

## Appendix C –

### Additional information and results about counts and observation

#### Additional methods information

#### Number of Count Sessions per location by month and time of day

**Table 1. Count sessions per location by month for San Juan Island**

	May	June	July	August	September	Grand Total
<i>Location name</i>						
Cattle Point DNR building + grass	1		1	4	3	9
Cattle Point DNR North beach	1		1	3	3	8
Cattle Point DNR main beach	1		1	3	3	8
Cattle Point lighthouse	1		1	4	3	9
Mt. Finlayson / ridge trailhead	1		1	4	1	7
South Beach overlook (turnout)	1		1	4	3	9
South Beach – toward point	1		1	4	3	9
Jackle’s Lagoon trailhead	1		1	3	1	6
South Beach main lot (east)	1		1	5	5	12
South Beach middle lot	1		1	5	5	12
South Beach last lot (west)	1		1	5	5	12
South Beach – roadless to Grandma’s	1					1
Grandma’s Cove	1					1
Redoubt lot	1		1	3	1	6
4th of July trailhead / ball field	1		1	4	3	9
4th of July beach	1		1	2	3	7
American Camp VC lot (picnic tables)	1		1	4	4	10
American Camp VC (inside)	1		1	3	3	8
American Camp buildings / camp	1		1	3	3	8
Eagle Cove lot and beach	1		1	4	1	7
Eagle Cove overflow	1		1	3		5
Pear Point Road lot	1		1			2
Jackson Beach lots, picnic, and v-ball	1		1			2
Jackson Beach	1		1			2
Jackson Beach boat ramp and lot	1		1			2
Westside Preserve lot south	2			1		3
Westside Preserve lot middle	2			1		3
Westside Preserve lot north	2			1		3
Deadman Cove turnout and beach	2			1		3
Lime Kiln SP upper lot	6	10	5	20		41

Lime Kiln SP lower lot and VC area	6	10	5	20		41
Lime Kiln whale trail (Munro/south)	6	10	5	19		40
Lime Kiln whale trail (middle)	6	10	5	18		39
Lime Kiln whale trail (cove)	6	10	5	17		38
Lime Kiln whale trail (point)	6	10	5	18		39
Lime Kiln lighthouse building	6	10	5	18		39
Lime Kiln upland trail to parking	6	10	5	17		38
Carefree Lake turnout	2					2
SJC Park Smallpox boat lot and ramp	5	21	23	31	11	91
SJC Park Smallpox beach	5	21	23	32	11	92
SJC Park day lot and lawn	5	21	23	21	11	81
SJC Park north beach	4	21	23	20	11	79
SJC commercial parking area	2	21	23	29	11	86
Horse Trail Road (Mitchell Hill trailhead)	2					2
English Camp lot	3	4		4	2	13
English Camp trail to garden overlook	3	4		1		8
English Camp lawn	3	4		3		10
English Camp VC building	3	4		3		10
Young Hill trailhead turnout	2	4		4	1	11
Roche trailhead (the Y)	2					2
Rueben Tarte lot and beach						
Mount Grant Preserve parking lot.	1					1
<b>Grand Total</b>	<b>123</b>	<b>205</b>	<b>178</b>	<b>370</b>	<b>111</b>	<b>987</b>
<b>Percent of total</b>	<b>12%</b>	<b>21%</b>	<b>18%</b>	<b>37%</b>	<b>11%</b>	<b>100%</b>

**Table 2. Count sessions per location by month for Orcas Island**

	May	June	July	August	September	Grand Total
<i>Location name</i>						
Judd Cove Preserve	1		3			4
Waterfront Park	1		3			4
Crescent Beach (town lot)	2		4			6
Crescent Beach (middle lot)	2		4			6
Crescent Beach (east lot)	2		4			6
North Beach shore access lot	1		12	3		16
Cascade Lake north day use	2	2	15	16	2	37
Cascade Lake south day use	1			4		5
Cascade Falls turnout	1	2		6		9
Mountain Lake day use	1	2	2	13	9	27
Little Summit lot	1	2	1	6		10
Cold springs turnout	1	2	1	6		10
Mount Constitution lot	1	2	1	12	10	26
Mount Constitution viewpoint	1	2	2	11	10	26
Obstruction Pass parking lot	2	1	4	6		13
Obstruction trail to beach	1	1	4	6		12
Obstruction Beach	1	1	4	6		12
<b>Grand Total</b>	<b>22</b>	<b>17</b>	<b>64</b>	<b>95</b>	<b>31</b>	<b>229</b>
<b>Percent of total</b>	<b>10%</b>	<b>7%</b>	<b>28%</b>	<b>41%</b>	<b>14%</b>	<b>100%</b>

**Table 3. Count sessions per location by month for Lopez Island**

	May	June	July	August	September	Grand Total
<i>Location name</i>						
DOT picnic / hang-out areas	1	6	7	7		21
Odlin Park day use area	5	19	8	11	4	47
Odlin Park beach (not campsites)	5	19	8	11	4	47
Village shore access		8	6	6		20
Village Park green	1	8	6	6		21
Weeks Point Way wetlands/shore access	1	8	6	6		21
Hummel Lake lot	1	7	8	6		22
Otis Perkins day park	1	13	6	2		22
Tombolo turnout	1	13	6	2		22
Spit lot and overlook	1	13	6	2		22
Spit beach (via binoculars)	1	15	6	6		28
Shark Reef lot	2	8	10	6	1	27
Shark Reef trail and shore to cove.	2	8	10	6	1	27
Shark reef cove to private land.	2	8	10	6	1	27
Agate Beach / Iceberg	1	8	10	6		25
Watmough lot and trail	1	8	10	6		25
Watmough beach	1	8	10	6		25
Colville turnout	1	8	10	6		25
Blackie Brady Park		8	10	6		24
Spencer spit day use parking lot	2	12	8	7		29
Spencer Spit day use picnic area	2	12	8	7		29
Spencer Spit beaches	2	12	8	7		29
<b>Grand Total</b>	<b>38</b>	<b>229</b>	<b>177</b>	<b>134</b>	<b>11</b>	<b>589</b>
<b>Percent of total</b>	<b>6%</b>	<b>39%</b>	<b>30%</b>	<b>23%</b>	<b>2%</b>	<b>100%</b>

**Table 4. Count sessions per location by time of day for San Juan Island**

	Morning	Afternoon	Evening	Total
<i>Location</i>				
Cattle Point DNR building + grass	3	4	2	9
Cattle Point DNR North beach	3	3	2	8
Cattle Point DNR main beach	3	3	2	8
Cattle Point lighthouse	3	4	2	9
Mt. Finlayson / ridge trailhead	1	3	3	7
South Beach overlook (turnout)	3	3	3	9
South Beach – toward point	2	4	3	9
Jackle’s Lagoon trailhead	1	2	3	6
South Beach main lot (east)	3	4	4	12
South Beach middle lot	3	4	4	12
South Beach last lot (west)	3	4	4	12
South Beach – roadless to Grandma’s Grandma’s Cove		1		1
Redoubt lot	1	4	1	6
4th of July trailhead / ball field	3	4	2	9
4th of July beach	3	3	1	7
American Camp VC lot (picnic tables)	3	3	3	10
American Camp VC (inside)	2	2	3	8
American Camp buildings / camp	2	3	2	8
Eagle Cove lot and beach	2	2	3	7
Eagle Cove overflow	1	1	3	5
Pear Point Road lot	1		1	2
Jackson Beach lots, picnic, and v- ball	1		1	2
Jackson Beach	1		1	2
Jackson Beach boat ramp and lot	1		1	2
Westside Preserve lot south		2	1	3
Westside Preserve lot middle		2	1	3
Westside Preserve lot north		2	1	3
Deadman Cove turnout and beach		2	1	3
Lime Kiln SP upper lot	16	20	5	41
Lime Kiln SP lower lot and VC area	16	20	5	41
Lime Kiln whale trail (Munro/south)	16	19	5	40
Lime Kiln whale trail (middle)	15	19	5	39
Lime Kiln whale trail (cove)	14	19	5	38
Lime Kiln whale trail (point)	15	20	4	39
Lime Kiln lighthouse building	14	21	4	39
Lime Kiln upland trail to parking	14	19	5	38

Carefree Lake turnout		1	1	2
SJC Park Smallpox boat lot and ramp	42	23	22	91
SJC Park Smallpox beach	42	23	22	92
SJC Park day lot and lawn	33	21	22	81
SJC Park north beach	33	20	21	79
SJC commercial parking area	39	21	21	86
Horse Trail Road (Mitchell Hill trailhead)		1	1	2
English Camp lot	5	6	2	13
English Camp trail to garden overlook	1	4	3	8
English Camp lawn	3	4	3	10
English Camp VC building	3	4	3	10
Young Hill trailhead turnout	4	5	2	11
Roche trailhead (the Y)			2	2
Rueben Tarte lot and beach				
Mount Grant Preserve parking lot.		1		1
<b>Grand Total</b>	<b>375</b>	<b>361</b>	<b>221</b>	<b>987</b>
<b>Percent of total</b>	<b>38%</b>	<b>37%</b>	<b>22%</b>	<b>100%</b>

Table 5. Count sessions per location by time of day for Orcas Island

	Morning	Afternoon	Evening	Total
<i>Location</i>				
Judd Cove Preserve	2		2	4
Waterfront Park	2		2	4
Crescent Beach (town lot)	3	1	2	6
Crescent Beach (middle lot)	3	1	2	6
Crescent Beach (east lot)	3	1	2	6
North Beach shore access lot	7	5	4	16
Cascade Lake north day use	6	26	5	37
Cascade Lake south day use		5		5
Cascade Falls turnout	2	3	3	9
Mountain Lake day use		3	12	11
Little Summit lot	4	3	3	10
Cold springs turnout	4	3	3	10
Mount Constitution lot	5	12	9	26
Mount Constitution viewpoint	5	12	9	26
Obstruction Pass parking lot	3	7	3	13
Obstruction trail to beach	3	6	3	12
Obstruction Beach	3	5	4	12
<b>Grand Total</b>	<b>58</b>	<b>102</b>	<b>67</b>	<b>229</b>
<b>Percent of total</b>	<b>25%</b>	<b>45%</b>	<b>29%</b>	<b>100%</b>

**Table 6. Count sessions per location by time of day for Lopez Island**

	<b>Morning</b>	<b>Afternoon</b>	<b>Evening</b>	<b>Total</b>
<i>Location</i>				
DOT picnic / hang-out areas	4	16	1	21
Odlin Park day use area	11	30	6	47
Odlin Park beach (not campsites)	11	30	6	47
Village shore access	5	11	4	20
Village Park green	5	12	4	21
Weeks Point Way wetlands/shore access	6	11	4	21
Hummel Lake lot	6	10	6	22
Otis Perkins day park	6	10	6	22
Tombolo turnout	6	10	6	22
Spit lot and overlook	5	11	6	22
Spit beach (via binoculars)	7	15	6	28
Shark Reef lot		9	13	5
Shark Reef trail and shore to cove.	9	13	5	27
Shark reef cove to private land.	9	13	5	27
Agate Beach / Iceberg	7	16	2	25
Watmough lot and trail	8	10	7	25
Watmough beach	8	10	7	25
Colville turnout	8	10	7	25
Blackie Brady Park	6	11	7	24
Spencer spit day use parking lot	12	16	1	29
Spencer Spit day use picnic area	11	17	1	29
Spencer Spit beaches	11	17	1	29
<b>Grand Total</b>	<b>171</b>	<b>314</b>	<b>104</b>	<b>589</b>
<b>Percent of total</b>	<b>29%</b>	<b>53%</b>	<b>18%</b>	<b>100%</b>

# Example count forms

## San Juan Island – Southside Circuit – Form S-9

Date: \_\_\_\_ / \_\_\_\_ Tech: \_\_\_\_

Location	ID	Time	People	Vehicles	Bikes	Boats	Kayaks	Comments
Cattle Point DNR lot, building + grass	11							
Cattle Point DNR North beach	12							
Cattle Point DNR Main beach	13							
Cattle Point lighthouse turnout	14							
Mt. Finlayson / ridge trail turnout	15							
South Beach overlook (turnout only)	16							
South Beach – roadless from overlook	21							
Jackle's Lagoon trailhead	17							
South Beach main first lot	22							
South Beach middle lot	23							
South Beach last lot (west)	24							
Redoubt lot near Am Camp buildings	31							
4 <sup>th</sup> of July trailhead lot / ballfield	32							
4 <sup>th</sup> of July beach	33							
American Camp VC lot (picnic tables)	34							
American Camp VC (inside)	35							
American Camp buildings / camp	36							
Eagle Cove lot and beach	41							
Eagle Cove overflow	42							
Jackson Beach area – Pear Point lot	43							
Jackson Beach lots, picnic, and v-ball	44							
Jackson Beach	45							
Jackson Beach boat ramp and lot	46							Trailers:
		Time	Bikes	Mopeds & scooters	Tour buses	Congestion events	Badly parked cars	
Road: Friday Harbor to Cattle Point	1							
Road: Cattle Point to Am. Camp	2							
Road: Pickett's / South Beach	3							
Road: Side roads to Jackson Beach	4							

Figure 1. Southside circuit count form

### San Juan Island – English Camp Only – Form S-8

Location	ID	Date	Time	People	Vehicles	Bikes	Boats	Kayaks	Comments	
English Camp lot	82									
English Camp trail to garden overlook	83									
English Camp lawn	84									
English Camp VC building	85									
Young Hill trailhead turnout	86									
English Camp lot	82									
English Camp trail to garden overlook	83									
English Camp lawn	84									
English Camp VC building	85									
Young Hill trailhead turnout	86									
English Camp lot	82									
English Camp trail to garden overlook	83									
English Camp lawn	84									
English Camp VC building	85									
Young Hill trailhead turnout	86									
English Camp lot	82									
English Camp trail to garden overlook	83									
English Camp lawn	84									
English Camp VC building	85									
Young Hill trailhead turnout	86									
English Camp lot	82									
English Camp trail to garden overlook	83									
English Camp lawn	84									
English Camp VC building	85									
Young Hill trailhead turnout	86									
English Camp lot	82									
English Camp trail to garden overlook	83									
English Camp lawn	84									
English Camp VC building	85									
Young Hill trailhead turnout	86									

Figure 2. English Camp count form

**Orcas Island – Mountain Lake & Summit Circuit – Form O-3**

Tech: \_\_\_\_

Location	ID	Date	Time	People	Vehicles	Bikes	Boats	Kayaks	Comments	
Cascade Falls turnout	233								Overflow parking:	
Mountain Lake day use	241									Overflow parking:
Little Summit lot	251									
Cold springs turnout	252									
Mount Constitution lot	253									Overflow parking:
Mount Constitution viewpoint	254									
Cascade Falls turnout	233								Overflow parking:	
Mountain Lake day use	241									Overflow parking:
Little Summit lot	251									
Cold springs turnout	252									
Mount Constitution lot	253									Overflow parking:
Mount Constitution viewpoint	254									
Cascade Falls turnout	233								Overflow parking:	
Mountain Lake day use	241									Overflow parking:
Little Summit lot	251									
Cold springs turnout	252									
Mount Constitution lot	253									Overflow parking:
Mount Constitution viewpoint	254									
Cascade Falls turnout	233								Overflow parking:	
Mountain Lake day use	241									Overflow parking:
Little Summit lot	251									
Cold springs turnout	252									
Mount Constitution lot	253									Overflow parking:
Mount Constitution viewpoint	254									

**Figure 3. Mt. Constitution count form**

## Maps of count locations



Figure 4. Over view of San Juan Island sites.

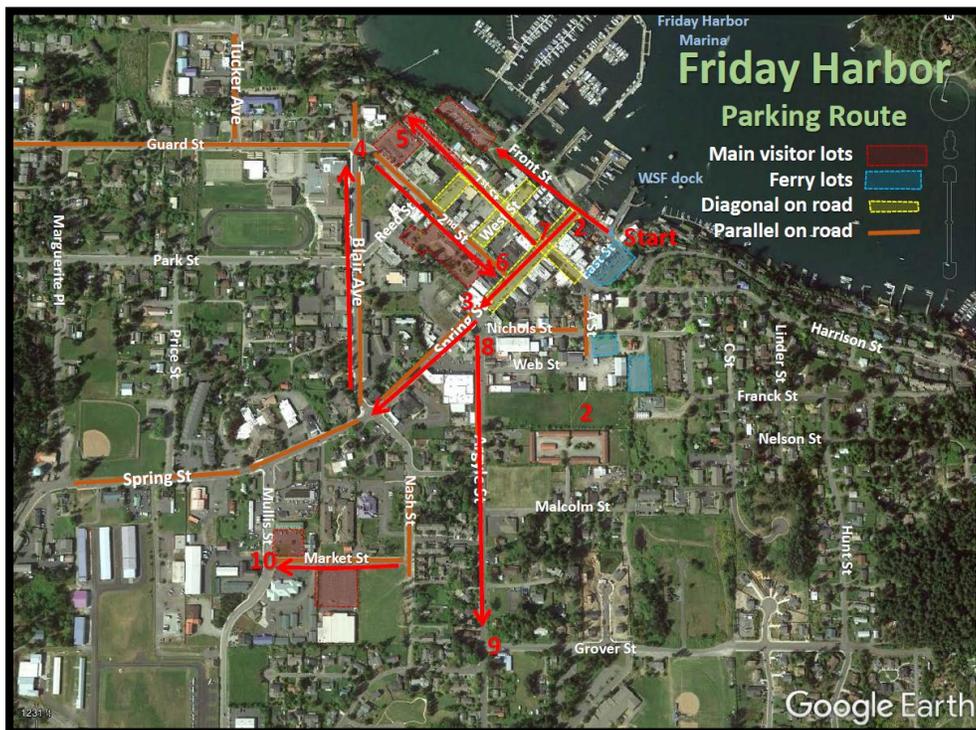


Figure 5. Friday Harbor parking occupancy route, San Juan Island.

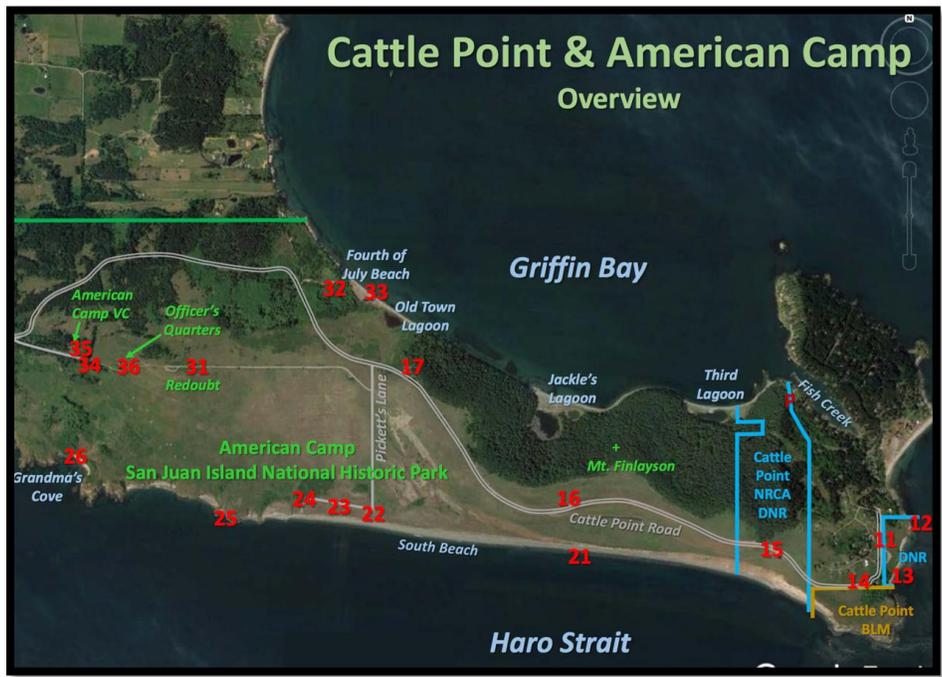


Figure 6. Southside site map, San Juan Island

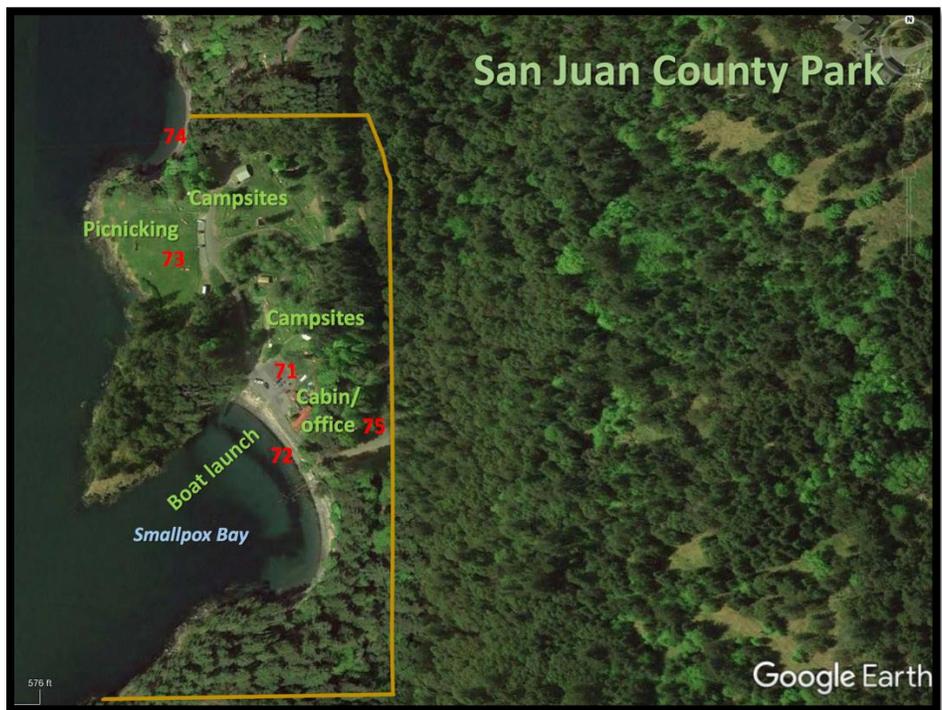


Figure 7. County Park site map, San Juan Island



Figure 8. West side Preserve and Lime Kiln site map, San Juan Island.

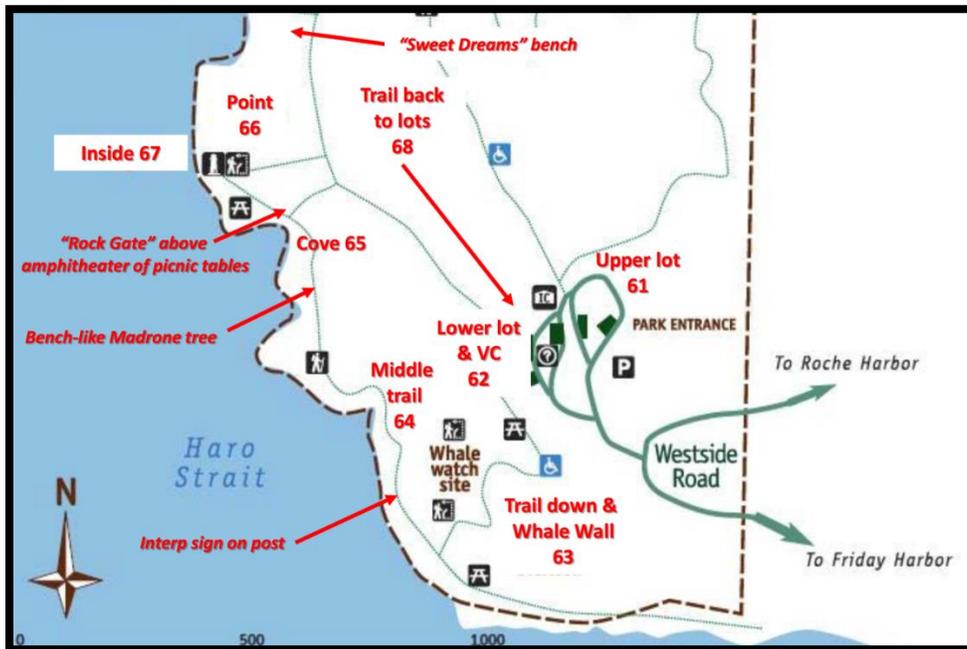


Figure 9. Lime Kiln detailed site map, San Juan Island.



Figure 10. Overview of Orcas Island sites.



Figure 11. Eastsound area sites, Orcas Island.



Figure 12. Eastsound parking occupancy route, Orcas Island.

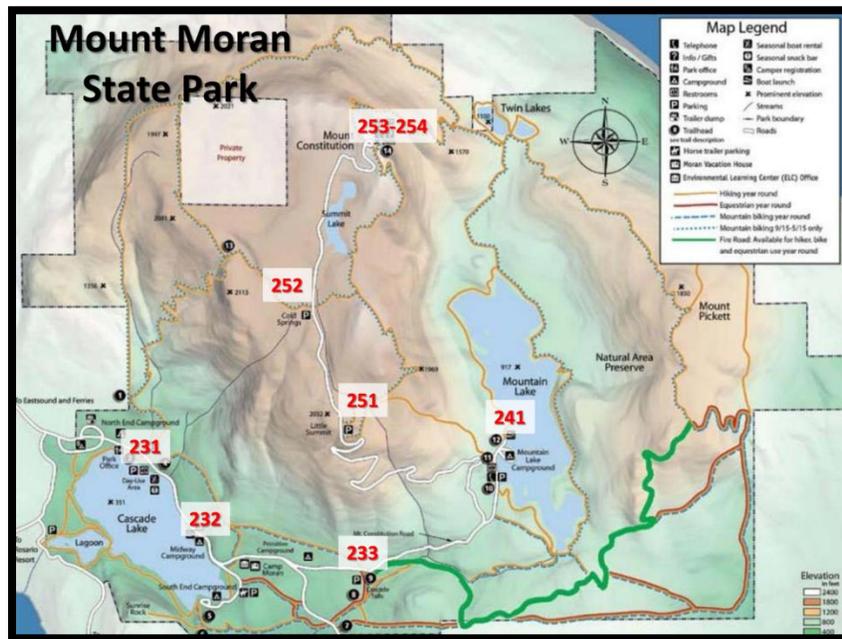


Figure 8. Moran State Park site map, Orcas Island.



Figure 13. Day use area at Cascade Lake, Orcas Island.

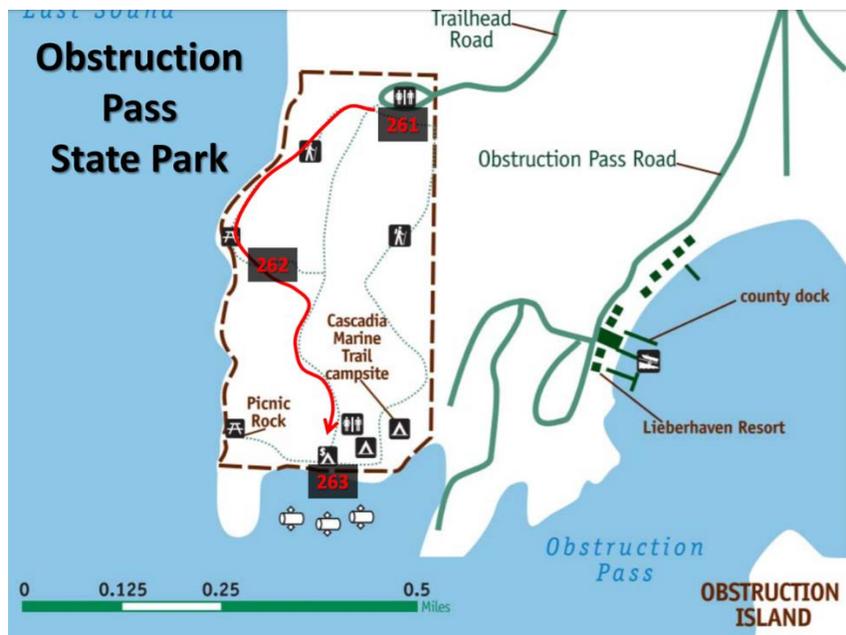


Figure 9. Obstruction Pass site map, Orcas Island.



Figure 14. Overview of Lopez Island sites.



Figure 15. Lopez Village area site map, Lopez Island.



Figure 10. Shark Reef site map, Lopez Island.

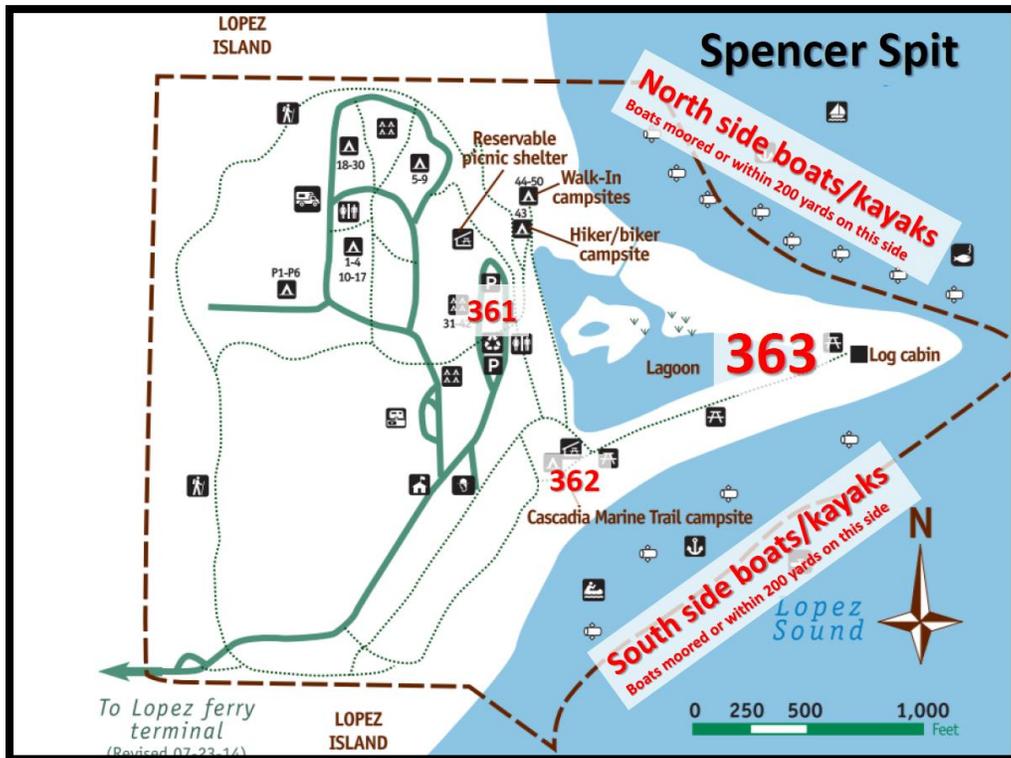


Figure 16. Spencer Spit SP site map, Lopez Island.



Figure 17. Watmough Bay site map, Lopez Island.



Figure 18. Iceberg Point / Agate Beach Park site map.

## Additional findings

### Site density maps

#### Lime Kiln Site density maps

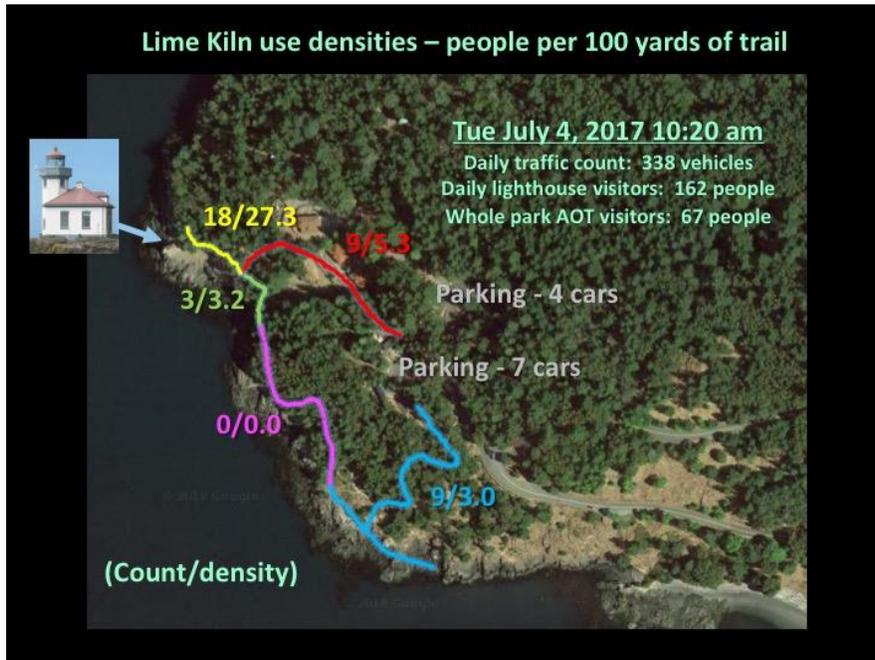


Figure 19. Lime Kiln site density map

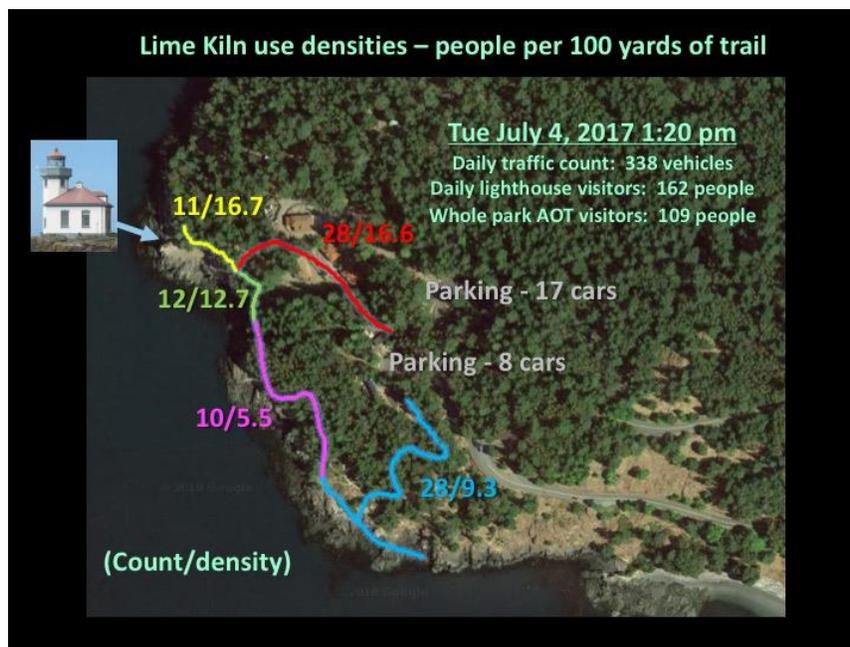


Figure 20. Lime Kiln site density map

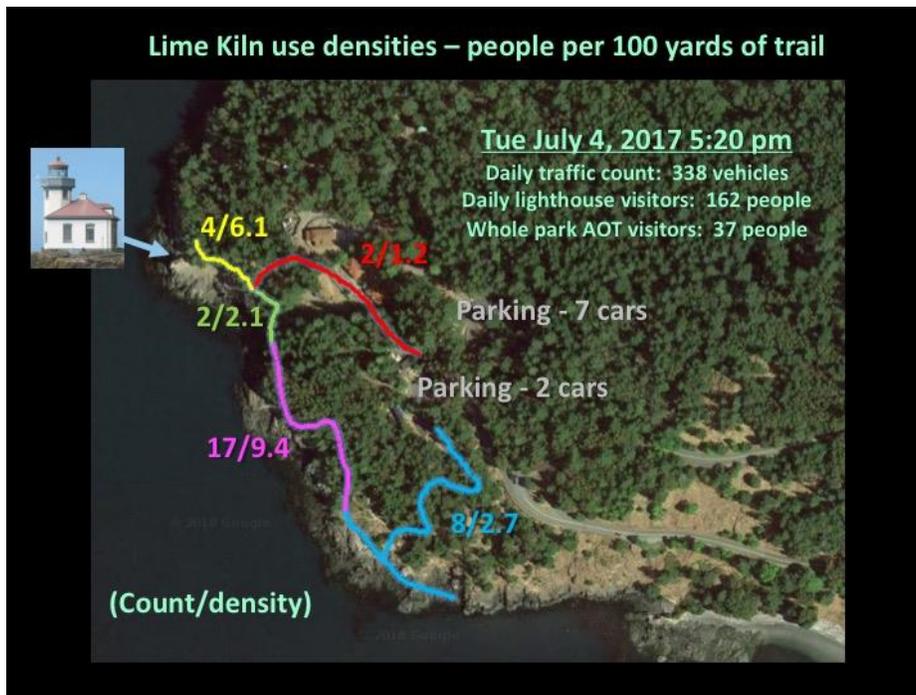


Figure 21. Lime Kiln site density map

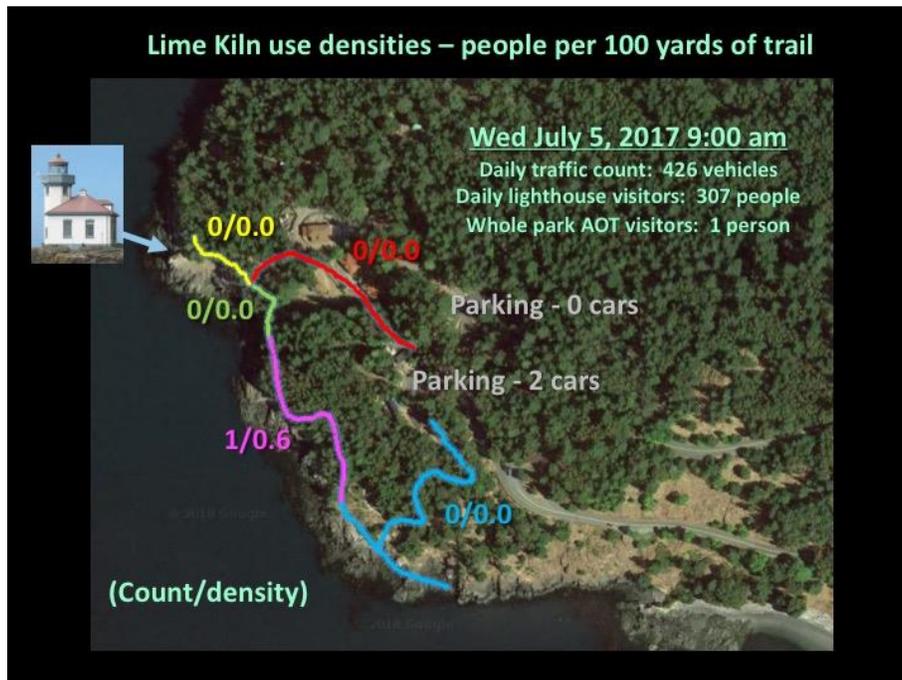


Figure 22. Lime Kiln site density map

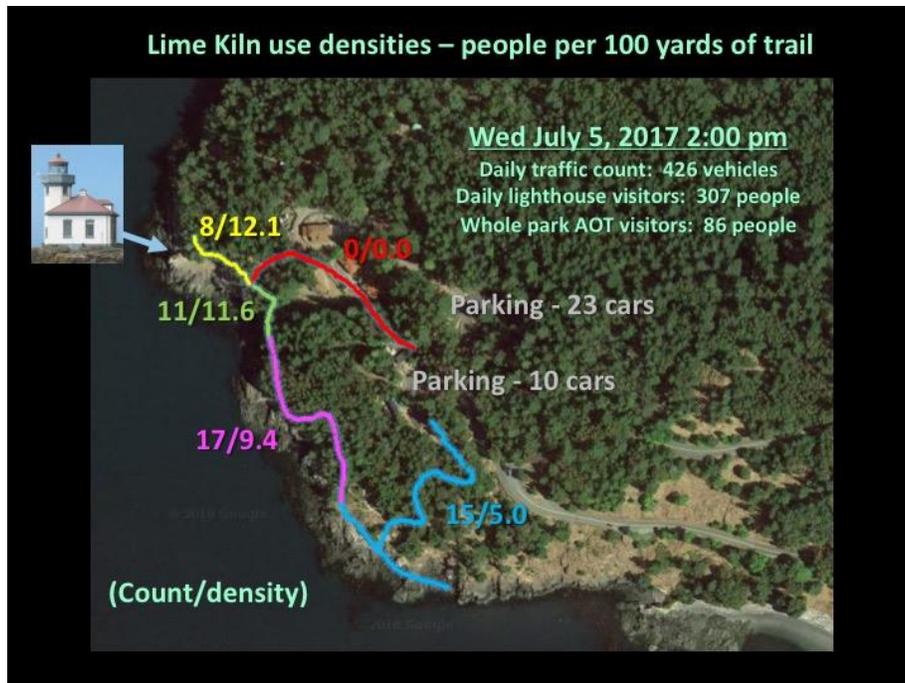


Figure 23. Lime Kiln site density map

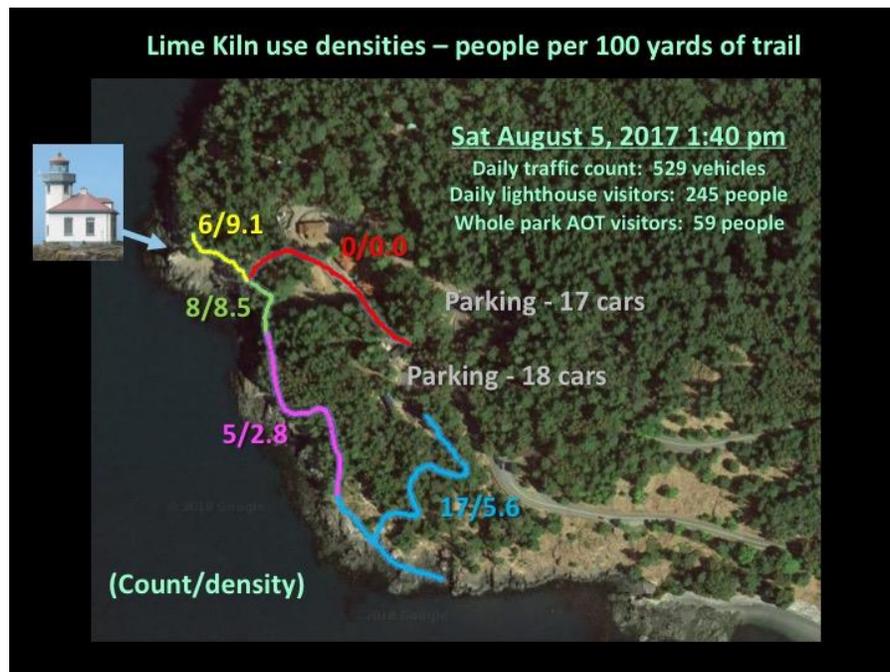


Figure 24. Lime Kiln site density map

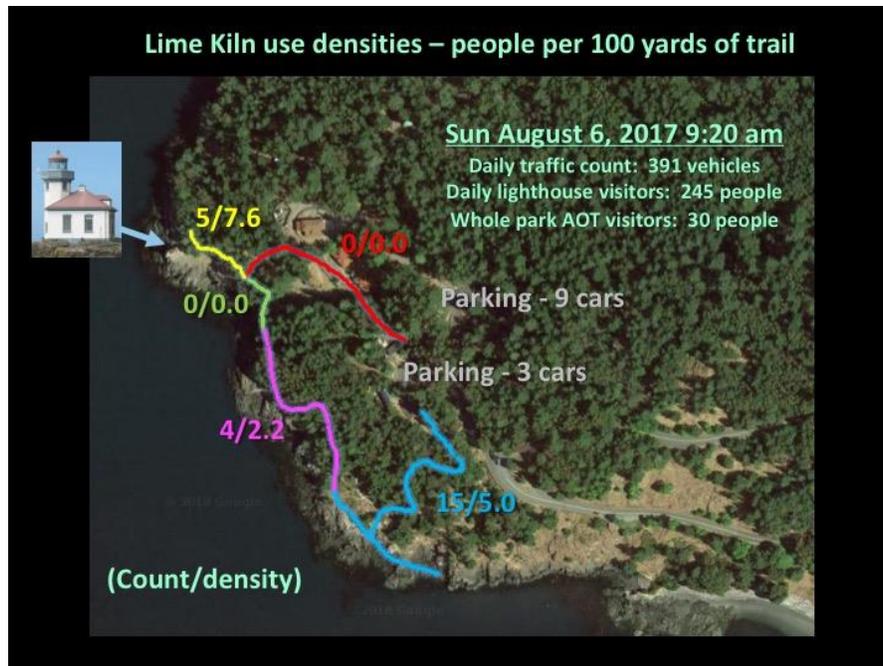


Figure 25. Lime Kiln site density map

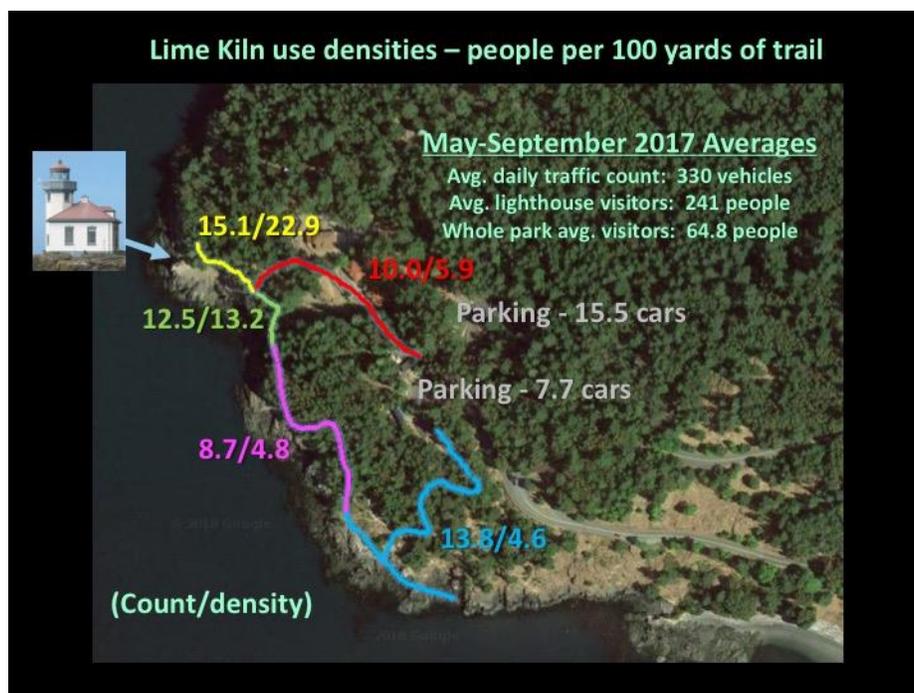


Figure 26. Lime Kiln average site density map

*Mt. Constitution Site density maps*



Figure 27. Mt. Constitution site density map



Figure 28. Mt. Constitution site density map



Figure 29. Mt. Constitution site density map



Figure 30. Mt. Constitution site density map



Figure 31. Mt. Constitution average site density map

*Shark Reef site density maps*



Figure 32. Shark Reef site density map



Figure 33. Shark Reef site density map



Figure 34. Shark Reef site density map



Figure 35. Shark Reef site density map



Figure 36. Shark Reef site density map

## Count data summaries for key sites

### *San Juan Island*

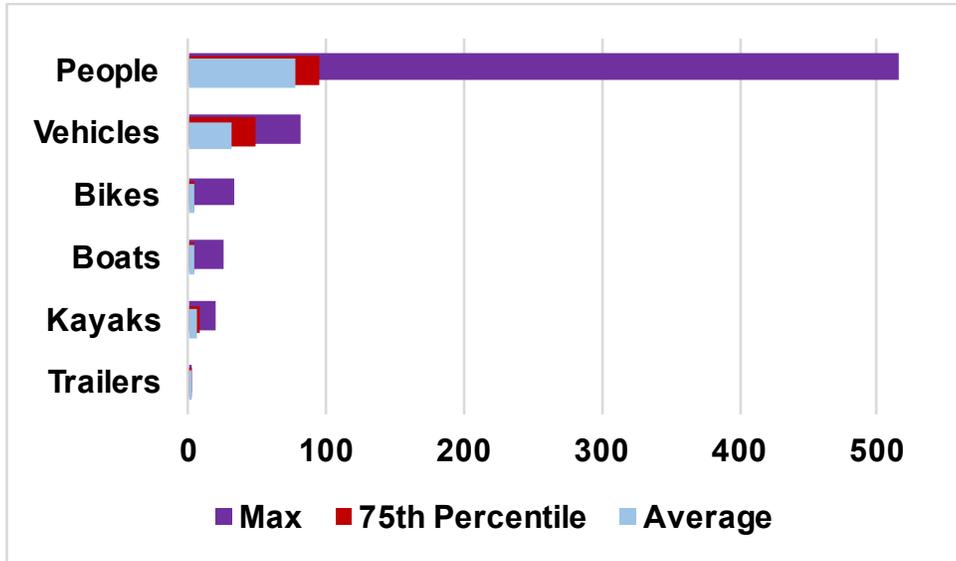


Figure 37. Lime Kiln counts

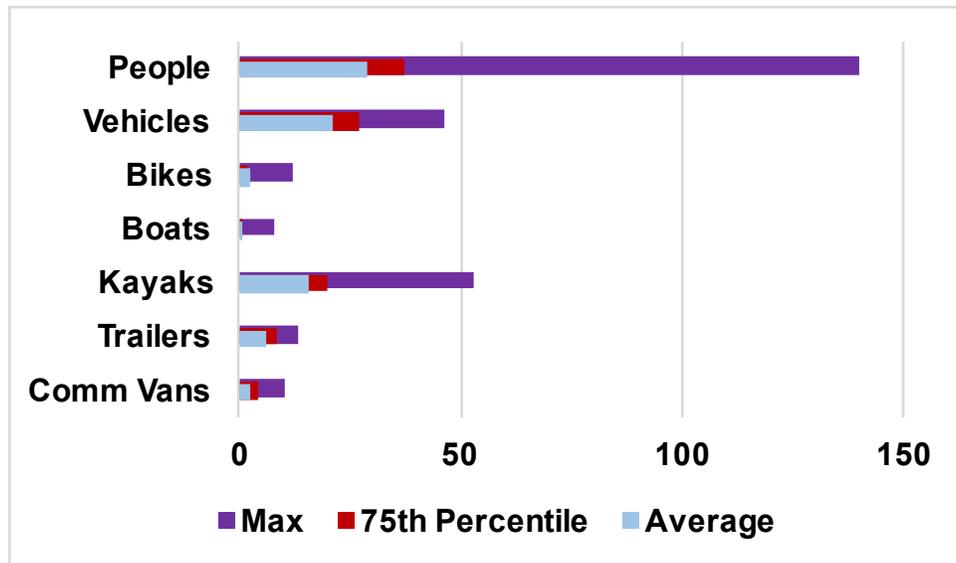


Figure 38. County Park counts

*Orcas Island*

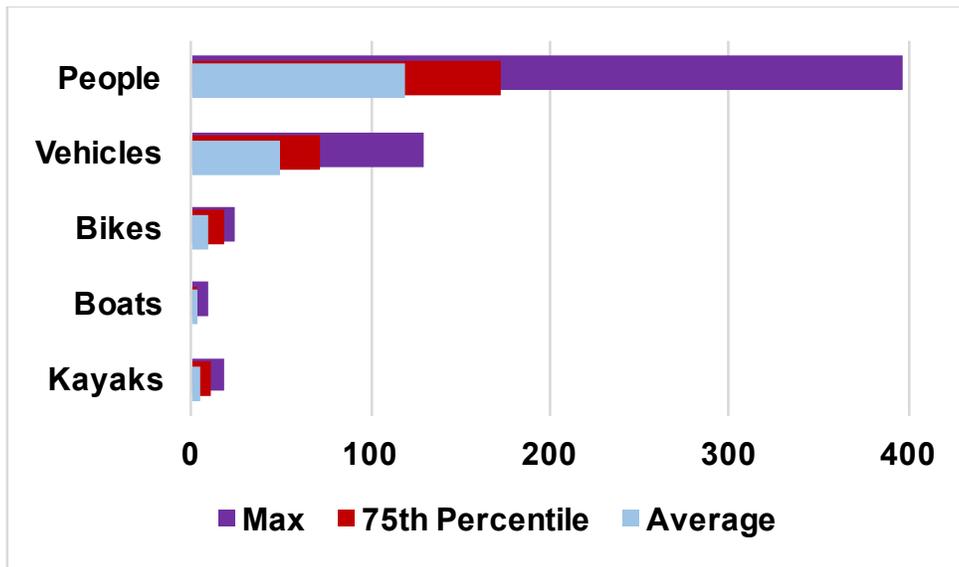


Figure 39. Cascade Lake counts

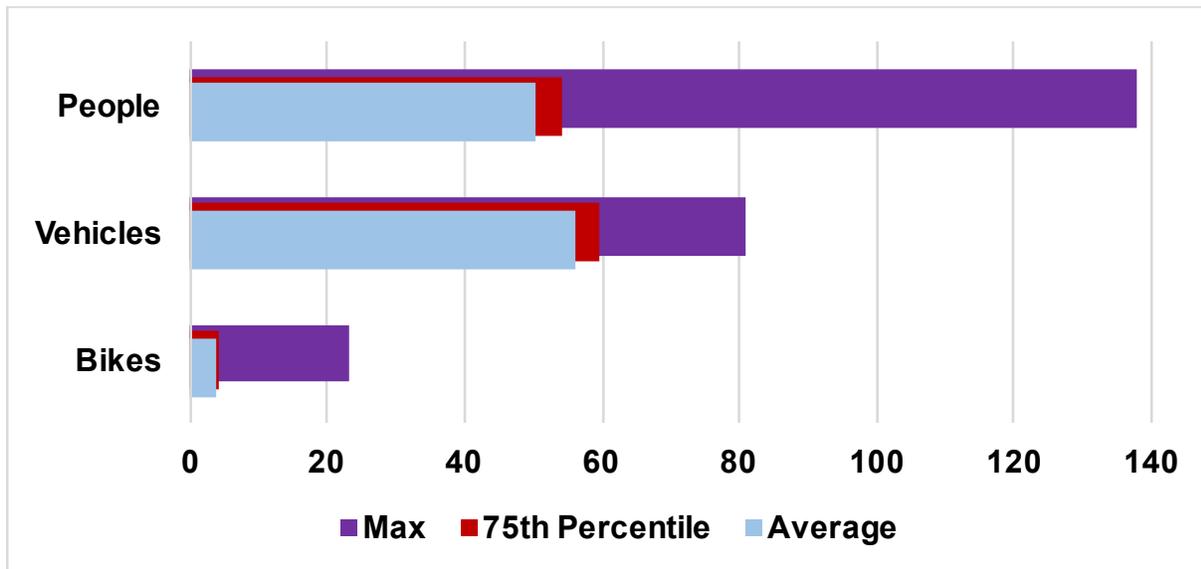


Figure 40. Mt. Constitution counts

*Lopez Island*

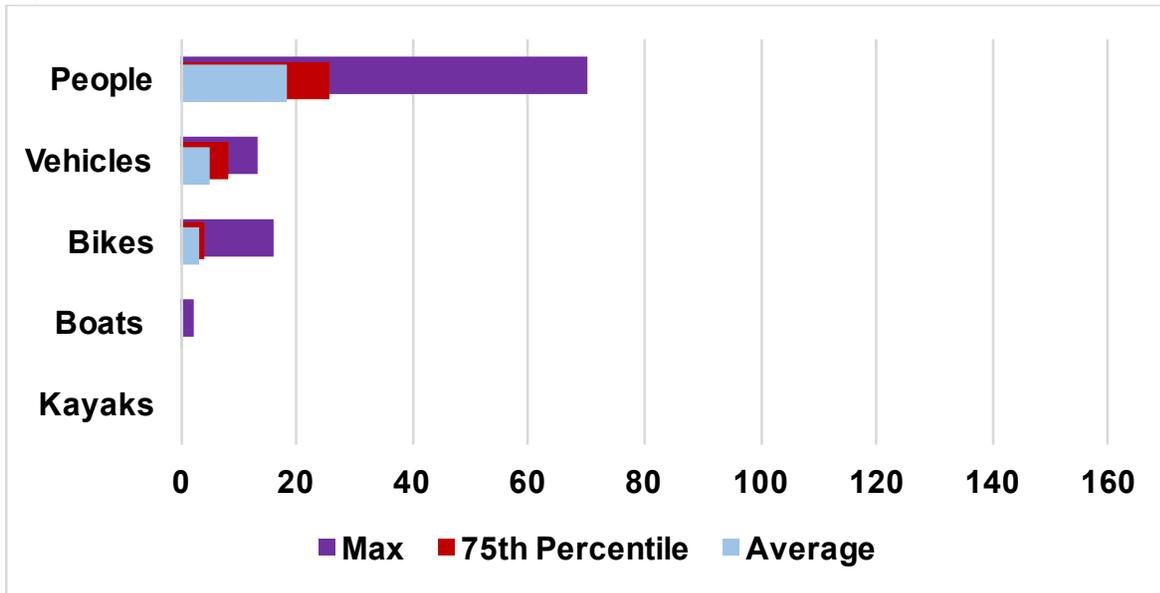


Figure 41. Shark Reef counts

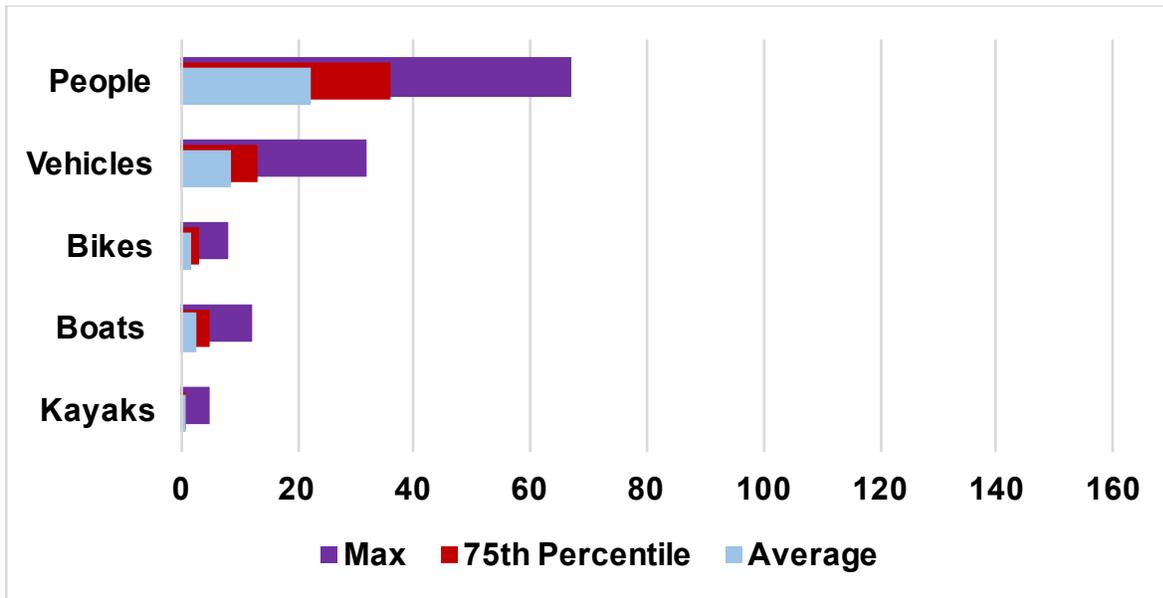


Figure 42. Watmough counts

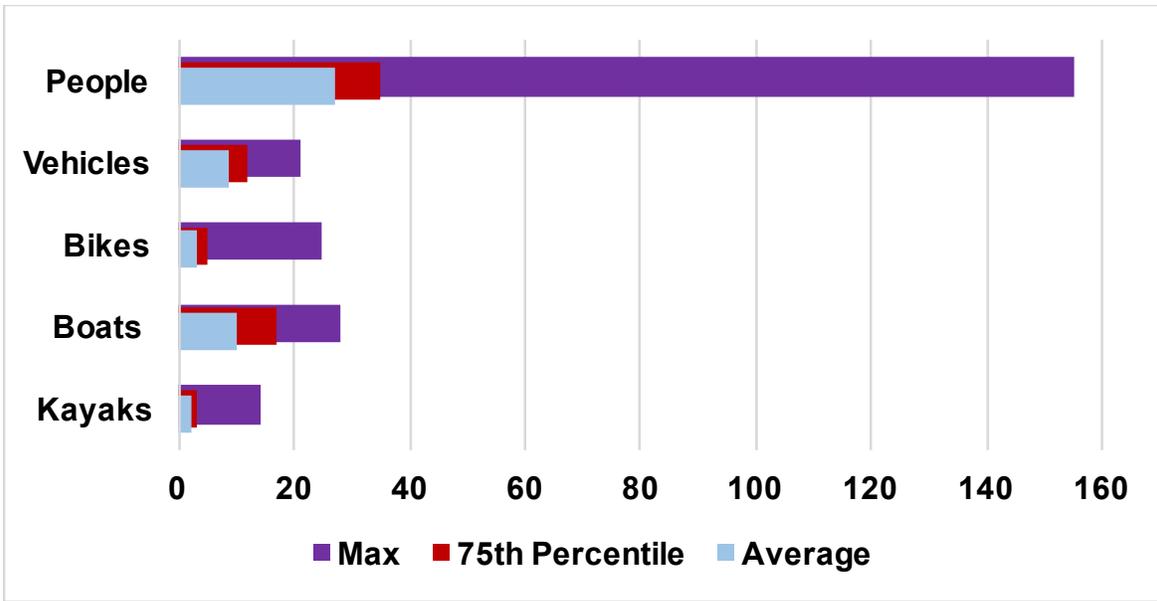


Figure 43. Spencer Spit counts

## Road Segment Counts

**Table 7. San Juan Island road segment counts**

	Sample size	Buses	Mopeds	Traffic Jams	Bad parks
<i>Road segment</i>					
Friday Harbor to Cattle Point	3	0	.7	0	0
Cattle Point to American Camp	1	0	0	0	0
Picketts Road to South Beach	1	0	0	0	0
Side roads to Jackson Beach	2	0	0	0	0
Friday Harbor to Bailer Hill pullout	2	.5	0	0	0
West Side to English Camp	4	0	1.3	0	0
English Camp to Reuben Tarte	2	0	0	0	0
Friday Harbor to County Park	4	.3	.8	.3	0
Grand Total	19	.1	.5	.1	0

**Table 8. Lopez Island road segment counts**

	Sample size	Buses	Mopeds	Traffic Jams	Bad parks
<i>Road segment</i>					
Lopez Village to Shark Reef	21	135	4	0	7
Shark Reef to Agate	24	138	1	0	8
Agate to Watmough	24	61	0	0	5
Grand Total	69	334	5	0	20

## Friday Harbor parking counts

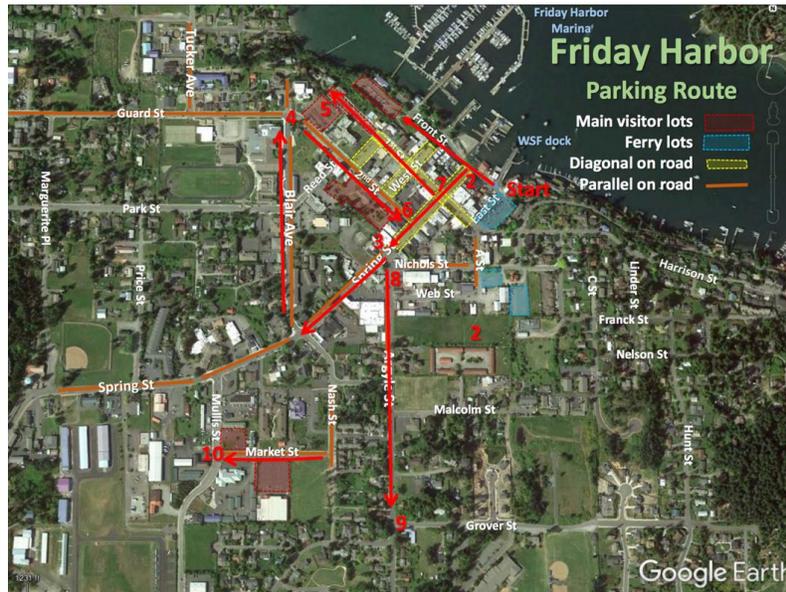


Figure 36. Friday Harbor parking count route map

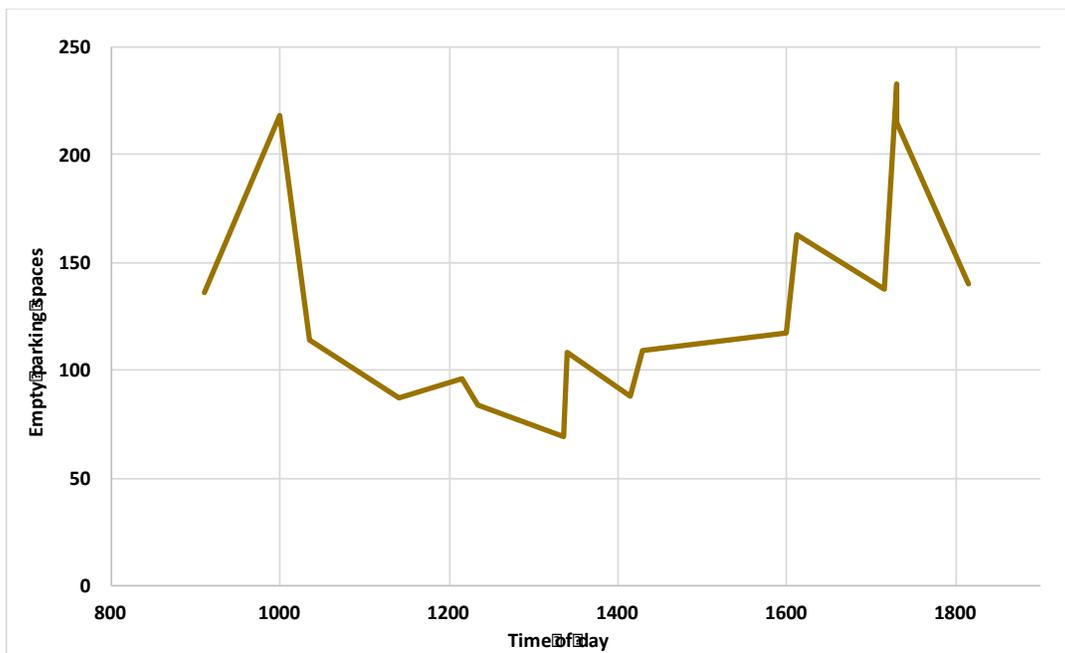


Figure 37. Total circuit empty parking spaces by time of day

- Parking is substantially less available during the middle of the day (11 am to 4 pm).
- Prior to the first busy ferry (about 10 am) and after the work day ends (about 5 pm), more spaces become available.

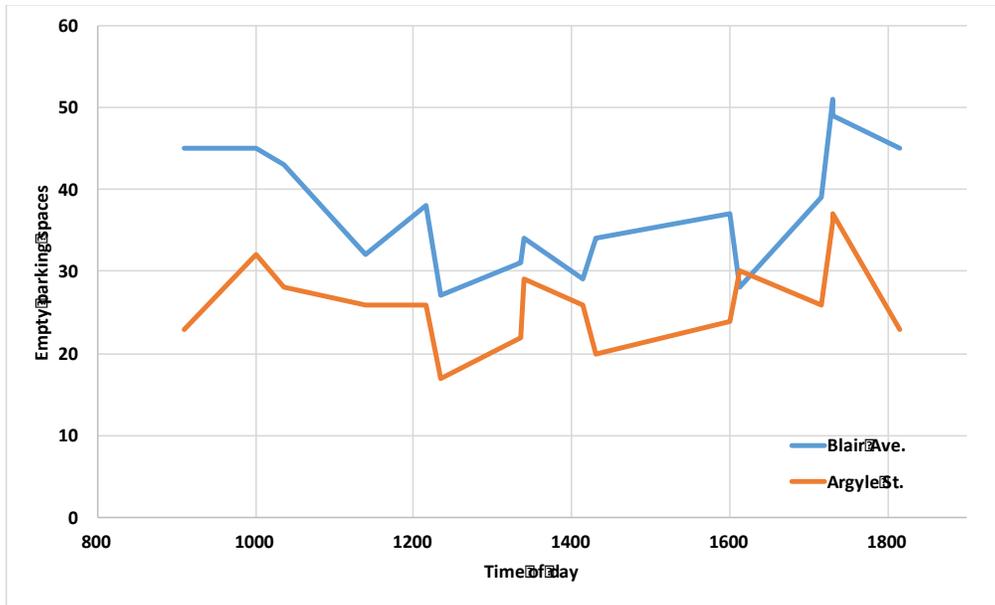


Figure 38. Empty spaces on Blair and Argyle by time of day

Blair and Argyle exhibit similar parking patterns because they are peripheral to downtown and adjacent to each other. These consistently have more spaces than core downtown areas, with less variation through the day.

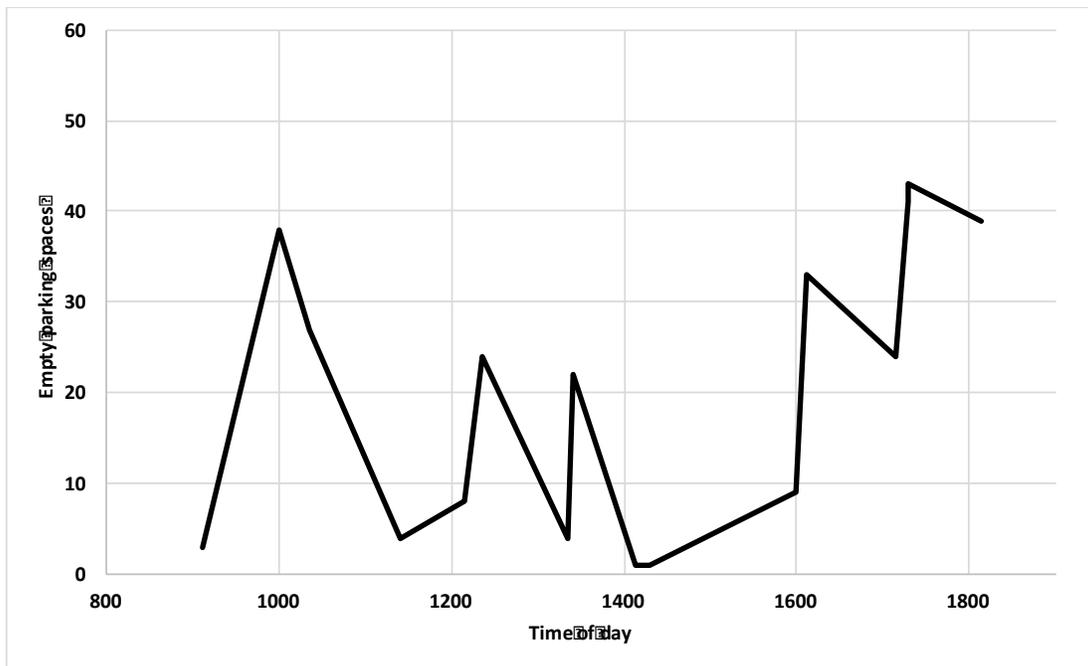


Figure 39. Empty parking spaces in courthouse lot by time of day

The courthouse lot exhibits a different pattern. This lot is used mainly by city employees, locals, and some savvy tourists, and has more variable occupancy, with many spaces appearing around lunch.

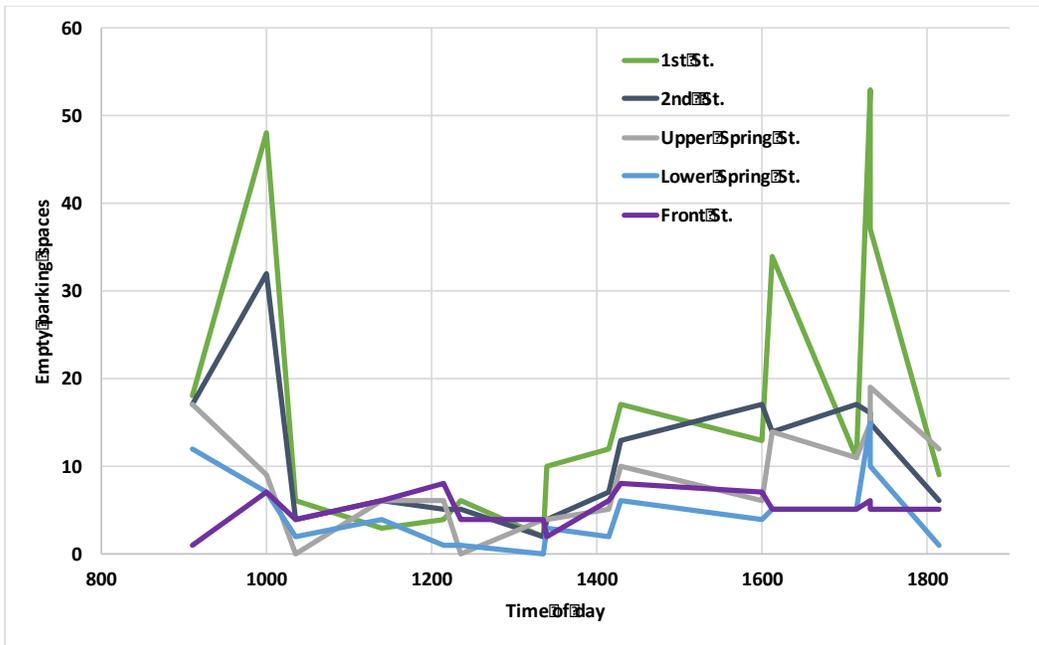


Figure 44 .Empty parking spaces on 1st, 2nd, Spring, and Front

1<sup>st</sup>, 2<sup>nd</sup>, Spring, and Front Streets exhibit similar patterns, showing the most noticeable lack of spaces in the middle of the day. These are the roads most adjacent to stores and restaurants in the downtown core, and they fill quickly once stores open about 10 am. Less than 10% of vehicles on midday ferries (which have a capacity of 100 to 140) are likely to find parking in these areas.

Table 9. Empty parking spaces in Friday Harbor by day of the week

	Total	Blair	Argyle	Court	1 <sup>st</sup>	2 <sup>nd</sup>	U. Spring	L. Spring	Front
<b>Thursday</b>	136	39	28	12	22	12	11	8	5
<b>Friday</b>	126	39	23	18	13	13	10	4	6
<b>Saturday</b>	117	33	26	27	14	7	5	3	4
<b>Sunday</b>	217	47	35	41	43	24	14	9	6
<b>Monday</b>	83	35	24	6	3	4	5	1	6

## Use information from other sources

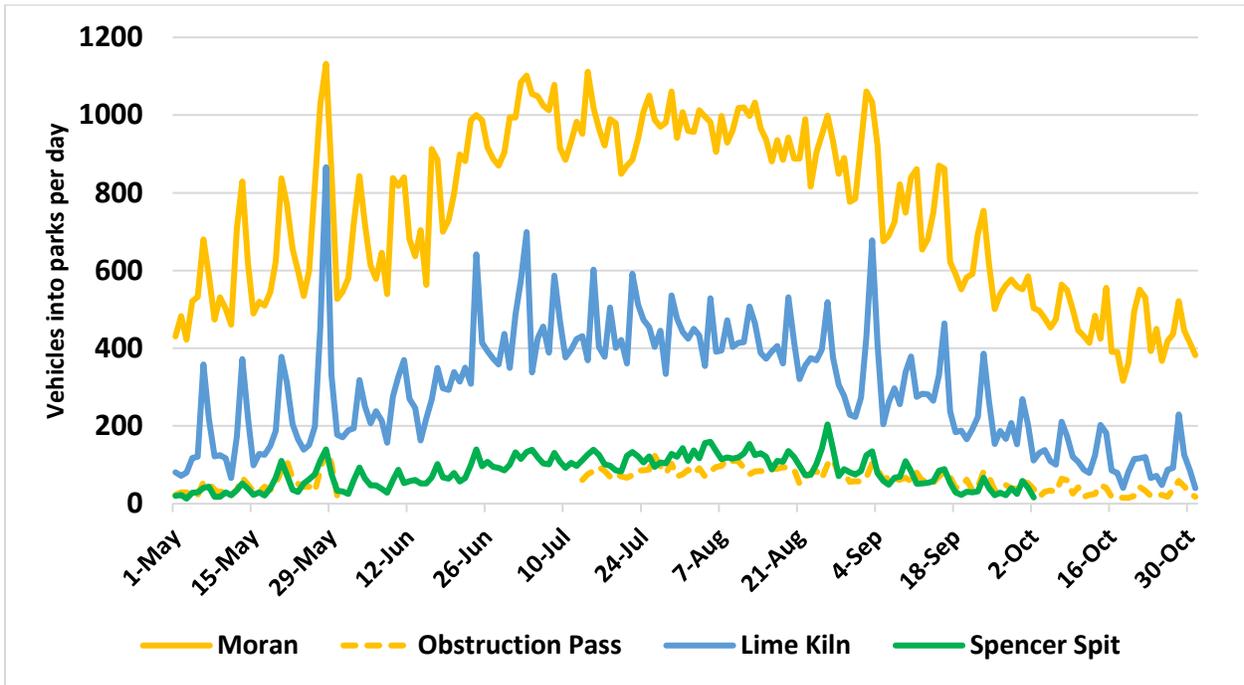
### *San Juan County campground occupancy 2017*

Campground and type of site	Capacity	Percent occupancy				
		May	June	July	Aug	Sep
Odlin regular vehicle sites	35	44	70	90	91	64
Odlin hiker/biker sites	20	3	7	14	2	0
Odlin moorages	5	2	1	11	9	0
County Park vehicle sites	25	58	89	98	97	72
County Park hiker/biker sites	25	1	18	28	25	9

### *State Parks use estimates 2017*

Campground and type of site	Capacity	People per month		
		July	Aug	Sep
Lime Kiln day use counts	50 vehicles	49,564	42,935	29,407
Moran day users	--	148,320	140,294	104,213
Moran regular site campers	142 sites	16,805	15,446	5,981
Moran vacation house rental users	1 house	64	185	56
Moran group site users	1 site	763	780	176
Obstruction Pass campers	10 sites	437	452	0
Obstruction day users	--	8,936	9,223	6,314
Spencer Spit day users	--	12,437	12,786	6,122
Spencer Spit regular campers	50 sites	4,268	3,932	1,373
Spencer Spit group site campers	6 sites	1,207	1,108	464
Spencer Spit moorage users	12 buoys	2,034	1,854	617

**State Park traffic counters – vehicles into parks 2017**



**Lime Kiln vehicles past counter vs. daily Lighthouse count (people) in peak season**

