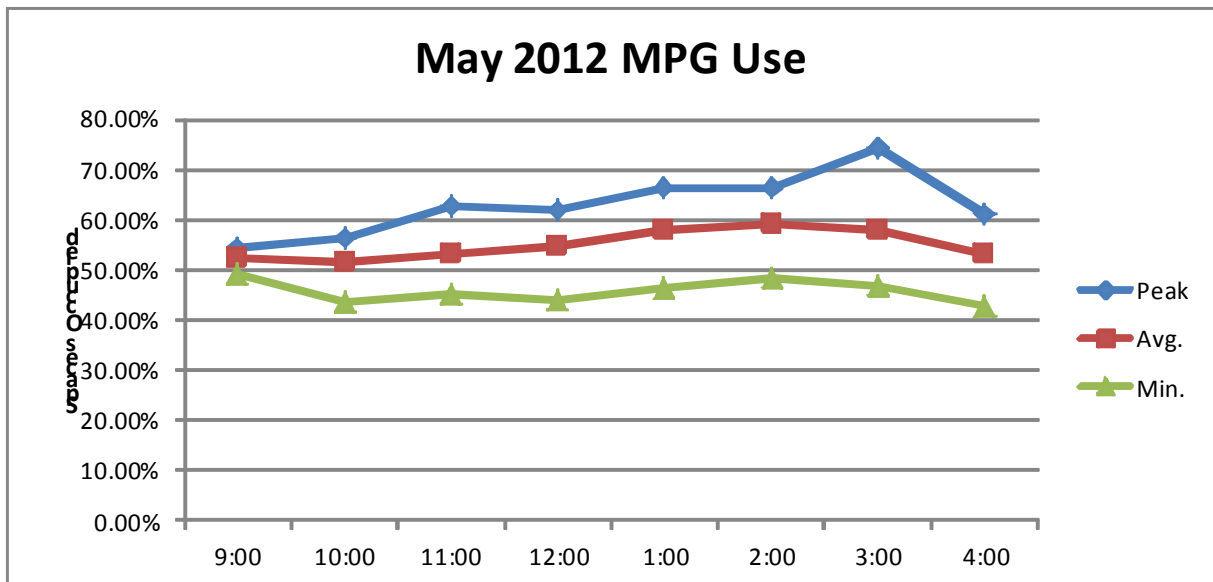
Use of the MPG declined in March, with peak utilization of between 50-55% and minimum use of just over 40% throughout the day.



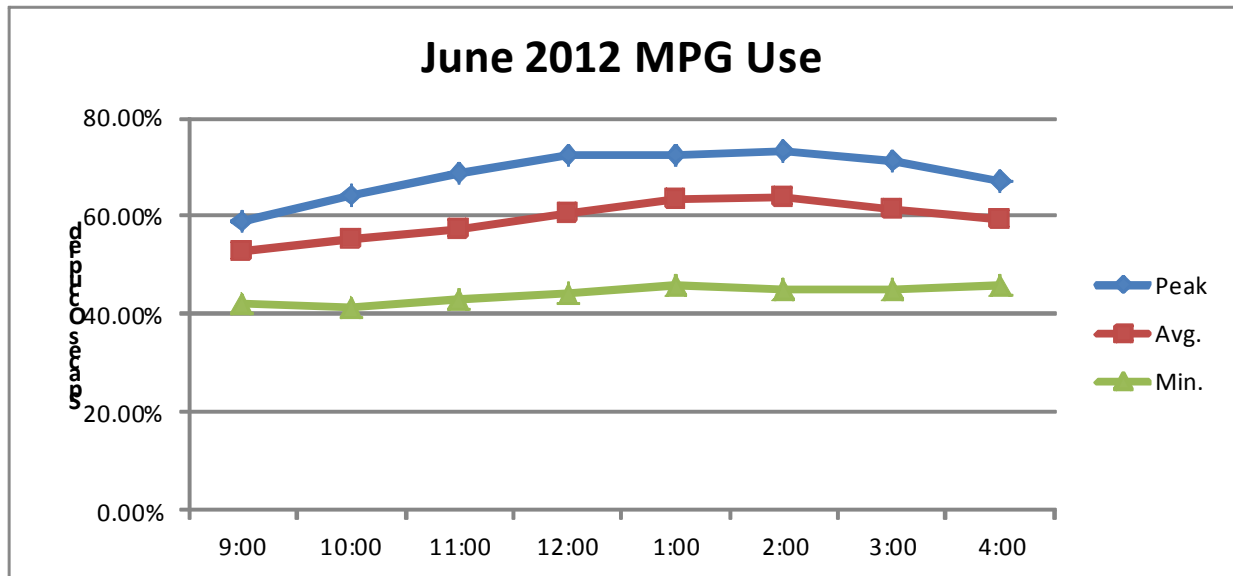
Aside from lower morning counts, the overall trend in April followed that of March, with peak use between 50-60%, minimum use just over 40%, and average use near or under 50%.



With the exception of a single outlying peak count of nearly 75% occupancy, which saw over 30 more vehicles in the MPG than were there an hour previous, May saw modest growth in peak utilization, with six count periods experiencing peak use over 60%. The range between minimum and peak counts grew to be 15-20% in May, with the greatest range experienced during the 3:00 pm period, at approximately 25%.

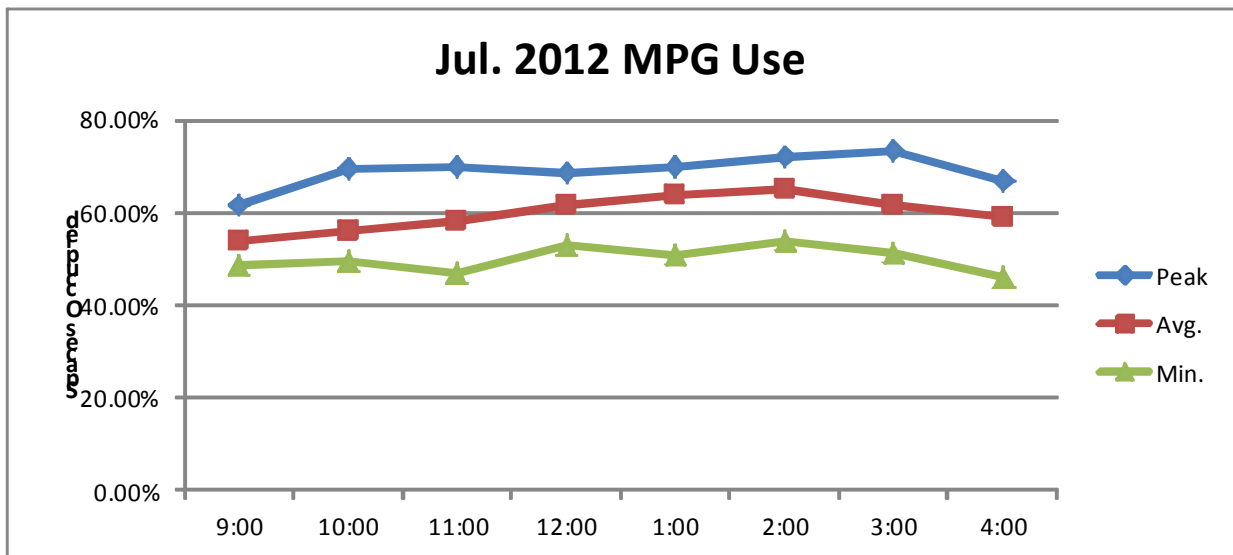


June 2012 had very similar peak use to June 2011, although the 4:00 peak count was slightly lower in 2012. Minimum counts were lower in 2012 during all survey periods, and average counts were lower during morning (9:00 to 11:00) counts as well as late afternoon (3:00 and 4:00) counts. Peak use increased during almost all survey periods from May 2012.



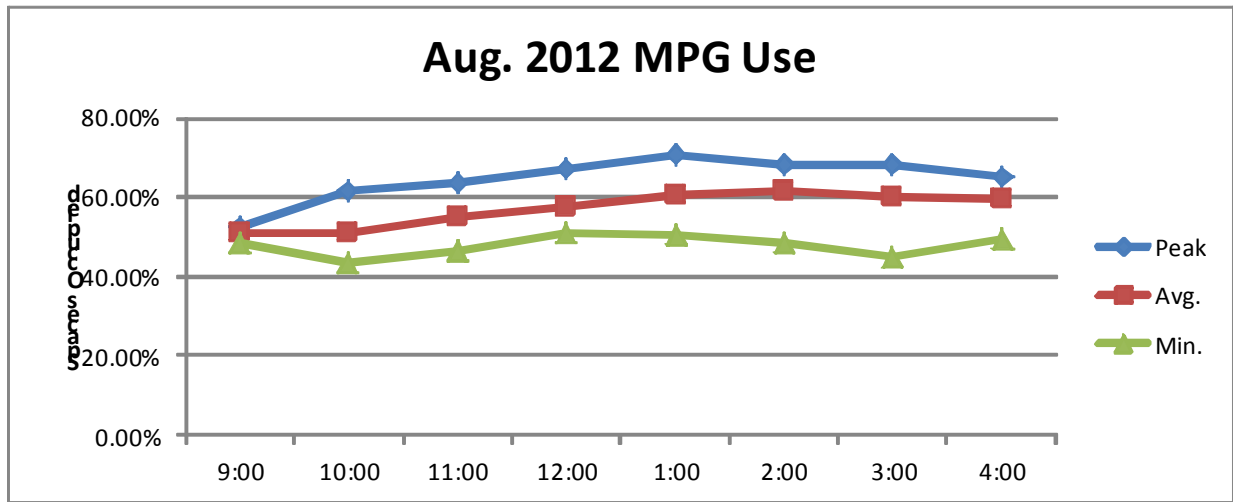
July 2012 had very similar average and peak use rates to June, with an increase in peak occupancy during the 10:00 survey period. Minimum use rates increased 5-10% over the previous month.

Compared to July 2011, minimum and average counts were higher throughout the day, with increases in morning peak use as well (9:00 through 12:00).

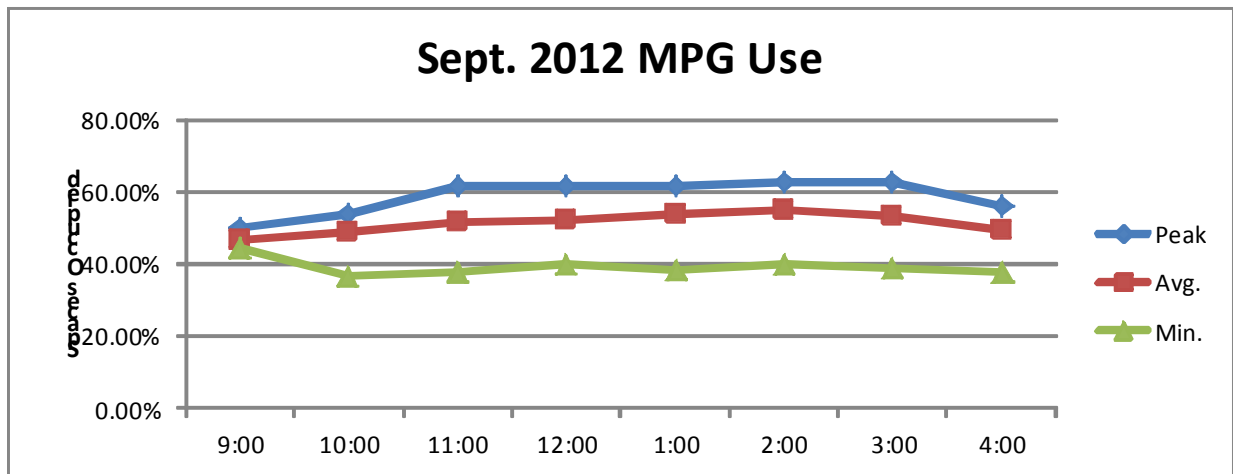




Use of the MPG declined in August 2012 across the board; only the peak count at 1:00 remained unchanged. Compared to August 2011, peak and average use were nearly identical in the two years, while minimum occupancy increased in 2012.

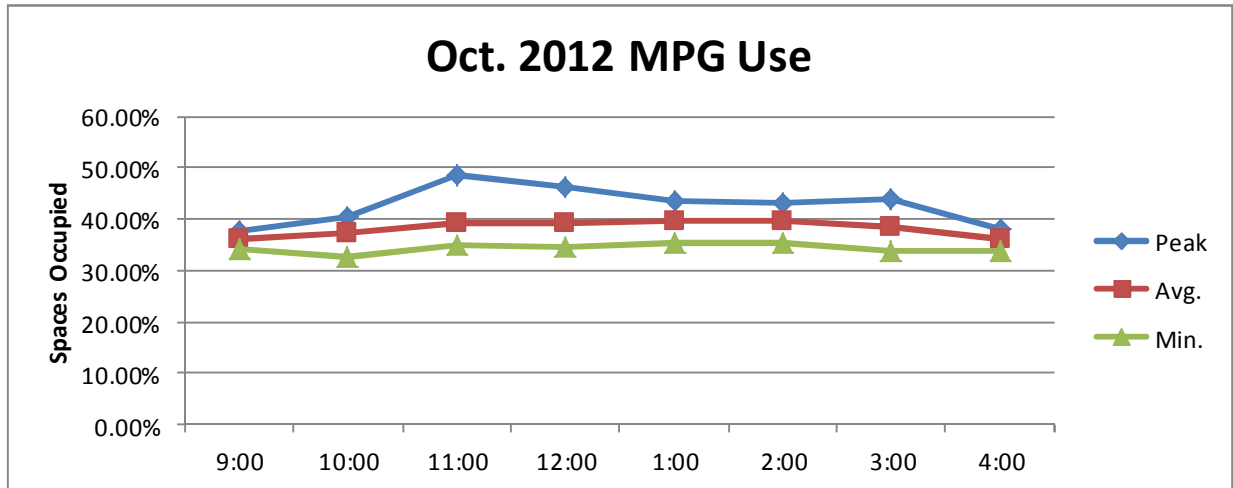


Use declined across the board again in September 2012, with peak use dropping at least 10% from the levels experienced two months previously. Peak use was lower in September 2012 than it was in September 2011, while minimum use increased in 2012. Average use was nearly identical in the two years.

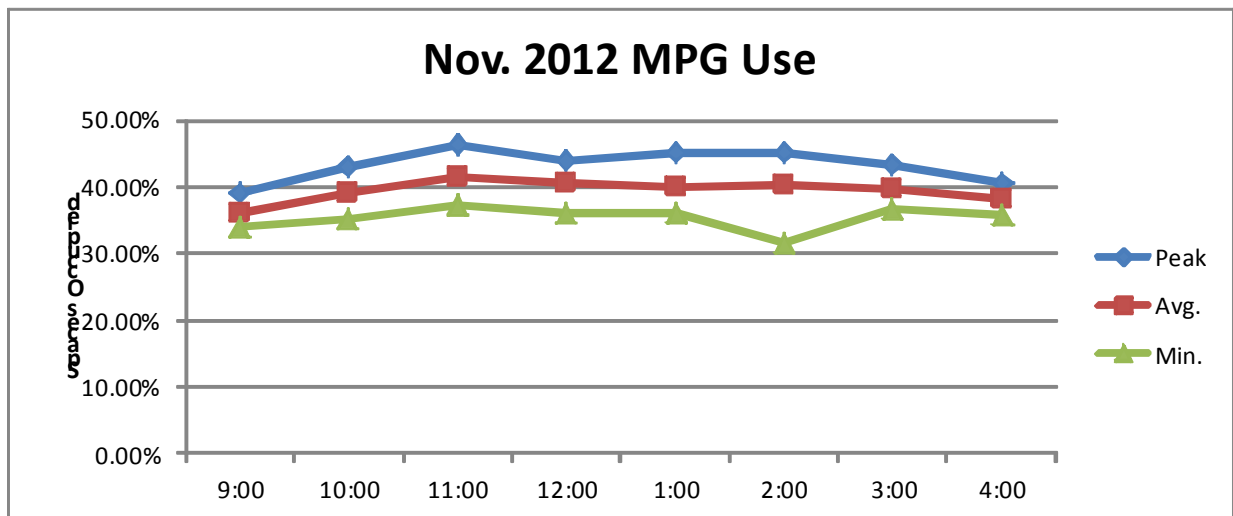


Peak use of the MPG declined sharply in October, with peak occupancy down by as much as 15% in most survey periods from September. Average use also declined, although not as dramatically, with most survey periods seeing a 10% reduction in use from the previous month. Minimum use saw the least change, down just a few percent.

Use was down slightly from October 2011 during all day parts.



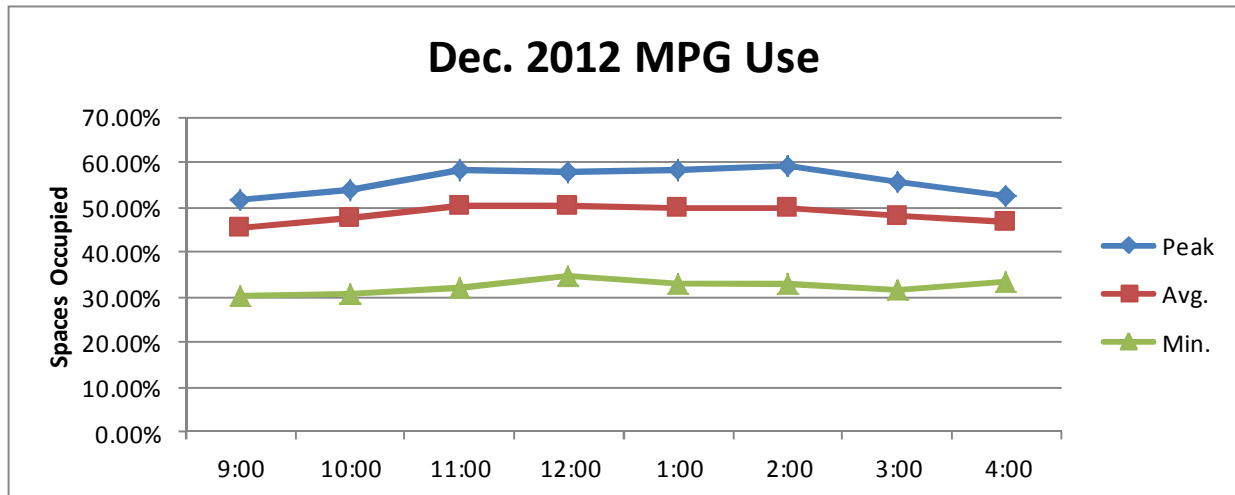
November 2012 had very similar use rates to the previous month, with peak, average, and minimum use rates that were approximately 5% lower than they were in November 2011.



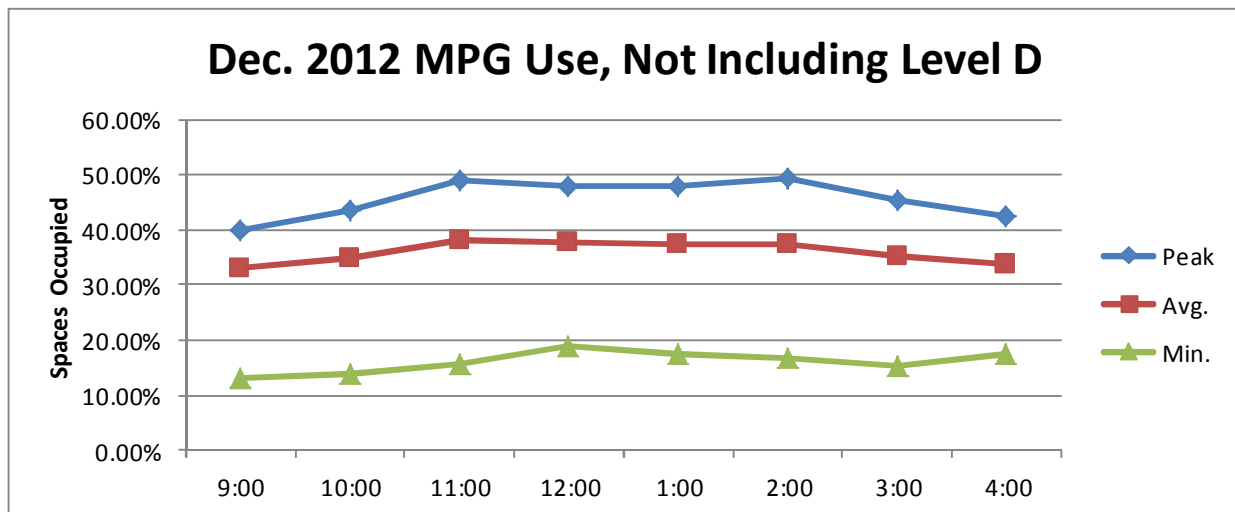
With the closure of the SubPort lot to public parking on December 3, 2012, there was concern about where CBJ employees who had parked at that facility would park during the day. Both the MPG and the DTC had adequate capacity to accommodate the 50-60 cars that were typically parked at the SubPort, but the parkers who used that facility generally did so due to cost (free) rather than location. To address the concerns of affected parkers, CBJ management began offering free parking to CBJ employees on the “D” (top) level of the MPG on Dec. 3. The charts below show utilization both overall (top) and as if Level D did not exist (the total capacity was reduced by the 37 spaces on Level D to 190 for these calculations).

When considering the entire facility, peak use rates were 5-10% higher in December 2012 than they had been in December 2011. Average rates also increased by about 5%. Minimum counts dropped by 5-10% from December 2011 rates, indicating that there were more high-occupancy counts than low-occupancy counts.

Peak use rates increased 10-15% from November 2012, while minimum use rates remained nearly unchanged.

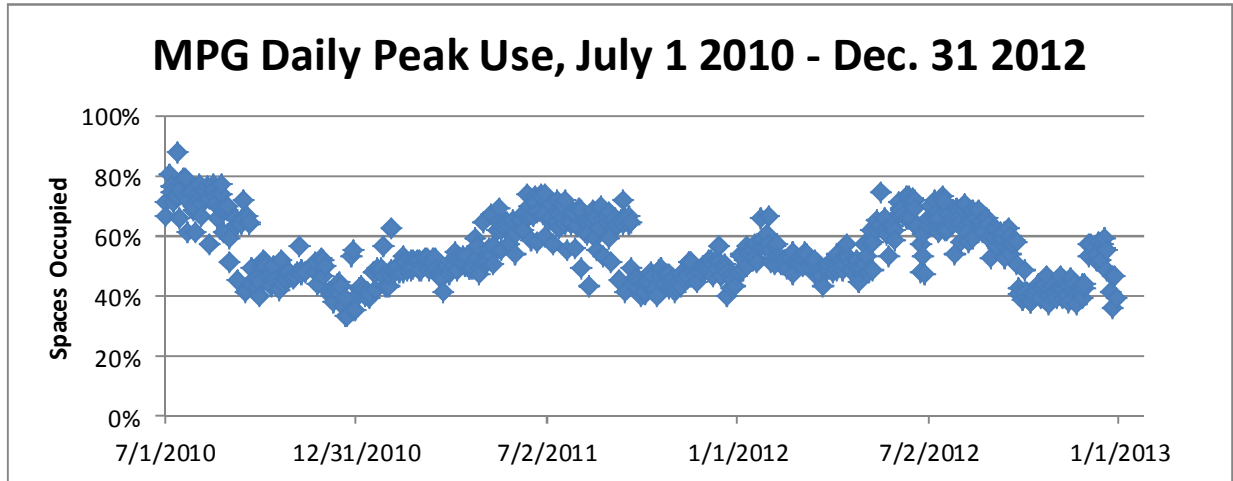


When Level D is not considered, however, peak use drops by approximately 10%, and average use drops by 10-15%. Minimum use rates plummet to between 10 and 20% of capacity, 10-20% below the minimum use rate for the entire facility.



The MPG has been open to the public as a paid-parking facility since 1985, so the facility has regular users who have been accustomed to paying to park for many years. The facility is located at the southern end of the downtown core and adjacent to the seasonally-occupied corridor from Admiral Way to Taku Smokeries, a location that is not very convenient for most year-round downtown workers but which is close to summer shopping and retail jobs. Accordingly, large swings in occupancy by season are the norm at this facility. December peak occupancy counts are the lowest of the year, even in years when free parking was offered at the facility during that month.

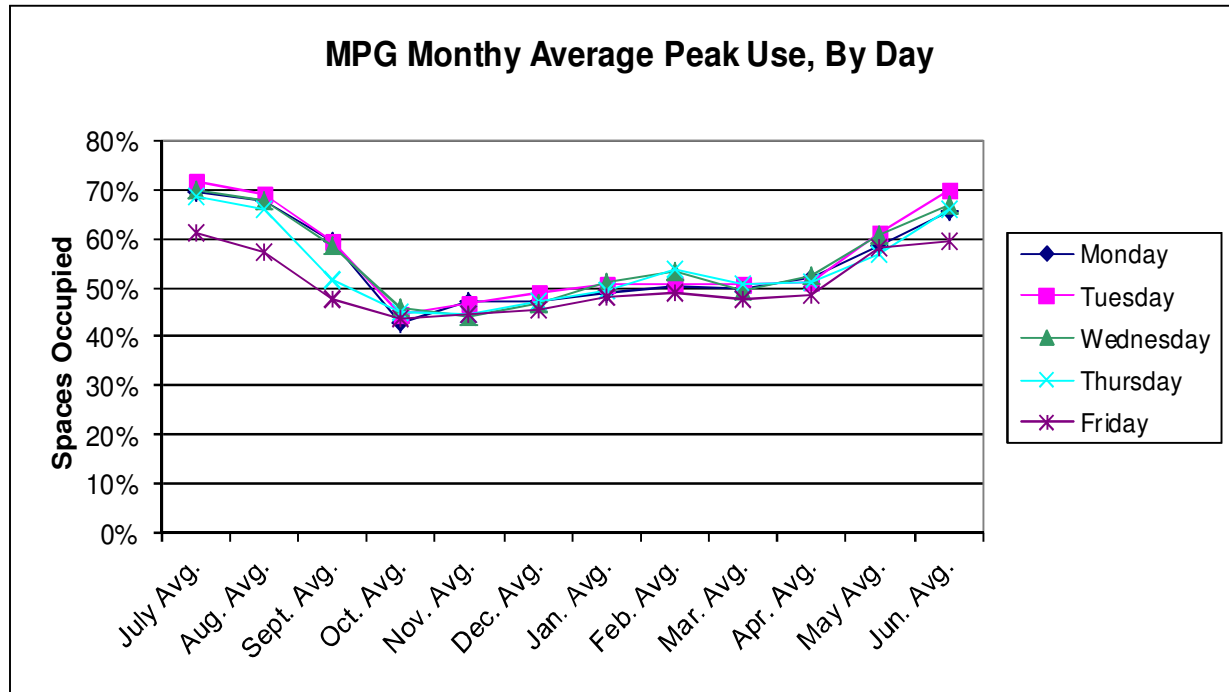
Data collected from December 1, 2010 to December 31, 2012, shown in the chart below, shows that peak occupancy fluctuates seasonally, with summer months seeing much higher occupancy than winter months. This pattern is the seasonal inverse of that seen at the DTC.



Free parking was not offered at the MPG in December 2011 or December 2012, which explains the relatively high peak counts observed in December 2010 that were not repeated in 2011 or 2012.

With peak use that almost never reaches 80% of capacity, this facility has ample space to accommodate additional demand even in the summer; in the winter months, it is rarely more than half full even at its peak occupancy.

A wide range between peak and low occupancy counts was documented in June, July, August, and September 2011, and staff hypothesized that this high degree of variability in occupancy levels might be visible if the data were viewed on a day-of-the-week basis. Peak occupancy counts for each week day in each month were averaged within the calendar month, and are shown below; as the data shows, the high degree of variability in occupancy levels in June, July, August, and September is the result of different travel or parking behaviors throughout the week during those months.



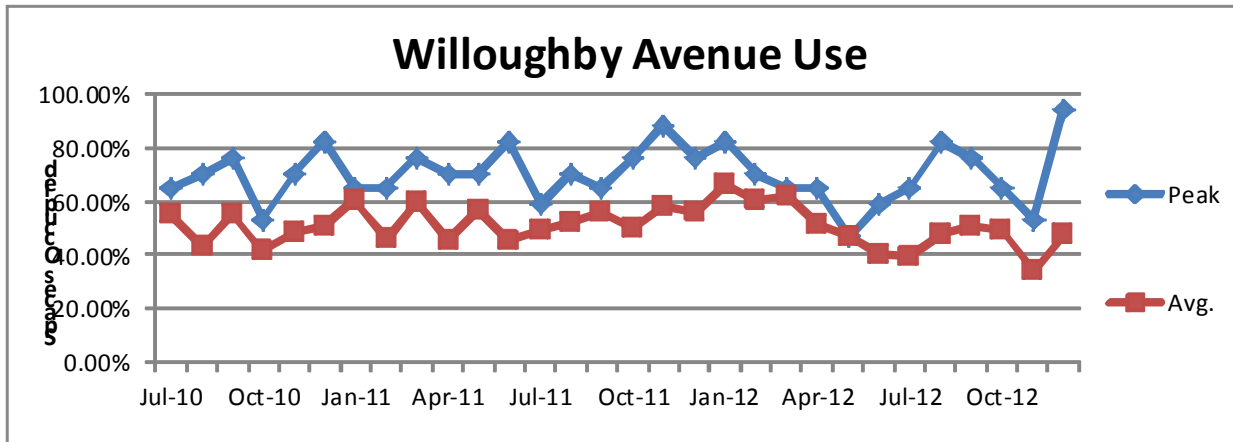
Most notably, Friday average peaks are approximately 10% lower in June, July, and August and than were the average peaks for all other week days. Average Friday peaks in September are approximately 15% lower than average peaks for Monday-Wednesday, but oddly enough Thursday average peaks are approximately 10% lower than Monday-Wednesday average peaks that month. Average peaks in all other months were fairly uniform through all week days, with the range between the lowest average peaks and highest average peaks in a given month rarely exceeding 5% across all week days. As the months with a high degree of variation between low occupancy and peak occupancy are summer months, and as Fridays are often quiet days for the cruise industry, with fewer vessels visiting Juneau on Friday than on other days of the week most cruise seasons, it appears that the variation in travel patterns between Fridays and other days of the week during summer months is directly related to the cruise ship schedule.

Interestingly, Tuesday comes out as the busiest—or at least close to the busiest—day for parking at the MPG in every month except February, when Thursday takes that honor. Monday, Wednesday, and Thursday average peaks were nearly identical in most months. Friday average peaks were much lower than those of other days during summer months, as discussed above, but Friday average peaks were also lower than average peaks for other days in March and April. Monday and Friday are generally considered to be outliers in transportation planning data collection that are affected by holidays and extended weekends; Tuesday, Wednesday, and Thursday are typically considered to be more stable days for travel patterns. The MPG, for whatever reason(s), does not follow this pattern of “normal” travel behavior, with Monday use being nearly identical to all other days, with the exception of Thursdays in September and Fridays in June through September.

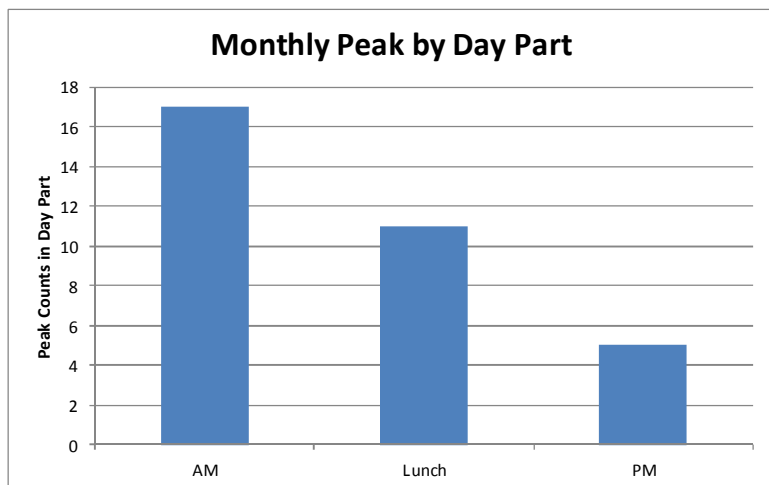




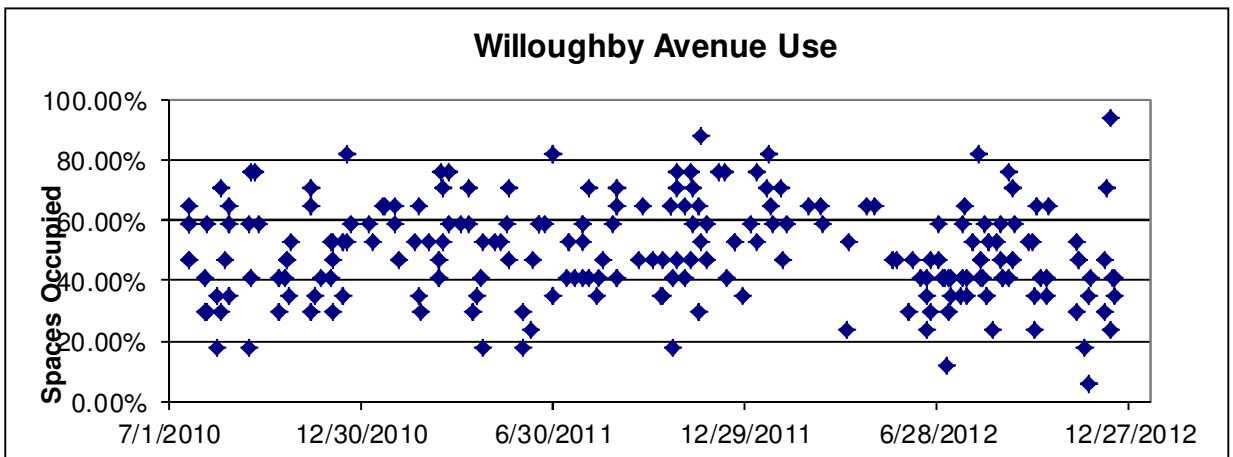
Willoughby Avenue is proximate to the State Office Building, Bullwinkle’s Pizza Parlor, Centennial Hall, and other State and private offices, as well as the Andrew Hope Building (Alaska Native Brotherhood Hall), a small café, and an assisted living center. Although this wide variety of neighboring uses leads to wide variation in occupancy of Willoughby Ave. on-street parking at any given time, the mixture of uses in this area result in a fairly consistent average demand for on-street parking, with average occupancy hovering between 40-60% for all but a few months.



Peak parking events typically occur during morning survey periods, with 17 peak parking events in the AM period, 11 during the Lunch period, and only five peaks in the PM period. (In some months, equivalent peaks occurred in different periods, so the total number of peaks exceeds the number of months surveyed)

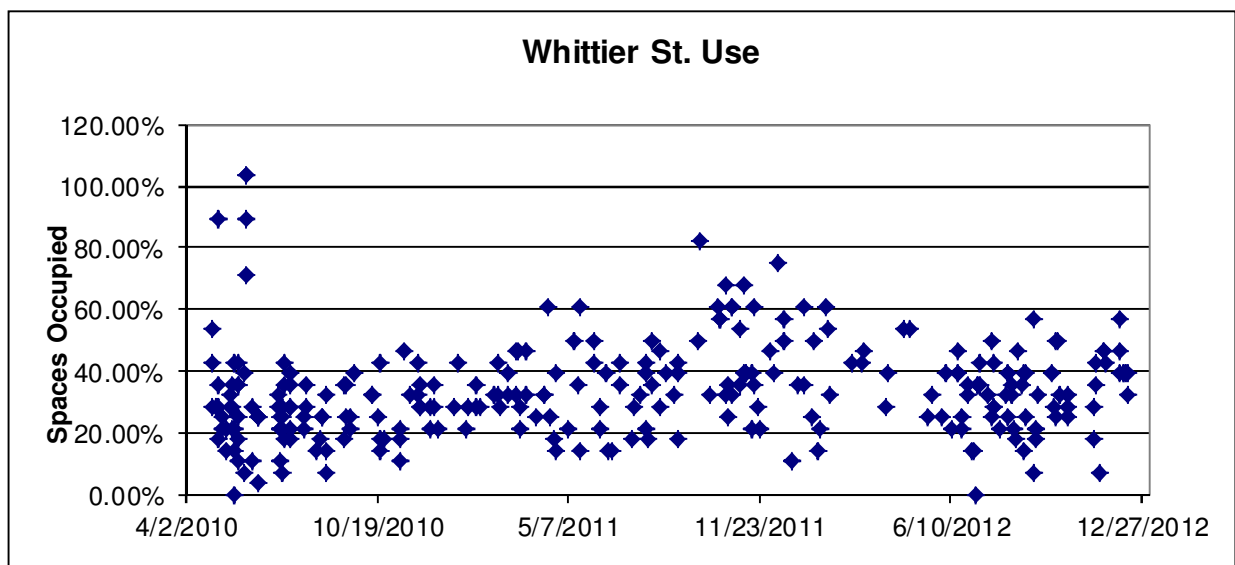
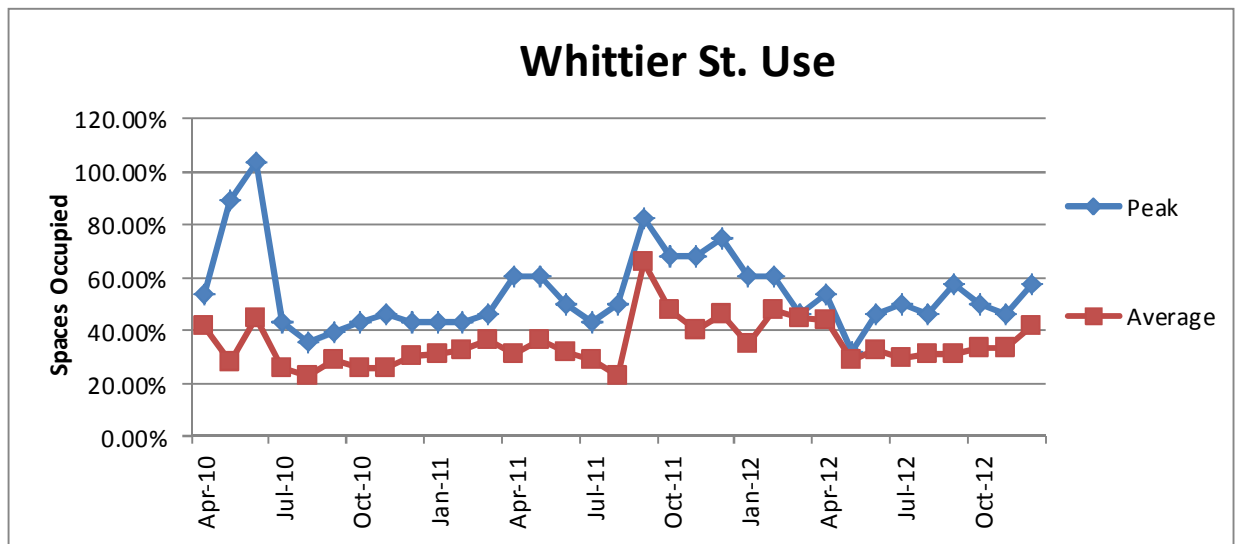


As the individual data points from each survey show (below), use of this block of on-street parking varies widely during each day, and does not appear to have seasonal trends. Instead, both low and high occupancy events can occur any day, with occupancy ranging by as much as 60%, from frequent lows of 18% to frequent highs of 76% or higher, within a short time period.





Whittier Street was one of the original Parking Use Survey streets, so 33 months of use data are available for this facility. As the individual data points for each survey show, Whittier Street on-street parking is vastly underutilized most of the time, with nearly all surveys finding that less than 60% of the capacity of the street is being used. The few surveys that have counted more than 60% of the spaces on this block occupied fall into three groups: The first took place in May and June of 2010; the cause of the high utilization of on-street parking on May 5, 2010 is unknown, but all three other counts in the spring of 2010 that found more than 60% of the block occupied took place during Celebration, which was held at the nearby Andrew Hope Building. The second group of 60% occupancy counts were in April and May of 2011, both before on-street meters were installed in the downtown core (and therefore not caused by spillover effects from meter installation)—the May 60% (AM) count occurred on the same day as a 14% (PM) occupancy count (5/19/11), so whatever its cause, the peak was short-lived. The third group of unusually high utilization rates for this block occurred in September, October, and November of 2011, and consisted not only of unusually high peak counts, but also unusually high low occupancy counts—in these months, the lowest counts (21%) were roughly equivalent to the average counts in August of 2010 and 2011. The cause of this temporary upswing in utilization of parking on this block is unknown, but it does correlate with decreased use of the nearby Willoughby Lot in those months. Use has increased slightly, both on average and in typical peaks, in 2012; this incremental increase is notable, but has not resulted in peaks of 60% occupancy or more.



While parking management in downtown Juneau has not yet achieved all three of the goals of the 2010 Downtown Juneau Parking Management Plan, the data collected in the Parking Use Survey and by Bootlegger Parking Enforcement staff does show that changes to pricing and time limits for parking can have a direct impact on parking behavior; unfortunately, the data also shows that those impacts can be unpredictable, and even counter-intuitive at times. Furthermore, it is clear from the data collected that in order for changes in parking regulations to be effective in managing parking use, enforcement must be consistent or significant portions of the parking public will ignore the regulations and thus fail to be managed by them.

Additional data collection efforts into the future will allow staff engaged in parking management efforts to evaluate long-term impacts of parking management, as well as measuring changes to parking behavior that result immediately after changes to pricing or time limits are enacted. Parking use patterns in downtown Juneau will continue to evolve as parkers develop new travel patterns to adjust to parking management changes; for this reason, continued data collection is imperative to the CBJ's successful management of parking resources.

As data is collected and processed, additional summary documents will be published; requests for particular views of the data, or particular comparisons of interest, may be included upon request. Please contact Ben Lyman, Senior Planner, at [Benjamin\\_Lyman@ci.juneau.ak.us](mailto:Benjamin_Lyman@ci.juneau.ak.us) with questions or requests for future data summaries. Raw survey data and minimally-processed pay station transaction data (payment details such as credit card information removed) is also available upon request.