

## FORT WILLIAMS PARK SURVEY

The Town of Cape Elizabeth, asked the Greater Portland Council of Governments to perform a survey of vehicle access to and from Fort Williams Park for the primary purpose of documenting the number and origin of vehicles utilizing the park. The survey was conducted on four separate days during the summer of 2009 as summarized in the below Survey Schedule. In order to minimize costs it was agreed that the survey would be conducted using GPCOG interns with GPCOG staff oversight.

As a working policy guide for the Town the key survey data are considered as follows:

- Total number of vehicles entering and leaving the park.
- Number of out of town vehicles.
- Average length of stay.

In addition to the above, the Survey results as detailed in Appendix A. include the following:

- Direction of automobiles entering and exiting the park on Shore Road
- Number of Passengers in automobiles
- Thirty (30) minute counts of vehicles parked in each parking lot.
- Total number of cars entering each parking lot
- Number of vehicles visiting the playground area,
- Out-of-state or Maine license plate information.

### Survey Schedule and Site Conditions

<b>Date</b>	<b>Day</b>	<b>Time</b>	<b>Conditions</b>
6/25	Thursday	9am – 7pm	Cold & windy
6/27	Saturday	9am – 7pm	Warm & Sunny
7/25	Saturday	12pm – 7pm	Warm & Sunny
8/8	Saturday	9am – 2pm	Warm & Sunny

### Survey Methodology

**Vehicles entering and leaving the park** – Two surveyors were stationed at the park entrance equipped with tape recorders to document the turning movements, number of occupants and license plate information of vehicles entering and leaving the park. The time was noted at fifteen minute intervals. One surveyor recorded information on vehicles entering the park while the other recorded those leaving. Comparison of the license plate numbers determined each vehicle's length of stay.

License plate numbers were also intended to be used to determine the town of origin of Maine registered vehicles and give a snapshot of other states represented by visitors.

**Total number of cars entering each parking lot** – Two additional surveyors were stationed where they could observe and record which parking lot vehicles went to once inside the park. A fifth, roving surveyor counted the number of vehicles parked in each lot at 30 minute intervals. This person also conducted informal interviews with people at the playground.

### Constraining Factors & Limitations

- The survey is a sample only.
  - Each sample day did not span the total hours the park was open.
  - The methodology did not lend itself to capturing all of the information about every vehicle, every time.
    - Most of the entering and exiting vehicles were counted accurately.
    - During periods of high vehicle volumes, and/or when surveyors didn't enunciate well into the voice recorders, license plate numbers were lost.
    - It was also not easy to count the number of passengers in the vehicles during these high activity periods.
    - Analyses based on comparison of the same vehicles entering and exiting the park (sorted by license plate numbers) yielded a smaller sample due to these cumulative errors.
- Privacy protection laws prevented the use of license plate numbers to determine town of origin of all Maine registered vehicles
- 

### Key Summary Findings

- Approximately one quarter of all vehicles counted entered or exited south
- Most vehicles were occupied by two persons (48%) or one person (24%)
- The number of vehicles in the park tended to peak between 1:00 and 2:00
- Approximately 27% of all vehicles, regardless of state of origin, stayed in the park for thirty minutes or less.
- Another 25% of Maine registered vehicles and 36% of all others, stayed for thirty to sixty minutes.

## **Appendix A**

### **TABLE 1**

#### **Total # of Vehicles that Entered Fort Williams Park**

This table displays a count of the total number of automobiles that entered the park each day of the survey. Days 6/25 & 6/27 the Cape Elizabeth Police Department placed a marker inside the park the counted entering vehicles. On 6/25 & 6/27 the table includes a total from the Cape Elizabeth Police Department and GPCOG. The remaining days (7/25 & 8/8) were counted only by GPCOG

	<b>6/25/09</b>	<b>6/27/09</b>	<b>7/25/09</b>	<b>8/8/09</b>
<b>GPCOG</b>	1012	1359	1184	1028
<b>Cape Elizabeth Police Department</b>	1137	1330	N/A	N/A

### **Table 2**

#### **Maine & Out-of State Vehicles That Entered the Park**

This table shows the total number of Maine vehicles and a separate total of out-of-state vehicles that entered the park on each day surveyed.

	<b>Maine Vehicles</b>	<b>Out-of State Vehicles</b>
<b>6/25/09</b>	748 73.9%	264 26.1%
<b>6/27/09</b>	971 71.4%	388 28.6%
<b>7/25/09</b>	839 70.9%	345 29.1%
<b>8/8/09</b>	666 64.8%	362 35.2%

**TABLE 3**  
**Direction of Vehicles**

The direction of the automobiles was recorded as they entered and as they exited the park. They were recorded as north, toward South Portland or south, toward Cape Elizabeth. Direction of vehicles was not recorded on 6/25.

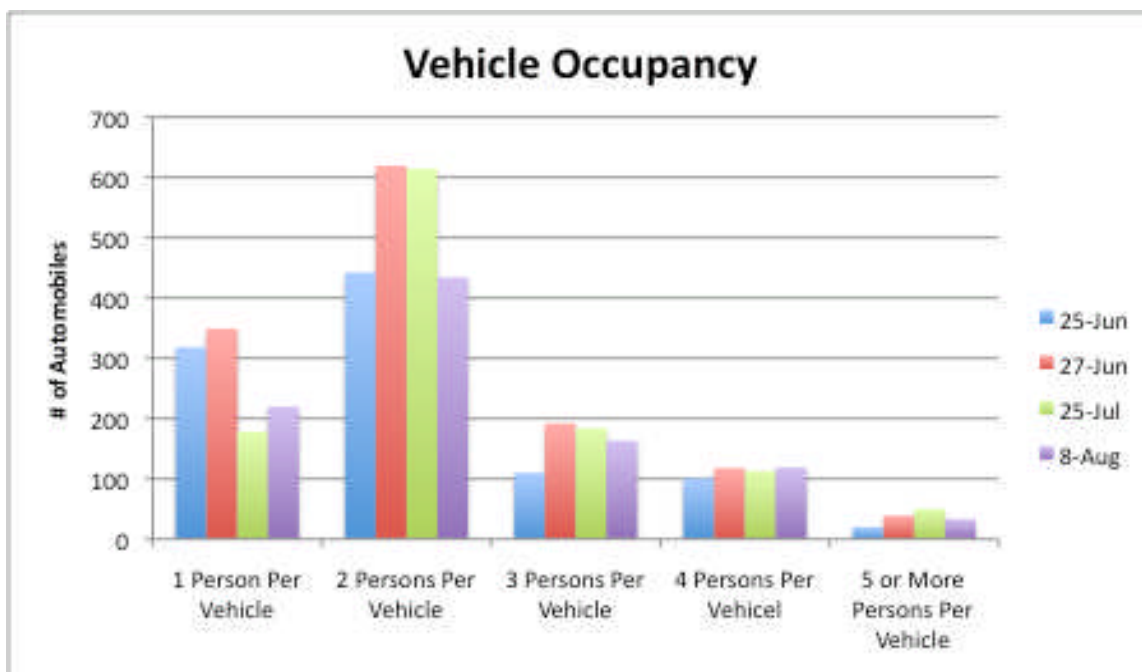
The data from table 3 is inconsistent with tables 1 and 2, because though vehicles were counted as they entered and exited the direction was not always included due mainly to the heavy traffic during peak hours

	<b>ENTER</b>		<b>Total</b>	<b>EXIT</b>		<b>Total</b>
	<b>North</b>	<b>South</b>		<b>North</b>	<b>South</b>	
<b>6/27/09</b>	847 65.9%	438 34.1%	1285	932 73.1%	343 26.9%	1275
<b>7/25/09</b>	846 73.9%	299 26.1%	1145	1051 76.8%	318 23.2%	1369
<b>8/8/09</b>	653 68.7%	297 31.3%	950	399 67.4%	193 32.6%	592
<b>TOTAL</b>	2346 74.8%	1034 25.2%	3380	2382 73.7%	854 26.3%	3236

**Table 4**  
**Number of Passengers**

This table shows the number of individuals that occupied each automobile that entered the park. As in table 3, not every vehicle's occupants were counted due to how busy it was at times.

	<b>1 Person Per Vehicle</b>	<b>2 Persons Per Vehicle</b>	<b>3 Persons Per Vehicle</b>	<b>4 Persons Per Vehicle</b>	<b>5 or More Persons Per Vehicle</b>	<b>Total</b>
<b>6/25/09</b>	318 32.1%	442 44.6%	110 11.1%	101 10.2%	20 2.0%	991
<b>6/27/09</b>	349 26.5%	619 47.0%	192 14.6%	118 9.0%	39 3.0%	1317
<b>7/25/09</b>	178 15.6%	614 53.9%	184 16.2%	113 9.9%	50 4.4%	1139
<b>8/8/09</b>	220 22.7%	434 44.8%	163 16.8%	119 12.3%	33 3.4%	969
<b>Total</b>	1065 24.1%	2109 47.8%	649 14.7%	451 10.2%	142 3.2%	4416

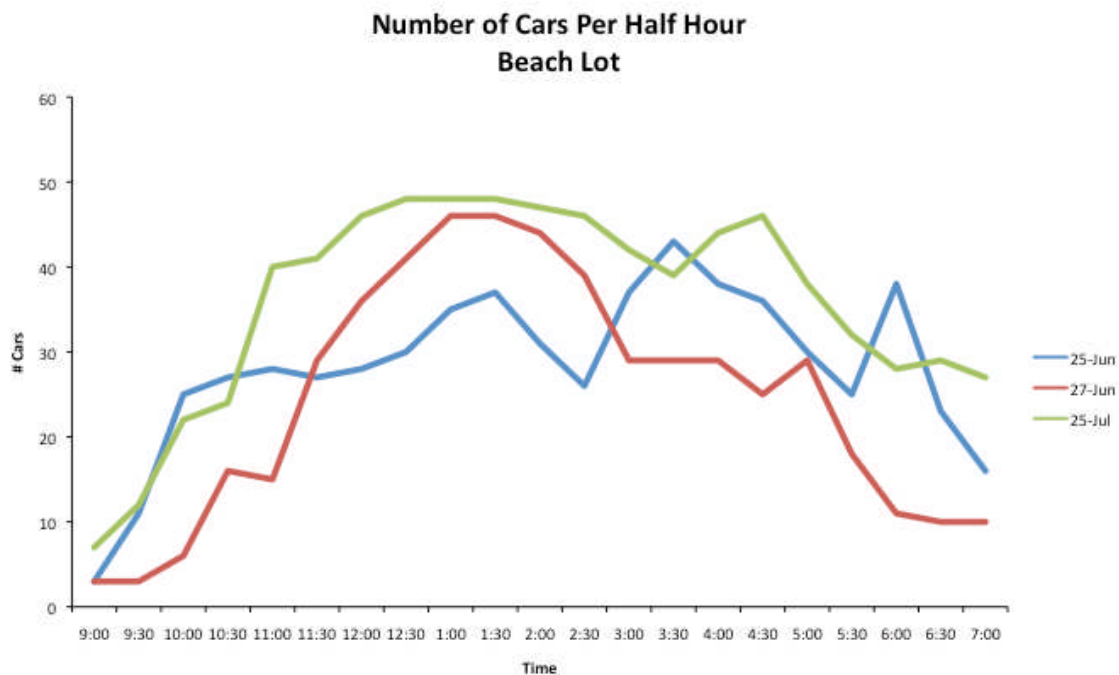


The following tables and accompanying graphs illustrate the total number of cars parked in each parking lot (Beach, Parade, Shelter, Central & Portland Head Light, PHL) at 30 minute intervals.

**TABLE 5a**

**30 Minute Count of Cars Parked in Beach Lot**

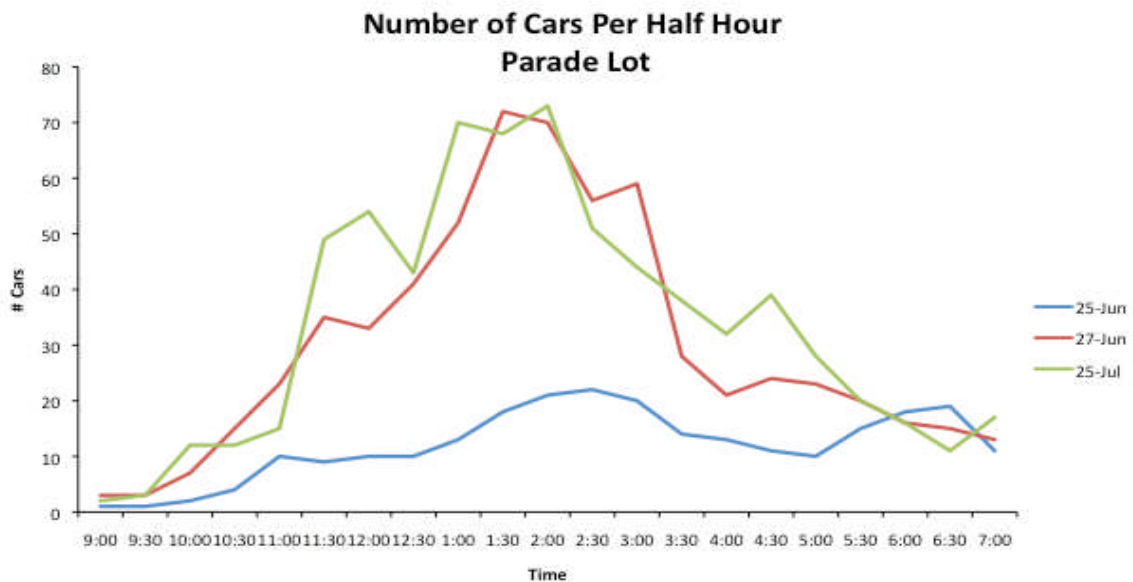
BEACH	6/25/2009 Thurs	6/27/2009 Sat	7/25/2009 Sat	TOTAL
9:00	3	3	7	13
9:30	11	3	12	26
10:00	25	6	22	53
10:30	27	16	24	67
11:00	28	15	40	83
11:30	27	29	41	97
12:00	28	36	46	110
12:30	30	41	48	119
1:00	35	46	48	129
1:30	37	46	48	131
2:00	31	44	47	122
2:30	26	39	46	111
3:00	37	29	42	108
3:30	43	29	39	111
4:00	38	29	44	111
4:30	36	25	46	107
5:00	30	29	38	97
5:30	25	18	32	75
6:00	38	11	28	77
6:30	23	10	29	62
7:00	16	10	27	53



## 5b

### 30 Minute Count of Cars Parked in Parade Lot

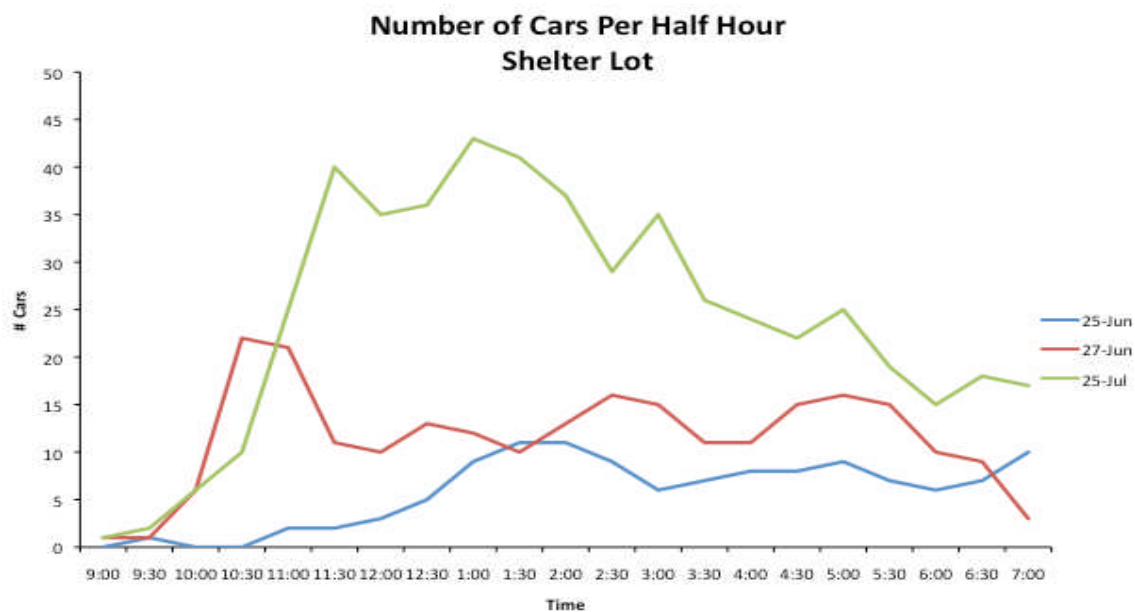
PARADE	6/25/2009 Thurs	6/27/2009 Sat	7/25/2009 Sat	TOTAL
9:00	1	3	2	6
9:30	1	3	3	7
10:00	2	7	12	21
10:30	4	15	12	31
11:00	10	23	15	48
11:30	9	35	49	93
12:00	10	33	54	97
12:30	10	41	43	94
1:00	13	52	70	135
1:30	18	72	68	158
2:00	21	70	73	164
2:30	22	56	51	129
3:00	20	59	44	123
3:30	14	28	38	80
4:00	13	21	32	66
4:30	11	24	39	74
5:00	10	23	28	61
5:30	15	20	20	55
6:00	18	16	16	50
6:30	19	15	11	45
7:00	11	13	17	41



## 5c

**30 Minute Count of Cars Parked in Shelter Lot**

SHELTER	6/25/2009 Thurs	6/27/2009 Sat	7/25/2009 Sat	TOTAL
9:00	0	1	1	2
9:30	1	1	2	4
10:00	0	6	6	12
10:30	0	22	10	32
11:00	2	21	25	48
11:30	2	11	40	53
12:00	3	10	35	48
12:30	5	13	36	54
1:00	9	12	43	64
1:30	11	10	41	62
2:00	11	13	37	61
2:30	9	16	29	54
3:00	6	15	35	56
3:30	7	11	26	44
4:00	8	11	24	43
4:30	8	15	22	45
5:00	9	16	25	50
5:30	7	15	19	41
6:00	6	10	15	31
6:30	7	9	18	34
7:00	10	3	17	30



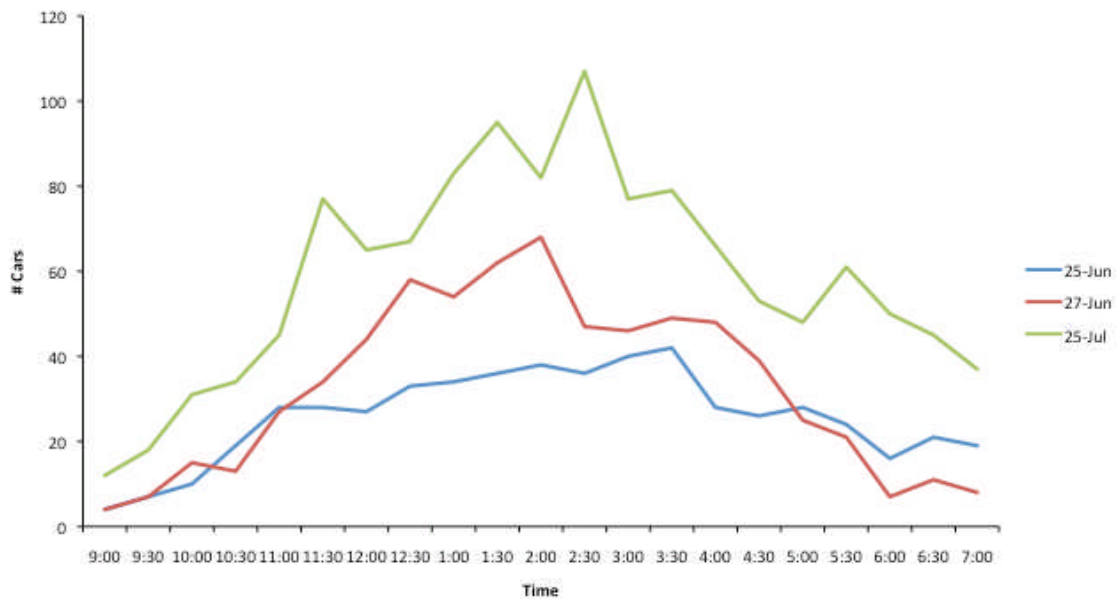


## 5d

### 30 Minute Count of Cars Parked in Central Lot

CENTRAL	6/25/2009 Thurs	6/27/2009 Sat	7/25/2009 Sat	TOTAL
9:00	4	4	12	20
9:30	7	7	18	32
10:00	10	15	31	56
10:30	19	13	34	66
11:00	28	27	45	100
11:30	28	34	77	139
12:00	27	44	65	136
12:30	33	58	67	136
1:00	34	54	83	171
1:30	36	62	95	193
2:00	38	68	82	188
2:30	36	47	107	190
3:00	40	46	77	163
3:30	42	49	79	170
4:00	28	48	66	142
4:30	26	39	53	118
5:00	28	25	48	101
5:30	24	21	61	106
6:00	16	7	50	73
6:30	21	11	45	77
7:00	19	8	37	64

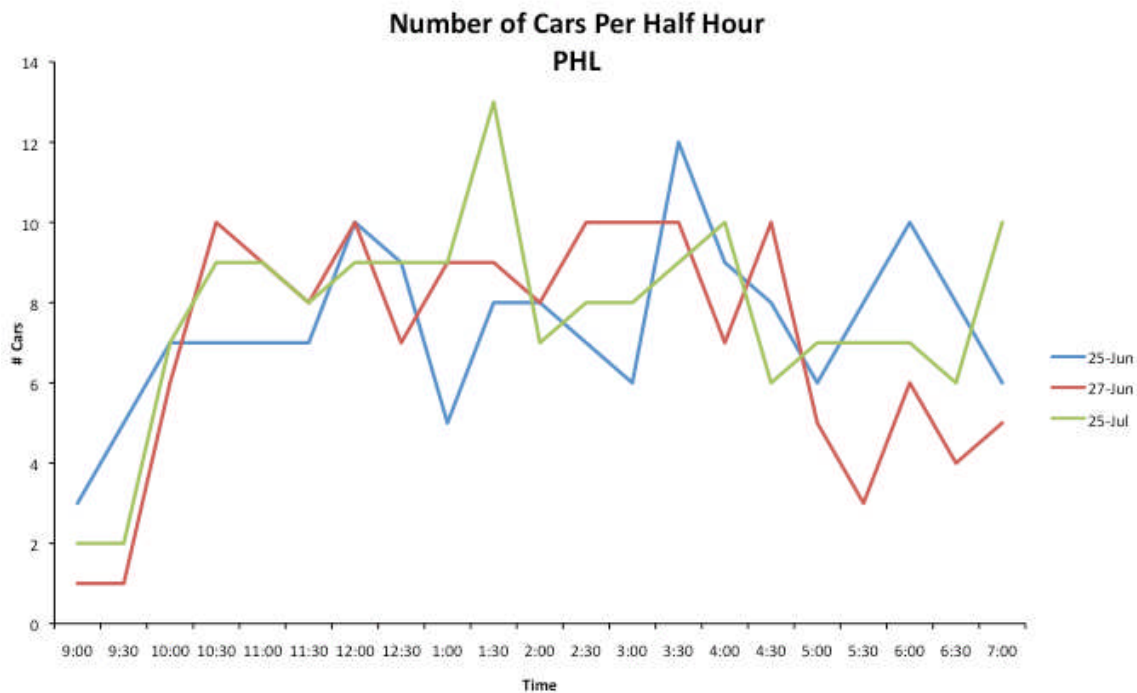
**Number of Cars Per Half Hour  
Central Lot**



## 5e

**30 Minute Count of Cars Parked in Portland Head Light**

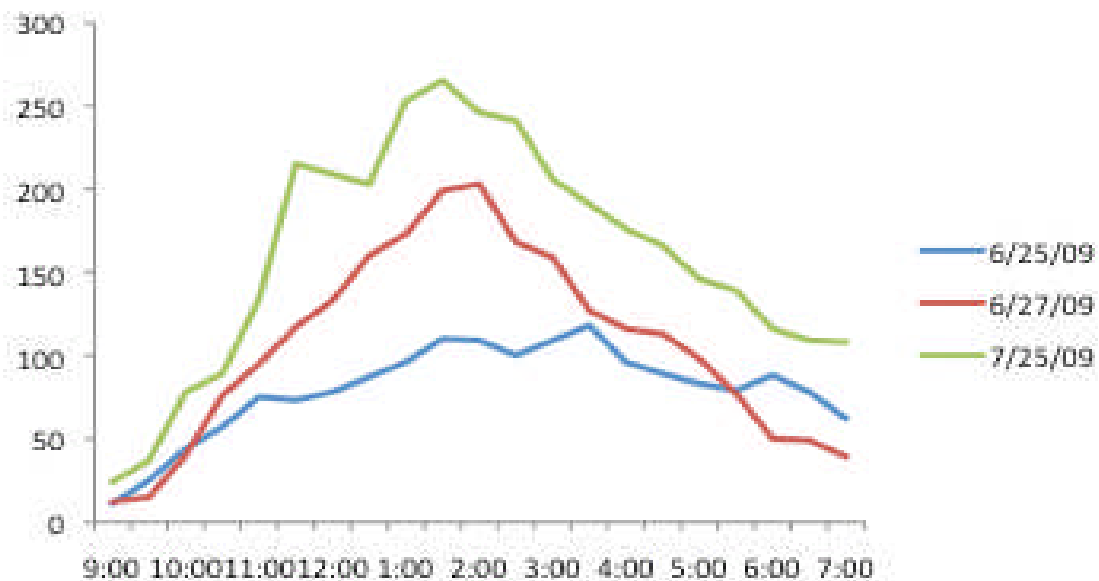
PHL	6/25/2009 Thurs	6/27/2009 Sat	7/25/2009 Sat	TOTAL
9:00	3	1	2	6
9:30	5	1	2	8
10:00	7	6	7	21
10:30	7	10	9	26
11:00	7	9	9	25
11:30	7	8	8	23
12:00	10	10	9	29
12:30	9	7	9	26
1:00	5	9	9	23
1:30	8	9	13	30
2:00	8	8	7	23
2:30	7	10	8	25
3:00	6	10	8	24
3:30	12	10	9	31
4:00	9	7	10	26
4:30	8	10	6	24
5:00	6	5	7	18
5:30	8	3	7	18
6:00	10	6	7	23
6:30	8	4	6	18
7:00	6	5	10	21



## 5f

The total number of vehicles parked within the park in 30 minute increments.

Time	6/25/09	6/27/09	7/25/09
9:00	11	12	24
9:30	25	15	37
10:00	44	40	78
10:30	57	76	89
11:00	75	95	134
11:30	73	117	215
12:00	78	133	209
12:30	87	160	203
1:00	96	173	253
1:30	110	199	265
2:00	109	203	246
2:30	100	168	241
3:00	109	159	206
3:30	118	127	191
4:00	96	116	176
4:30	89	113	166
5:00	83	98	146
5:30	79	77	139
6:00	88	50	116
6:30	78	49	109
7:00	62	39	108



**Table 6**  
**Length of Stay**

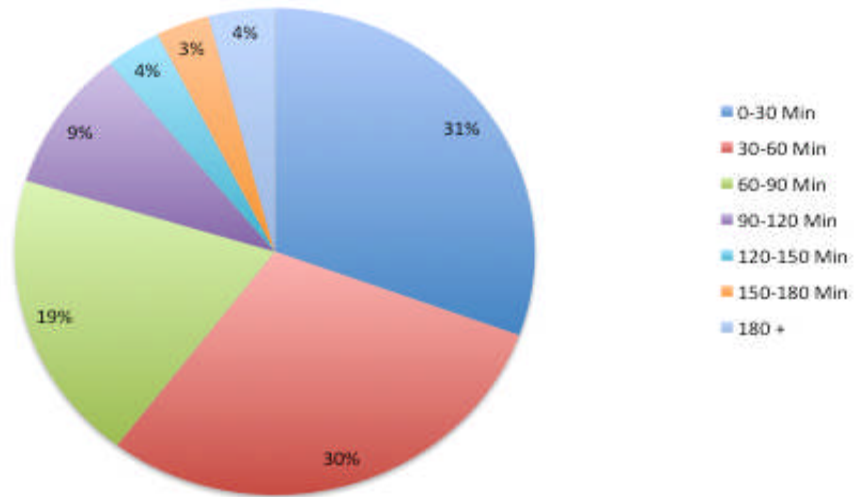
This table shows the approximate length of stay for Maine vehicles, out-of-state vehicles and totals. There are charts that represent the length of stay for each day and one that aggregates all of the dates.

Seventy-five percent of vehicles stayed in the park, 0-90 minutes. On the 25<sup>th</sup> of July there is an increase in the number of vehicles that stayed over 3 hours; this was most likely caused by 2 weddings near the Head Light and a gathering in the Shelter area.

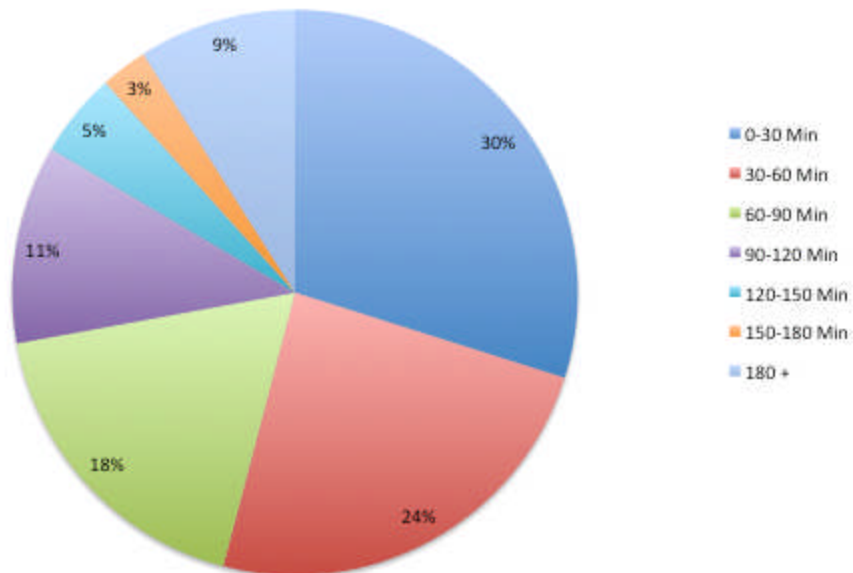
<b>6/25/09</b>	<b>Maine</b>		<b>Out-of-State</b>		<b>All Vehicles</b>	
0-30 Min	193	30.6%	42	18.3%	235	27.3%
30-60 Min	188	29.8%	80	34.8%	268	31.1%
60-90 Min	122	19.3%	52	22.6%	174	20.2%
90-120 Min	59	9.4%	30	13.0%	89	10.3%
120-150 Min	22	3.5%	14	6.1%	36	4.2%
150-180 Min	21	3.3%	6	2.6%	27	3.1%
180 +	26	4.1%	6	2.6%	32	3.7%
<b>Total</b>	<b>631</b>		<b>230</b>		<b>861</b>	
<b>6/27/09</b>						
0-30 Min	179	29.9%	39	15.7%	218	25.7%
30-60 Min	145	24.2%	95	38.3%	240	28.3%
60-90 Min	108	18.0%	60	24.2%	168	19.8%
90-120 Min	68	11.4%	27	10.9%	95	11.2%
120-150 Min	29	4.8%	11	4.4%	40	4.7%
150-180 Min	16	2.7%	10	4.0%	26	3.1%
180 +	54	9.0%	6	2.4%	60	7.1%
<b>Total</b>	<b>599</b>		<b>248</b>		<b>847</b>	
<b>7/25/09</b>						
0-30 Min	56	15.6%	31	19.7%	87	16.9%
30-60 Min	55	15.4%	58	36.9%	113	21.9%
60-90 Min	51	14.2%	33	21.0%	84	16.3%
90-120 Min	43	12.0%	17	10.8%	60	11.7%
120-150 Min	34	9.5%	8	5.1%	42	8.2%
150-180 Min	30	8.4%	6	3.8%	36	7.0%
180 +	89	24.9%	4	2.5%	93	18.1%
<b>Total</b>	<b>358</b>		<b>157</b>		<b>515</b>	
<b>8/8/09</b>						
0-30 Min	133	43.2%	29	24.0%	162	37.8%
30-60 Min	83	26.9%	36	29.8%	119	27.7%
60-90 Min	38	12.3%	27	22.3%	65	15.2%
90-120 Min	24	7.8%	11	9.1%	35	8.2%
120-150 Min	14	4.5%	8	6.6%	22	5.1%
150-180 Min	8	2.6%	7	5.8%	15	3.5%
180 +	8	2.6%	3	2.5%	11	2.6%
<b>Total</b>	<b>308</b>		<b>121</b>		<b>429</b>	
<b>All Days</b>						
0-30 Min	561	29.6%	141	18.7%	702	26.5%
30-60 Min	471	24.8%	269	35.6%	740	27.9%
60-90 Min	319	16.8%	172	22.8%	491	18.5%
90-120 Min	194	10.2%	85	11.2%	279	10.5%
120-150 Min	99	5.2%	41	5.4%	140	5.3%
150-180 Min	75	4.0%	29	3.8%	104	3.9%
180 +	177	9.3%	19	2.5%	196	7.4%
<b>Total</b>	<b>1896</b>		<b>756</b>		<b>2652</b>	

## Maine Vehicles Length of Stay

Thursday 6-25-09

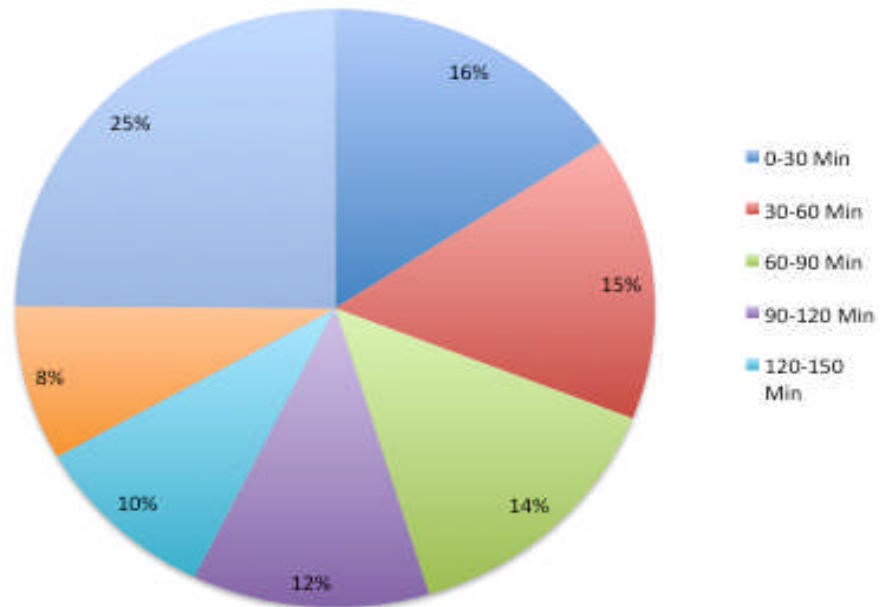


Saturday 6-27-09

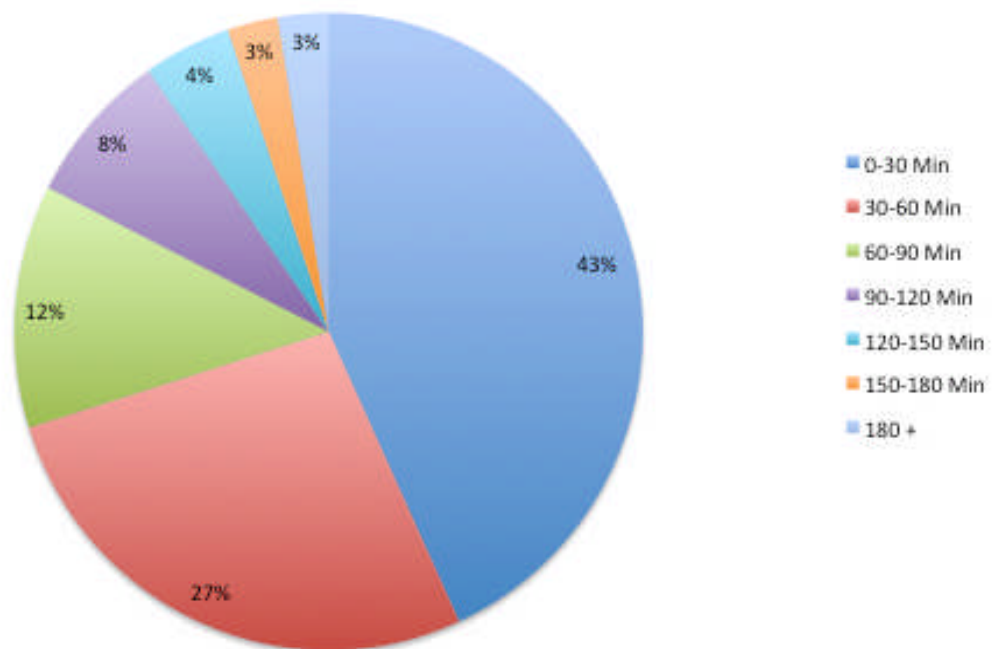


## Maine Vehicles Length of Stay

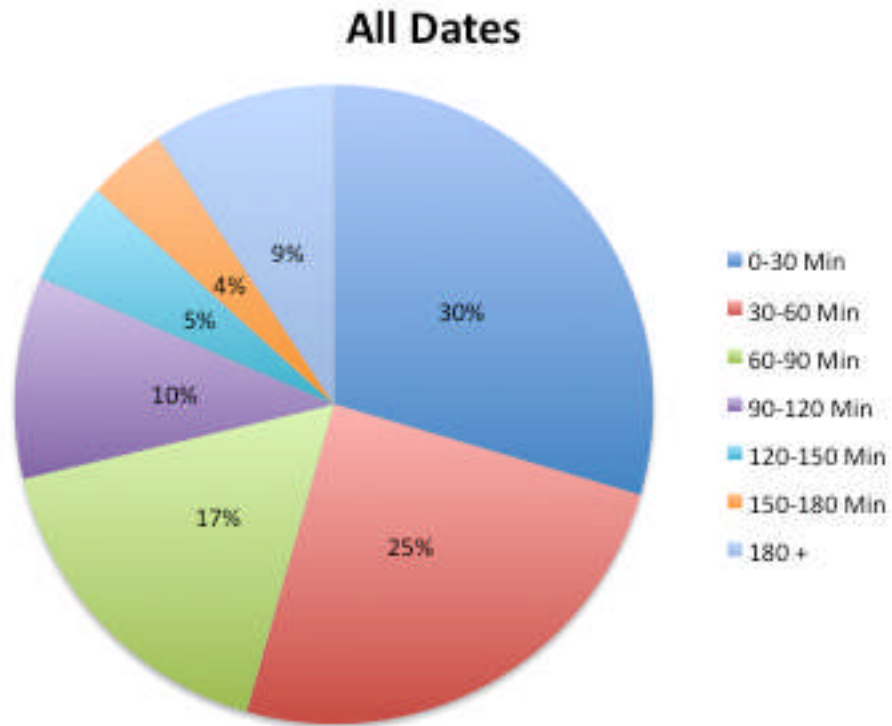
### Saturday 7-25-09



### Saturday 8-8-09

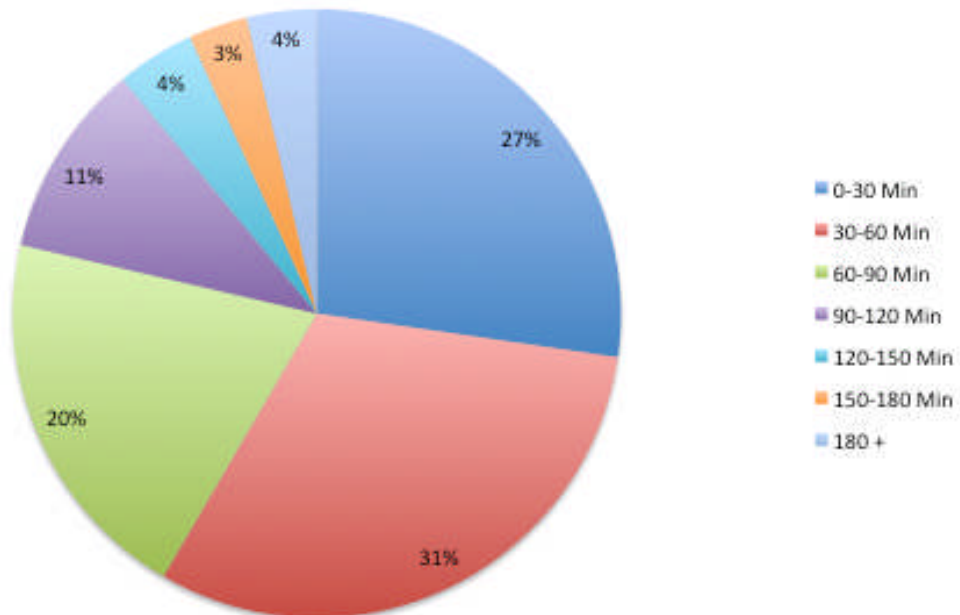


### Maine Vehicles Length of Stay



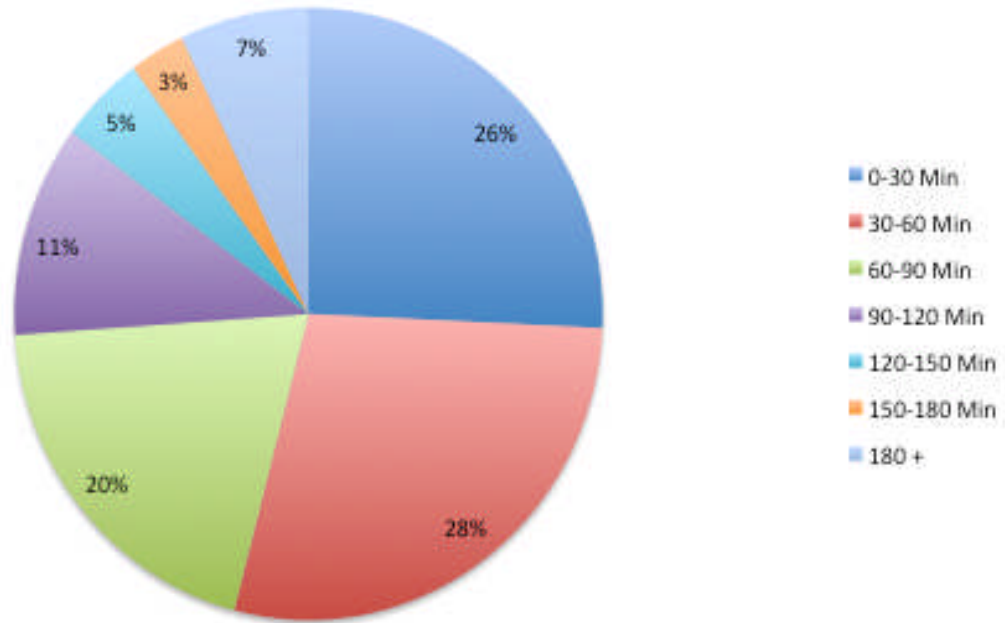
### All Vehicles Length of Stay

**Thursday 6-25-09**

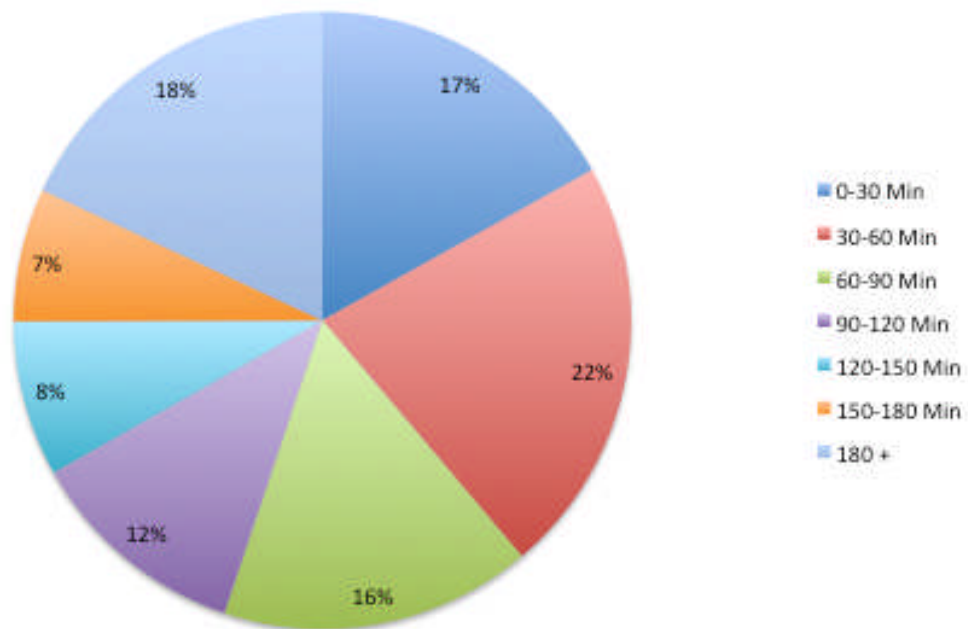


## All Vehicles Length of Stay

### Saturday 6-27-09



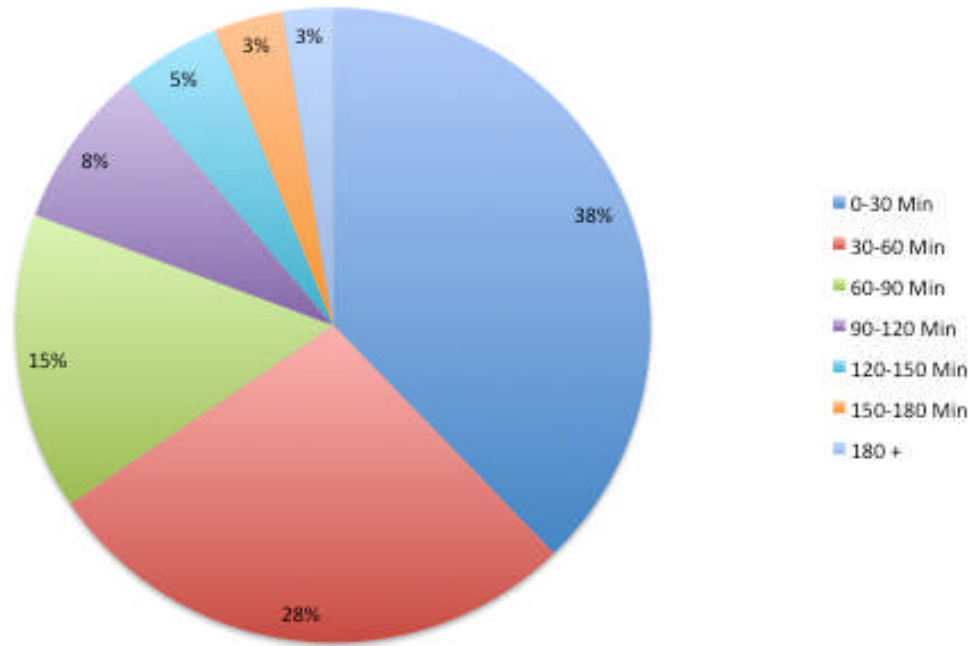
### Saturday 7-25-09



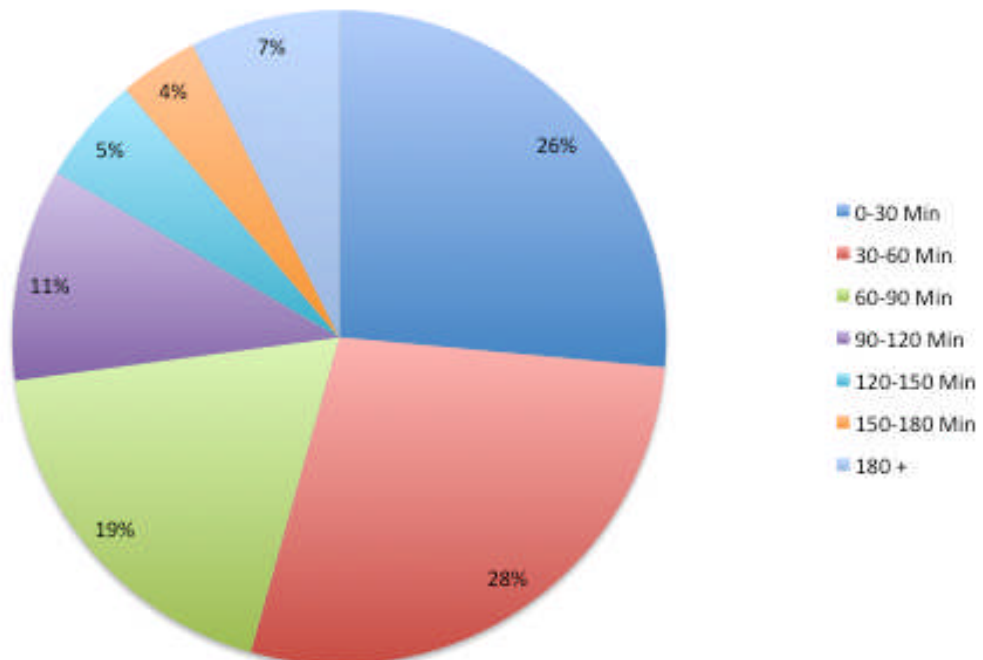


### All Vehicles Length of Stay

8-8-09



All Dates



## **PLAYGROUND DATA**

This information was collected from observing and speaking with individuals at the playground area. The information collected is anecdotal. There were three days of data collected; Thursday, June 25, Saturday June 27 and Saturday July 25. The information that was collected were the number of vehicles parked in the two parking lots on either end of the playground every 30minutes, and the state of origin of the vehicles. Secondly random individuals were questioned inside of the playground. The information gathered includes length of stay within playground, how often the respondent visited the playground and their residence.

### Thursday June 25:

There were 85 total vehicles counted in the two playground parking lots, 68 counted were from Maine and 17 were out of state. Eleven individuals were interviewed, five from Cape Elizabeth, four from South Portland, two from Scarborough, and one from Windham. Four said they stay between 30-60 minutes, five stay 60-90 minutes, and two stay more than 90 minutes. Three said they visit the playground weekly, seven bi-weekly and one monthly.

### Saturday June 27:

There were 93 total vehicles counted in the two playground parking lots. 70 counted were from Maine and 23 were out of state. Twelve individuals were interviewed, five were from Cape Elizabeth, three from South Portland, two from Portland, one from Gorham and one from Brunswick. Six of the individuals stay between 30-60 minutes, five stay 60-90 minutes and, one stays more than 90 minutes. Seven said they visit the playground weekly, two bi-weekly and three monthly.

### Saturday July 25:

There were 163 total vehicles counted in the two playground parking lots. 121 counted were from Maine and 42 were from out of state. Eleven individuals were interviewed, five were from Cape Elizabeth, three from South Portland, two from Portland, one from Gorham. Four individuals said they stay 30-60 minutes, six stay 60-90 minutes and one stays more than 90 minutes. Five visit the park weekly, three bi-weekly and three monthly.