



PACIFIC CITY WOODS PARKING STUDY

PARKING SURVEY

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 Project: Pacific City/Woods Parking Management Plan
 Subject: Parking Survey

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INTRODUCTION

This memorandum documents existing parking conditions within the Pacific City/Woods area for Summer 2018. The data collection occurred over two days on Tuesday, July 24th and Saturday, July 28th, 2018 and represents typical “summer” activities in the area. The information presented in this memorandum will augment information shared over the course of the study and inform the Parking Management Plan.

STUDY AREA

This study covers on-street and off-street parking in areas within Pacific City and Woods. The specific locations included are presented in Figure 1.

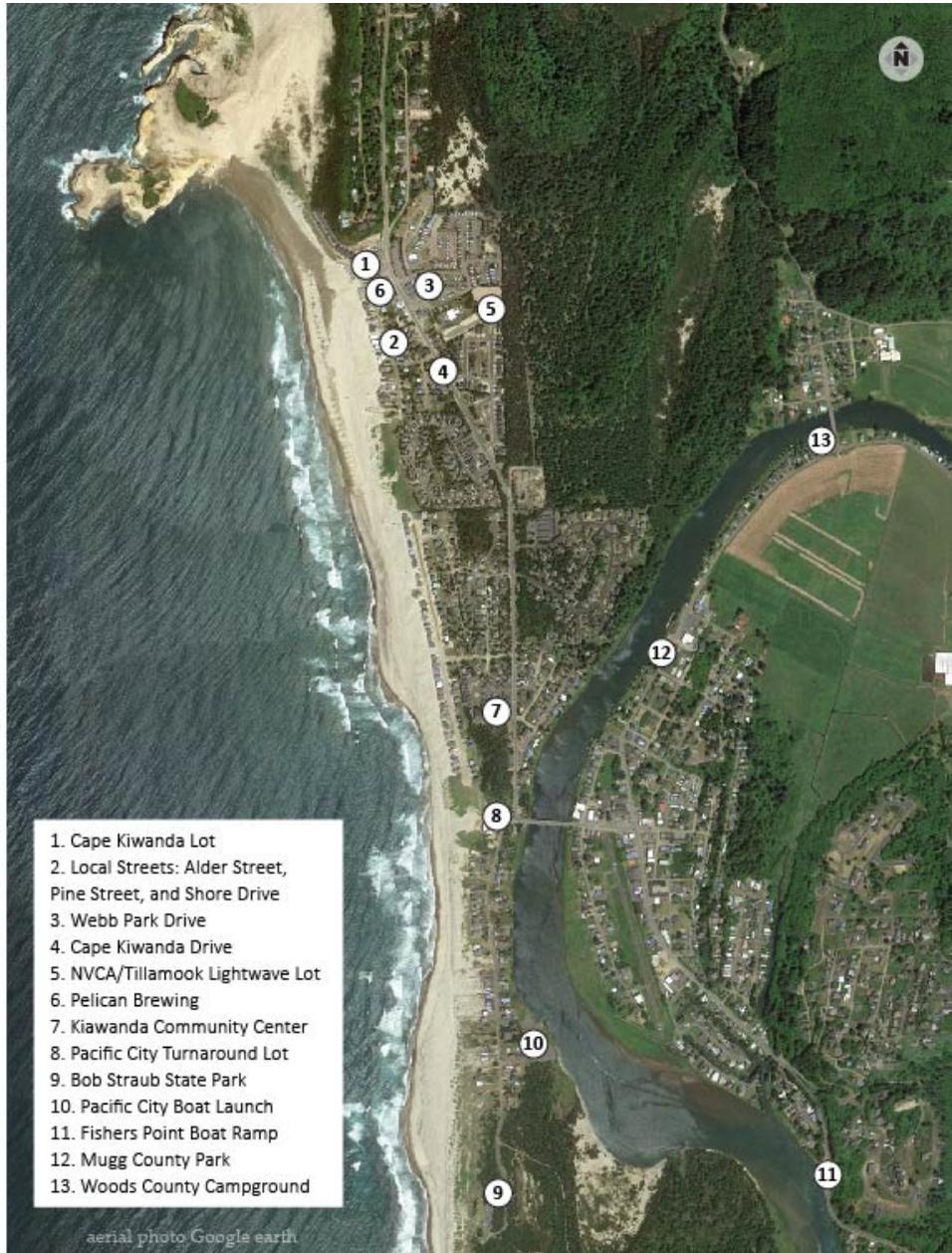


Figure 1: Study Area

Note: Kittelson collected data at McPhillips and Tierra Del Mar. Those locations are outside the study area and not shown in Figure 1.

METHODOLOGY

Kittelson collected parking supply and demand data within the study area on a typical mid-week day (Tuesday) and typical weekend day (Saturday) on July 24th and 28th

2018. The data was collected manually, by individuals walking along the streets and circulating within the surface parking lots. The data includes the number of on- and off-street parking stalls by location and type and partial license plate data from vehicles parked within the study area over an 8-hour period. For areas where the parking stalls are not delineated with markings, Kittelson estimated the amount of parking supply available. The amount of parking available is subject to change based on how vehicles are parked. The following summarizes the data collection effort.

PARKING SUPPLY

The parking supply data includes the number of on- and off-street parking stalls located within the study area by location and type. The on-street parking stalls are general use stalls available to the public. These stalls are typically located adjacent to residential and commercial uses and provide access to the beach. With a few exceptions outlined in Table 1, most of the off-street parking stalls are also general use stalls available to the public. However, there are a small number of stalls with time limits and stalls reserved for people with disabilities. Additional information on the location and type of on- and off-street parking stalls within the study area is provided below.

PARKING DEMAND

The parking demand data includes partial license plate data from vehicles parked between 10:00 a.m. and 6:00 p.m. and is summarized in 1-hour intervals. The parking demand data is summarized by location and type and described in terms of occupancy, duration of stay, and turnover. The following provides a brief description of each.

Occupancy

Occupancy refers to the number of occupied parking stalls and is most commonly shown as a percentage of the overall system. A parking system is commonly considered to be full or at its effective capacity when occupancies reach or exceed 85% in the peak hour. When more than 85% of parking stalls are occupied, business patrons or other users may be discouraged from visiting local land uses or may add to area congestion by circling the area in search of available spaces.

Duration of Stay

Duration of stay refers to the average length of time a vehicle remains in a parking stall. For this study, Kittelson sampled duration of stay in one-hour increments. Duration of stay information can be useful in determining the time stay needs of patrons parking in the area. Average time stays can be used to calibrate time limits to best accommodate intended user groups. This information also can be used to identify the vehicle turnover rate within a parking supply (see below). Duration of stay is calculated by dividing the number of vehicle hours parked in a stall (or supply) by the number of unique vehicles captured in the data.

Turnover

Turnover reflects the number of vehicles that can or will use a parking stall over the course of a survey day. Turnover is often used as for measuring how efficient or inefficient a parking system is operating and serving its intended user groups. For instance, if a stall has a two-hour time restriction, then its intended minimum rate of turnover is 4.00 vehicles (8 hour day divided by 2-hour stall). As such, if turnover were demonstrated to be at a rate of less than 4.00, the system would be deemed inefficient. A rate higher than 4.00 would indicate a system that is operating more efficiently than designed.

The turnover data also shows parking use characteristics that provide information about how the parking system is functioning. The tables displayed in the following sections include turnover by location, number of unique vehicles, total vehicle hours parked, and stays of 4 hours or more.

Number of Unique Vehicles is an aggregate measure of how many visitors, customers, and employees are parking in the area. The closer the number of *Unique Vehicles* is to *Total Vehicle Hours Parked*, the more efficient (i.e., higher turnover rate) the parking system is, which allows more customers to access the area using the same number of parking stalls.

Finally, *Stays of 4 Hours or More* can be used to estimate the number of employees using a commercial supply of stalls, the number of residents or visitors parked outside a residential area, or the number of people spending an extended period of time in the area. This information guides designing and implementing a parking management plan.

DATA ANALYSIS

Kittelton analyzed the parking supply data and summarized this by location and type. Kittelton analyzed the parking demand data and summarized it by occupancy, duration of stay, and turnover. The parking occupancy, duration of stay, and turnover data was analyzed on an hourly basis by stall, by surface lot, by street, and by the overall study area. The analysis was conducted using Excel and file size precludes attaching it to the report. The following sections summarize the results of the parking survey.

PARKING SURVEY

This section documents parking conditions within surface parking lots and along public streets. This section summarizes existing parking supply and demand data collected on Tuesday, July 24 and Saturday, July 28 in 2018.

PARKING SUPPLY



Table 1 summarizes the parking supply data collected within the Pacific City/Woods area, including the total number of on- and off-street parking stalls and the percent of stalls in relation to the overall on- and off-street parking supply.

Table 1: Parking Supply

Parking Facility	# of Stalls	% of Stalls	Notes
Off-street Parking Supply			
Cape Kiwanda Parking Lot	151	27%	Four disabled persons stalls, two 15-minute parking stalls
NVCA	84	15%	
Pacific City Turnaround	16	3%	
Bob Straub State Park	64	12%	
Pacific City Boat Launch	86	15%	50 Truck and trailer stalls, 35 regular stalls, one disabled persons stall
Fisher Point Boat Launch	24	4%	12 Truck and trailer stalls, 11 regular stalls, one disabled persons stall
Mugg County Park	3	1%	Three 15-minute stalls
Woods County Campground	9	2%	Available for camping and day-use
McPhillips	18	3%	
Pelican Brewery	43	8%	Two ADA stalls
Cape Kiawanda Community Center	56	10%	Four meals on wheels stalls, Four ADA stalls
Total Off-street Supply	554	100%	
On-street Parking Supply			
Tierra Del Mar ¹	40	18%	
Cape Kiwanda Drive (North of Circle Drive)	47	21%	
Cape Kiwanda Drive (South of Pine Street)	43	19%	
Circle Drive	17	8%	
Alder Street	31	14%	
Shore Drive	29	13%	
Pine Street	16	7%	
Total On-street Supply	223	100%	

¹. The number of stalls shown for Tierra Del Mar reflect on-street parking along Sand Lake Road adjacent to the state park.

As shown in Table 1, 554 off-street parking stalls and 223 on-street parking stalls were included in the data. The Cape Kiwanda lot has the largest number of stalls followed by the Nestucca Valley Community Alliance (NVCA) lot. The Pacific City Boat Launch lot technically has more stalls than the NVCA lot; however, most of the stalls are striped as

truck and trailer stalls rather than general use stalls. Also, as indicated below, most people tend to disregard the lot lines in the Pacific City Boat Launch lot and park according to convenience. The Cape Kiwanda, NVCA, and Pacific City Boat Launch lots are the only lots with striped stalls, and all other lots are unstriped. As a result, there are some inefficiencies in how people tend to park. For these facilities, the off-street parking supply reflects the maximum number of vehicles parked in the lot during the peak hour, if the facility seemed reasonably full.

With the exception of Alder Street, the majority of on-street parking stalls are also unstriped and as a result, there are some inefficiencies in how people park. This is exacerbated by the presence of driveways, custom “No Parking” signs, and inconsistencies in the width of shoulders. Therefore, the on-street parking supply reflects the maximum number of vehicles parked along a given street during the peak hour, if the street parking seemed reasonably full.

PARKING DEMAND



Parking demand within the Pacific City/Woods area is generated by a variety of users, including visitors to the local retail/commercial businesses and the beach as well as local residents, renters, and their visitors. The following summarizes the parking demand data collected within the Pacific City/Woods area on Saturday, July 28th, 2018. Although data for Tuesday, July 24th, 2018 was also collected, demand was higher on Saturday, July 28th, and therefore more relevant to identifying parking issues and solutions.

Occupancy

Exhibit 1 summarizes the hourly parking occupancy data for the overall on- and off-street parking supply on Saturday. *Attachment “A” summarizes the data for Tuesday.*

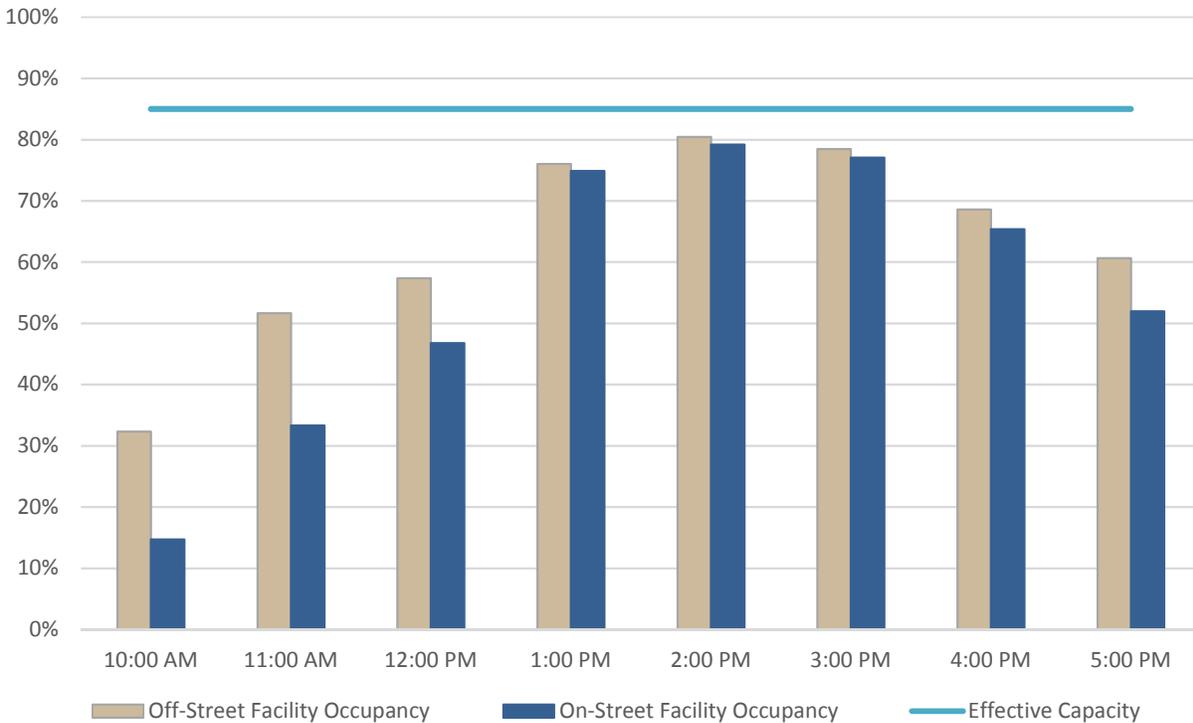


Exhibit 1: Overall Occupancy of on-street and off-street parking facilities (Saturday)

As shown in Exhibit 1, parking occupancy within the surface parking lots increases steadily throughout the day with a peak occupancy rate of 80% at 2:00 p.m. Parking occupancy along the adjacent street system also increases steadily throughout the day, although it trails the off-street system with a peak occupancy rate of 73% at 2:00 p.m. Generally, the on-street facilities did not fill until the nearby surface lots were already at or near capacity, which can be seen in the low numbers of demand for on-street facilities between 10:00 AM and 12:00 PM in Exhibit 1.

Also shown in Exhibit 1, overall parking occupancy within the surface parking lots and along the adjacent street system is below the effective capacity of the overall parking supply during all hours of the day. As indicated in the following sections, parking occupancy within several of the surface parking lots (i.e. Cape Kiwanda, NVCA, Pacific City Turnaround, etc.) reach 100 percent or more during the peak time periods. Surface lots like Pacific City Boat Launch, Fishers Point Boat Launch, and Woods Campground never reached parking capacity during the study period and lower the average for off-street parking facilities.

Table 2 summarizes detailed information on parking occupancy within the surface parking lots and along the adjacent street system, including the peak hours, occupancy rates, and total number of stalls available during the peak time periods for Saturday. *Attachment "A" summarizes the data for Tuesday.*

Table 2: Parking Occupancy (Saturday)

Parking Facility	# of Stalls	Peak Hour	Peak Occupancy	Stalls Available
Off-street Parking Occupancy				
Cape Kiwanda Parking Lot	151	1:00-3:00 p.m.	105%	0
NVCA	84	3:00 p.m.	100%	0
Pacific City Turnaround	16	2:00 p.m.	100%	0
Bob Straub State Park	64	2:00/3:00 p.m.	86%	9
Pacific City Boat Launch	86	1:00 p.m.	23%	66
Fisher Point Boat Launch	24	2:00 p.m.	54%	12
Mugg County Park	3	2:00/4:00 p.m.	67%	1
Woods County Campground	9	12:00 p.m.	89%	1
McPhillips	18	2:00/3:00 p.m.	94%	1
Pelican Brewery	43	12:00-2:00 p.m.	102%	0
Cape Kiwanda Community Center	56	12:00 p.m.	46%	30
On-street Parking Occupancy				
Tierra Del Mar	40	3:00/4:00 p.m.	60%	16
Cape Kiwanda Drive (North of Circle Drive)	47	2:00 p.m.	91%	4
Cape Kiwanda Drive (South of Pine Street)	43	2:00 p.m.	84%	7
Circle Drive	17	1:00 p.m.	94%	1
Alder Street	31	1:00/2:00 p.m.	84%	5
Shore Drive	29	2:00/3:00 p.m.	69%	9
Pine Street	16	2:00 p.m.	100%	0

The Cape Kiwanda Parking Lot has the highest parking supply of 151 stalls and has the highest peak occupancy rate, at 105%, as is shown in Exhibit 2. The Pacific City Boat Launch has the second highest parking supply, but it has the lowest peak occupancy rate, at 23%. This shows there is available parking supply in the system, even when individual lots have high occupancy rates.

Duration of Stay

Exhibit 2 summarize the duration of stay data within the surface parking lots and along the adjacent street system. As shown in Exhibit 2, the number of vehicles parked per hour declines steadily for on-street and off-street facilities as the number of hours increases.

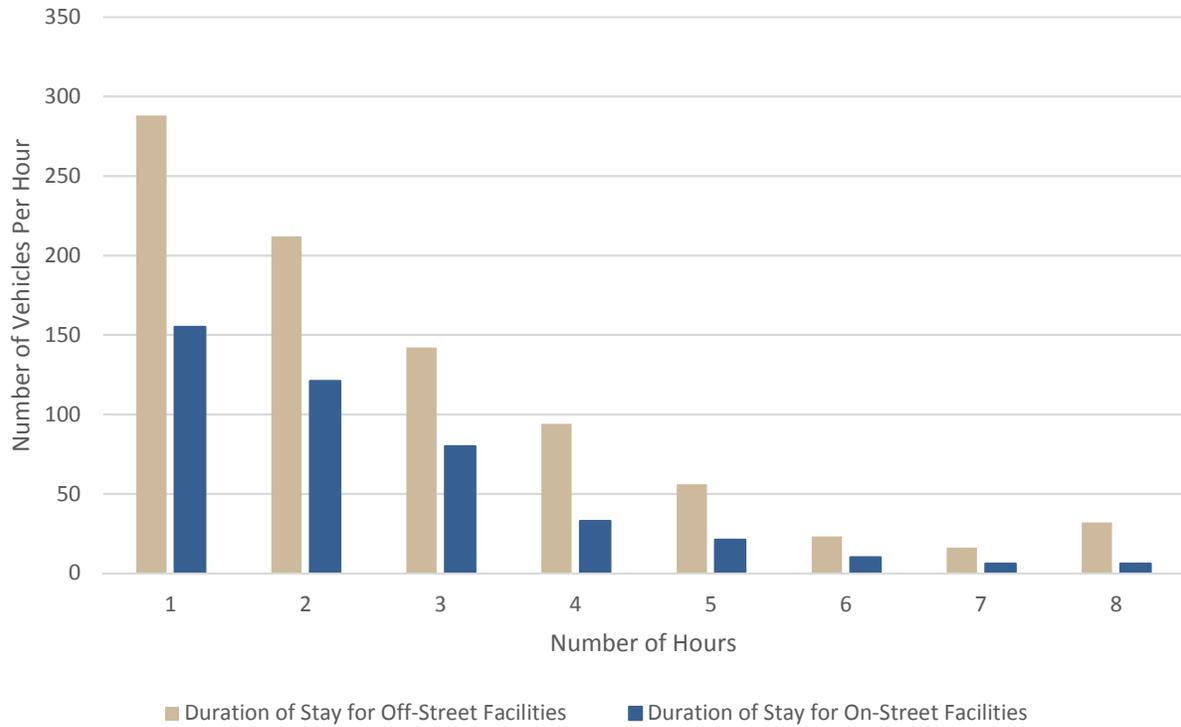


Exhibit 2: Average duration of stay for off-street and on-street parking facilities (Saturday)

Table 3 summarizes detailed information on duration of stay within the surface parking lots and along the adjacent street system. *Attachment "A" summarizes the data for Tuesday.* As shown, the average duration of stay varies by lot and by street; however, duration of stay tends to be less than 3-hours, which reflects the nature of most recreational tourism locations where people tend to stay longer than retail/commercial areas.

Table 3: Duration of Stay (Saturday)

Parking Facility	# of Stalls	Average Length of Stay
Off-street Duration of Stay		
Cape Kiwanda Parking Lot	151	2.87 hours
NVCA	84	2.85 hours
Pacific City Turnaround	16	2.27 hours
Bob Straub State Park	64	2.09 hours
Pacific City Boat Launch	86	2.28 hours
Fisher Point Boat Launch	24	2.67 hours
Mugg County Park	3	1.14 hours
Woods County Campground	9	4.44 hours
McPhillips	18	2.50 hours
Pelican Brewery	43	3.12 hours
Cape Kiawanda Community Center	56	2.25 hours
On-Street Dduration of Stay		
Tierra Del Mar	40	1.91 hours
Cape Kiwanda Drive (North of Circle Drive)	47	2.15 hours
Cape Kiwanda Drive (South of Pine Street)	43	2.22 hours
Circle Drive	17	2.27 hours
Alder Street	31	3.17 hours
Shore Drive	29	3.07 hours
Pine Street	16	2.30 hours

The Woods County Campground has the highest average length of stay, likely because of overnight campers. Alder Street, Shore Drive, Cape Kiwanda Parking Lot, and NVCA Lot have the next highest average lengths of stay. These likely are serving residents, short-term renters, and those accessing the beach and the dining and retail options in the area. In comparison, facilities that provide access to the beach but do not have close access to dining and retail locations tend to have lower average lengths of stay. These include Tierra Del Mar, Bob Straub State Park, and the Pacific City Turnaround. Mugg County Park has the lowest average length of stay, likely because parking spaces associated with Mugg County Park are signed as 15-minute only spaces.

Turnover

Table 4 summarizes the turnover data for the surface parking lots and along the adjacent street system for Saturday. Attachment “A” summarizes the data for Tuesday. As shown, average turnover varies by lot and by street; however, turnover tends to be less than 3.0, which reflects the nature of most recreational tourism locations where people tend to stay longer and stalls tend to turnover less than retail/commercial areas.

Table 4: Turnover (Saturday)

Parking Facility	# of Stalls	Rate of Turnover (Vehicles/ Parking Stall)	Unique Vehicles	Total Vehicle Hours	Percentage of Stays for 4+ Hours
Off-street Turnover					
Cape Kiwanda Parking Lot	151	2.79	422	1210	19%
NVCA	84	1.74	146	416	13%
Pacific City Turnaround	16	2.56	41	93	7%
Bob Straub State Park	64	2.09	134	280	9%
Pacific City Boat Launch	86	1.38	47	107	6%
Fisher Point Boat Launch	24	1.00	21	56	14%
Mugg County Park	3	2.33	7	8	0%
Woods County Campground	9	1.00	9	40	44%
McPhillips	18	1.80	36	90	11%
Pelican Brewery	43	1.91	82	256	23%
Cape Kiawanda Community Center	56	0.57	32	72	3%
On-street Turnover					
Tierra Del Mar	40	1.63	65	124	6%
Cape Kiwanda Drive (N)	47	2.15	101	217	7%
Cape Kiwanda Drive (S)	43	1.77	76	169	4%
Circle Drive	17	1.29	22	50	9%
Alder Street	31	1.90	59	187	25%
Shore Drive	29	1.41	41	126	22%
Pine Street	16	2.50	40	92	3%

Fisher's Point Boat Launch and Woods County Campground have the lowest turnover rates. Most of the vehicles parked at Fisher's Point Boat Launch had a boat trailer and most of the vehicles parked at Woods County Campground were campers or had an associated tent. Low turnover is expected for these types of recreational activities.

OBSERVATIONS AND CONSIDERATIONS

The following documents observations and considerations from the parking survey that have not been captured in the sections above.

- Parking on the beach is allowed in Pacific City, but beach parking is not within the jurisdiction of the County. This parking survey does not document the parking demand for the beach. As shown in Figure 2, there are not specific parking stalls on the beach, but during the summer temporary planks are put on the beach driveway from Hungry Harbor Road, which is the drive aisle through the Cape Kiwanda Parking Lot. There is a sign indicating that north of the drive aisle is reserved for boat launching and that public parking is allowed south of the drive aisle. In the public parking area, parking is allowed for all vehicles. Figure 2 shows vehicles parked on the beach on Saturday, July 28th, when the data for this parking survey was taken.



Figure 2: Beach parking in Pacific City

- Cape Kiwanda Parking Lot exhibited an occupancy rate of greater than 100%. When the lot had occupancy rates above 100%, vehicles were parked illegally. These vehicles were parked in areas striped for no parking, drive aisles, or double parked behind other vehicles, as shown in Figures 3-5.



Figure 3: Vehicles double parked in Cape Kiwanda Parking Lot



Figure 4: Vehicles parked in drive aisle in Cape Kiwanda Parking Lot



Figure 5: Vehicles Parked in area striped for no parking in Cape Kiwanda Parking Lot

- A non-dedicated area in the north east corner of the Cape Kiwanda Parking Lot made it driver and pedestrian circulation. When the lot began to fill past 100% occupancy, cars double parked behind other vehicles in this area, as shown in Figure 6. Reconfiguring the parking lot in this area can encourage better circulation and discourage double parking.



Figure 6: Cars double parked in Cape Kiwanda Parking Lot

- Kittelson observed vehicles parked in a non-parking zone on Cape Kiwanda Drive north of Circle Drive. Cars began parking in this zone at around 11:00 a.m., when Cape Kiwanda Parking Lot reached 101% occupancy. 2:00 p.m. was the

recorded peak hour for this on-street section of Cape Kiwanda Drive, when 38 vehicles were parked. There was no parking enforcement in the study area during the data collection.

- Several disabled persons parking stalls and 15-minute parking stalls exist in the study area. Table 1 outlines all parking facilities with dedicated uses. The 15-minute parking stalls are located at Mugg County Park and in the Cape Kiwanda Parking Lot, near public restrooms. These stalls are likely dedicated 15-minute dedicated stalls to encourage turnover near the restrooms. This can be useful, especially in areas of high parking occupancy like Cape Kiwanda Parking Lot. Mugg County Park parking has a 15-minute maximum. Providing one 15-minute parking stall to encourage turnover for use of the restroom and removing the time limit for all other stalls at Mugg County Park could encourage park use for picnicking and other activities.
- Sand infiltration affects several of the on- and off-street parking facilities in the study area, as shown in Figure 7. Maintaining the parking areas from sand infiltration can increase the parking supply and improve the parking experience for residents and visitors.



Figure 7: Sand Infiltration on Shore Drive

- Currently Woods County Campground and the boat launches are the only pay-to-park facilities in the study area. In the Cape Kiwanda Parking Lot, which had the highest occupancy rate, charging \$2 per hour to park would have generated about \$2,400 over the eight hours that the data collection was under taken on Saturday July 28th, 2018. On Saturdays and Sundays for 16 weekends

during the summer, a \$2/hour parking fee in the Cape Kiwanda Parking Lot would generate about \$80,000 over 16 weekends. The pay-to-park system and parking or transportation improvement programs like sand removal, parking ambassadors, and the seasonal shuttle can potentially be funded in full or in-part by a pay-to-park program.

- As presented in Exhibit 3, Alder Street and Cape Kiwanda Parking Lot exhibited higher occupancy (58% and 77%, respectively) at 10:00 a.m. than the other parking facilities on the west side of the Nestucca River in the study area. The NVCA lot, Shore Drive, Pine Street, Cape Kiwanda Drive, and Circle Drive filled after these facilities reached occupancy levels at or near 85%, indicating they provide overflow parking for the same destinations as those parking in Cape Kiwanda Parking Lot and on Alder Street. Figure 6 shows parking on Pine Street near 4:00 p.m.

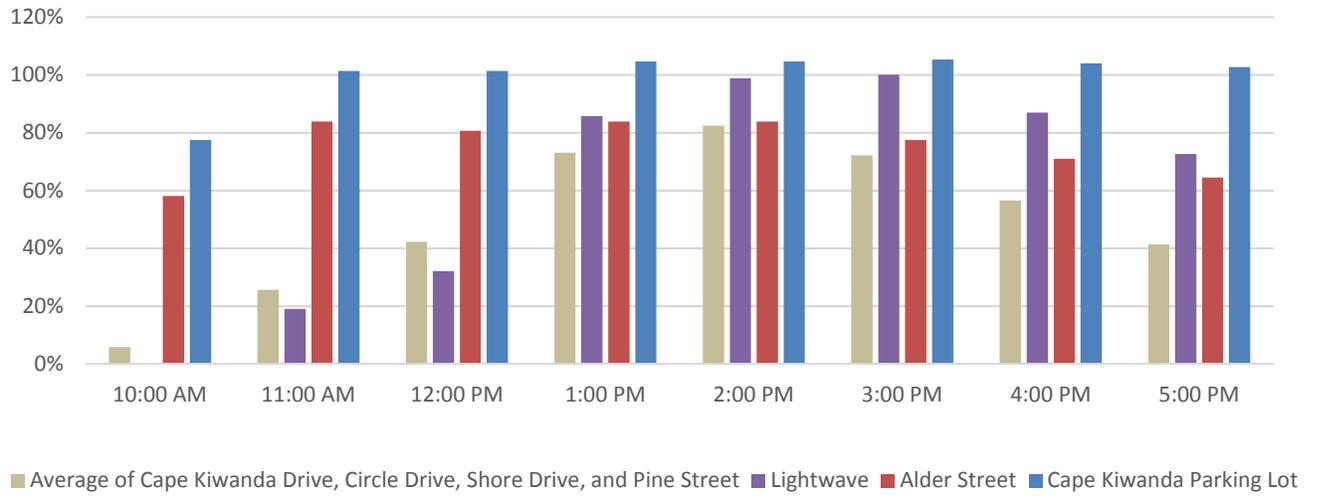


Exhibit 3: Occupancy of Shore Drive, Pine Street, Alder Street, and Cape Kiwanda Parking Lot



Figure 8: Parking on Pine Street near 4:00 p.m. on Saturday during the summer

PARKING SUMMARY

The following summarizes the parking survey for Pacific City for Saturday, July 28th, 2018.

- There are 656 available parking stalls in the surface lots and on-street parking facilities studied.
- 2:00 p.m. was the system peak for on-street and off-street facilities.
- Turnover for both facilities is less than 3 vehicles/parking stall per day on average.
- The average length of stay varied from 1.14 hours at Mugg County Park to 4.44 hours at Woods County Campground. The average length of stay among both facilities was 3.62 hours.
- Seven of the 16 parking facilities exceeded 85% occupancy for at least one hour of the day. Five of these facilities exceeded 90% occupancy rates for at least one hour of the day.
- Cape Kiwanda Parking Lot and Cape Kiwanda Drive (north of Circle Drive) exhibited illegal parking during times of high occupancy.
- Parking demand is not evenly distributed. Some facilities experienced high occupancy rates other lots like the Pacific City Boat Launch never reached 85% occupancy.

NEXT STEPS

The data and observations from this parking survey will help identify parking issues and inform solutions. These solutions will be provided in the Pacific City/Woods Parking Management Plan, but the following outlines several potential strategies:

- Improved maintenance
- Improved wayfinding
- Real time parking information
- Parking ambassador
- User fees
- Improved bicycle and pedestrian facilities
- Regular parking enforcement
- Improved circulation in existing lots

ATTACHMENT A: TUESDAY DATA

This attachment documents existing parking conditions within the Pacific City/Woods area for Tuesday, July 24th. The data is intended to represent typical mid-week summer conditions.

Parking occupancy data for Tuesday, July 24th is presented in Table 1. In comparison to Saturday, July 28th, for which data is presented in the body of the Parking Survey Memorandum, parking occupancy is generally lower on Tuesday. Many of the lots that reached 100% or more during peak occupancy on Saturday, including Cape Kiwanda Parking Lot, NVCA, Pacific City Turnaround, and Pine Street, did not reach 100% occupancy on Tuesday. The Pelican Brewing Parking Lot is the only lot that reached the same peak occupancy (102%) on both Tuesday and Saturday. The Cape Kiwanda Community Center is the only facility that had a higher peak occupancy on Tuesday than Saturday. This indicates that activities, programs, or resources at the Cape Kiwanda Community Center are offered or utilized more during the week than on the weekend. The community center is likely mostly used by residents, so it does not experience the same weekend surge in occupancy from visitors as other parking facilities in the area.

Table 1: Parking Occupancy (Tuesday)

Parking Facility	# of Stalls	Peak Hour	Peak Occupancy	Stalls Available
Off-street Parking Occupancy				
Cape Kiwanda Parking Lot	151	2:00 p.m.	94%	9
NVCA ¹	84	N/A	N/A	N/A
Pacific City Turnaround	16	12:00 p.m.	69%	5
Bob Straub State Park	64	1:00/2:00 p.m.	19%	52
Pacific City Boat Launch	86	1:00 p.m.	13%	75
Fisher Point Boat Launch	24	11:00/12:00 p.m.	33%	16
Mugg County Park	3	2:00/3:00 p.m.	33%	2
Woods County Campground	9	11:00/12:00 p.m.	33%	6
McPhillips	18	3:00 p.m.	33%	12
Pelican Brewery	43	1:00 p.m.	102%	0
Cape Kiwanda Community Center	56	12:00 p.m.	57%	24
On-street Parking Occupancy				
Tierra Del Mar	40	1:00 p.m.	18%	33

Parking Facility	# of Stalls	Peak Hour	Peak Occupancy	Stalls Available
Cape Kiwanda Drive (N) ²	47	N/A	N/A	N/A
Cape Kiwanda Drive (S)	43	2:00 p.m.	14%	37
Circle Drive	17	10:00/11:00 a.m.	12%	15
Alder Street	31	1:00 p.m.	81%	6
Shore Drive	29	2:00 p.m.	48%	15
Pine Street	16	2:00/3:00 p.m.	25%	12

1. The NVCA parking lot was not open on Tuesday.
2. No vehicles were parked along Cape Kiwanda Drive (N) on Tuesday.

Exhibit 1 presents a comparison of the average on-street and off-street parking facilities. Like on Saturday, parking occupancy for both on-street and off-street facilities increases steadily throughout the day and reaches the peak during early afternoon. Also similar to Saturday, the off-street facilities saw significantly greater occupancy than the on-street facilities. The overall parking occupancy within the surface parking lots and along the adjacent street system is below the effective capacity of the overall parking supply (85%) during all hours of the day, but parking occupancy was not uniform among all facilities.

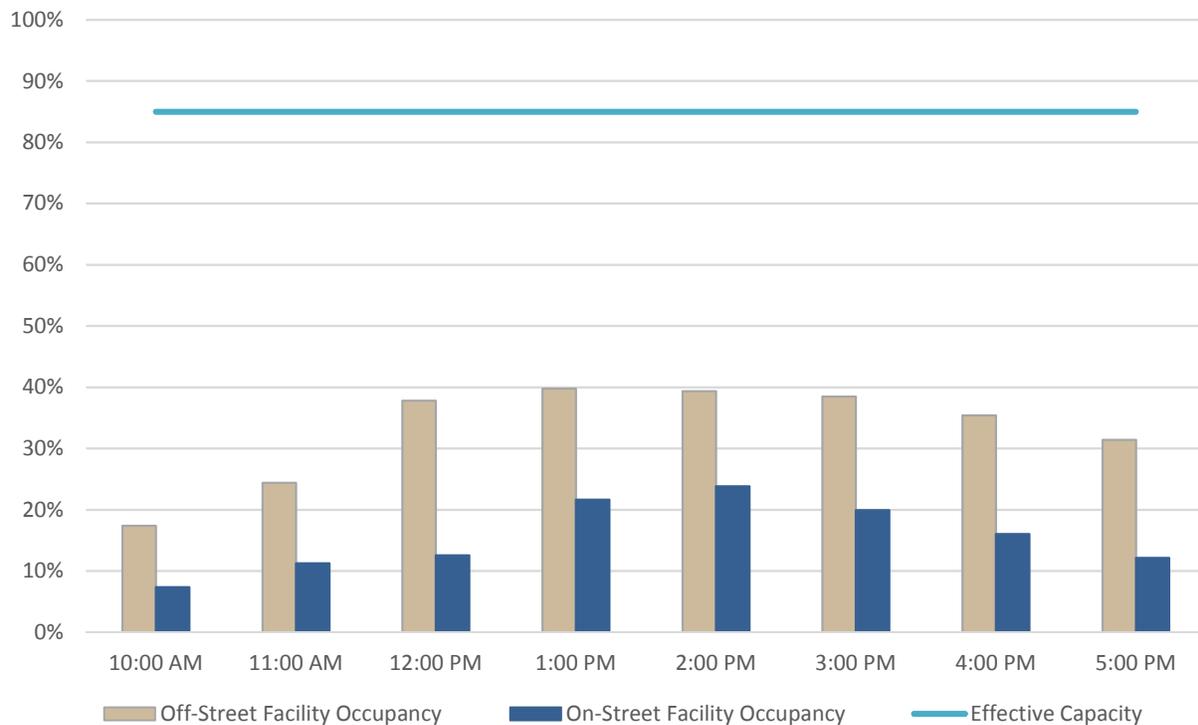


Exhibit 1: Average On-Street and Off-Street Parking Facility Occupancy

Table 2 presents the duration of stay within the surface parking lots and along the adjacent street system for Tuesday. As shown, the average duration of stay varies by lot and by street; however, duration of stay tends to be less than 3-hours, which reflects the nature of most recreational tourism locations where people tend to stay longer than retail/commercial areas.

Table 2: Duration of Stay (Tuesday)

Parking Facility	# of Stalls	Average Length of Stay
Off-street Duration of Stay		
Cape Kiwanda Parking Lot	151	1.86 hours
NVCA ¹	84	N/A
Pacific City Turnaround	16	1.61 hours
Bob Straub State Park	64	1.53 hours
Pacific City Boat Launch	86	2.11 hours
Fisher Point Boat Launch	24	2.29 hours
Mugg County Park	3	1.0 hours
Woods County Campground	9	4.0 hours
McPhillips	18	2.08 hours
Pelican Brewery	43	2.93 hours
Cape Kiwanda Community Center	56	2.77 hours
On-Street Duration of Stay		
Tierra Del Mar	40	1.39 hours
Cape Kiwanda Drive (N) ²	47	N/A
Cape Kiwanda Drive (S)	43	1.50 hours
Circle Drive	17	3.67 hours
Alder Street	31	2.04 hours
Shore Drive	29	2.19 hours
Pine Street	16	1.80 hours

1. The NVCA parking lot was not open on Tuesday.
2. No vehicles were parked along Cape Kiwanda Drive (N) on Tuesday.

Like for Saturday, the Woods County Campground has the highest average length of stay, likely because of overnight campers. Circle Drive and Pelican Brewery had the next highest average lengths of stay. Circle Drive likely has a high length of stay due to

residents, while the Pelican Brewery likely has a high length of stay because of staff or those accessing the beach, dining, and retail options. Mugg County Park has the lowest average length of stay, likely because parking spaces associated with Mugg County Park are signed as 15-minute only spaces. In comparison to Saturday, Tuesday's lengths of stay are generally lower.

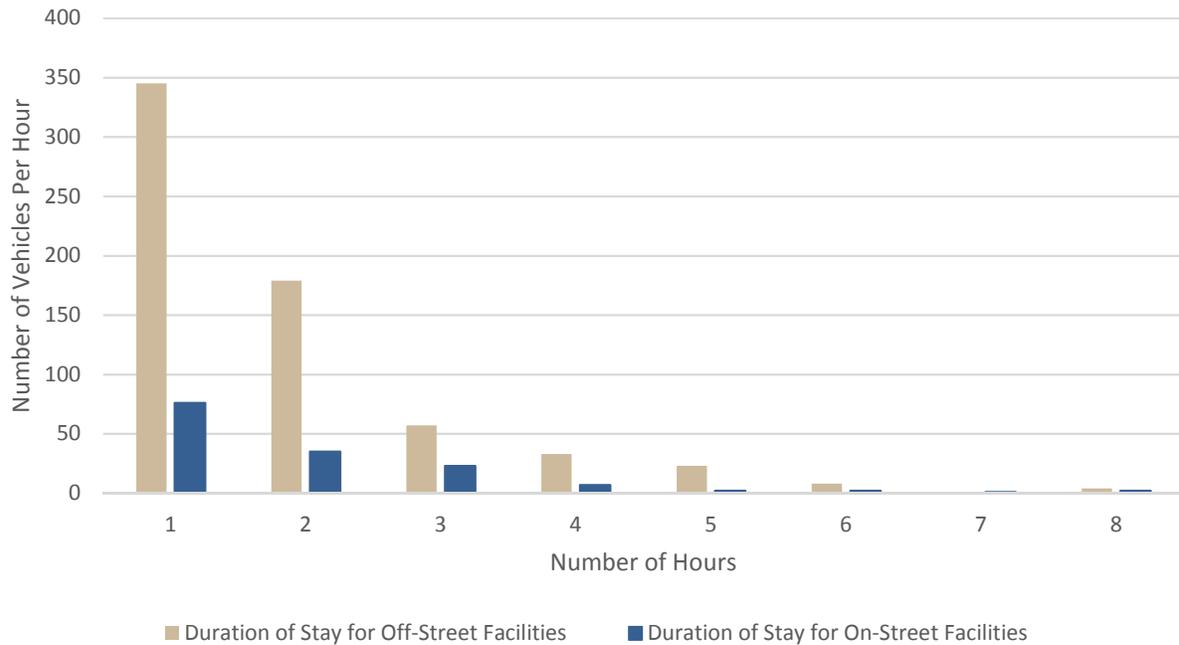


Exhibit 2: Average Duration of Stay for On- and Off-Street Facilities

Turnover

Table 3 summarizes the turnover data for the surface parking lots and along the adjacent street system for Tuesday. As shown, average turnover varies by lot and by street. Cape Kiwanda Parking Lot has the highest turnover at 3.36 vehicles/parking stall, while Circle Drive has the lowest turnover at .18 vehicles/stall. Cape Kiwanda Parking Lot is likely serving those utilizing the beach, dining, and retail options in the area. Low turnover on Circle Drive is indicative that most vehicles parked on Circle Drive on Tuesday were likely residents.

Table 3: Turnover (Tuesday)

Parking Facility	# of Stalls	Rate of Turnover (Vehicles/ Parking Stall)	Unique Vehicles	Total Vehicle Hours	Percentage of Stays for 4+ Hours
Off-street Turnover					
Cape Kiwanda Parking Lot	151	3.36	508	943	27
NVCA ¹	84	N/A	N/A	N/A	N/A
Pacific City Turnaround	16	2.25	36	58	1
Bob Straub State Park	64	0.80	51	78	2
Pacific City Boat Launch	86	0.56	19	40	1
Fisher Point Boat Launch	24	0.67	14	32	1
Mugg County Park	3	1.00	3	3	0
Woods County Campground	9	0.56	5	20	2
McPhillips	18	0.72	13	27	1
Pelican Brewery	43	1.58	68	199	19
Cape Kiwanda Community Center	56	0.86	48	133	11
On-street Turnover					
Tierra Del Mar	40	0.45	18	25	0
Cape Kiwanda Drive (N) ²	47	N/A	N/A	N/A	N/A
Cape Kiwanda Drive (S)	43	0.28	12	18	0
Circle Drive	17	0.18	3	11	1
Alder Street	31	2.23	69	141	5
Shore Drive	29	0.90	26	57	1
Pine Street	16	0.31	5	9	0

1. The NVCA parking lot was not open on Tuesday.
2. No vehicles were parked along Cape Kiwanda Drive (N) on Tuesday.