

DECEMBER 2018



**WIM #30  
MN 61, MP 16.3  
TWO HARBORS,  
MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #30 is located on MN 61 near Two Harbors in Lake county.

## System Operation

WIM #30 was operational for the entire month of December 2018. Volume was computed using all monthly data.

## System Calibration

WIM #30 was most recently calibrated on 2017-01-20. Table 1 summarizes the front axle weights of class 9s by lane <sup>1</sup>. Table 1 indicates that the class 9 front axle weights were all within +/- 9% of baseline calibration values for all lanes except lane 1. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation <sup>2</sup>. Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

## Summary of Volume Statistics

Total Monthly Volume: 202323 | Passenger Vehicles: 190274 | Heavy Commercial Vehicles: 12049

Monthly Average Daily Traffic (MADT): 6977 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 389

See Table 2 for vehicle class breakdown

## Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

**Volume trends.** NB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays. SB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Thursdays (see Figure 3 and 4).

### Passenger Vehicles (PVs)

**Volume trends.** On an average 24-hour day (see Figure 5), NB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, SB PVs peaked in volume between 12 PM and 04 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling NB typically reached peak volume levels between 03 PM and 05 PM, while volume going SB peaked between 12 PM and 04 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 5's and Class 9's.

## Overweight HCVs

**Volume trends.** Of a total of 12049 HCVs, 2054 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 1% of total monthly volume, and 16.5% of total monthly HCV volume. NB overweight vehicles typically reached highest numbers on Wednesdays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Wednesdays, with lowest volumes reported on Sundays. See Figure 3 . The top two overweight violators by class were the class 9 and class 10 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 51.6% of all overweight vehicles traveling NB this month (see Figure 7 & 8). Figure 9 shows the number of vehicles exceeding 88,000 pounds that crossed the WIM over the last 12 months. The highest number of 88,000+ vehicles within the last 12 months occurred in March.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report<sup>4</sup>.

Using normal load limits ,521 NB vehicles exceeded 88,000 pounds (337 vehicles were Class 9's; 172 vehicles were Class 10's). Of vehicles traveling SB,

626 NB vehicles exceeded 88,000 pounds (565 vehicles were Class 10's; 34 vehicles were Class 9's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from December 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in December 2018. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling NB, while there were more fully\_loaded Class 9's than empty traveling SB. Data also suggests that there were more empty Class 10's than fully\_loaded traveling in the NB direction. In the SB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 106845 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (50.5%) than SB (49.5%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridges No. 9341 and No. 9339, which are respectively on the NB and SB side of MN 61, are approximately 1.5 miles north of WIM #30. Bridge No. 9333 (a box culvert) is approximately 1.8 miles south of WIM #30. WIM #30 recorded a total of 202323 vehicles with a combined GVW of 1459670 kips (1 kip = 1,000 pounds = 0.5 tons) in December 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 18736 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 66.6% of all ESALs were recorded SB while 33.4% was observed NB. In particular, 39% of all ESALs were generated by the Class 14's (Class 14's were also responsible for generating % of total GVW observed this month). See Table 6

and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

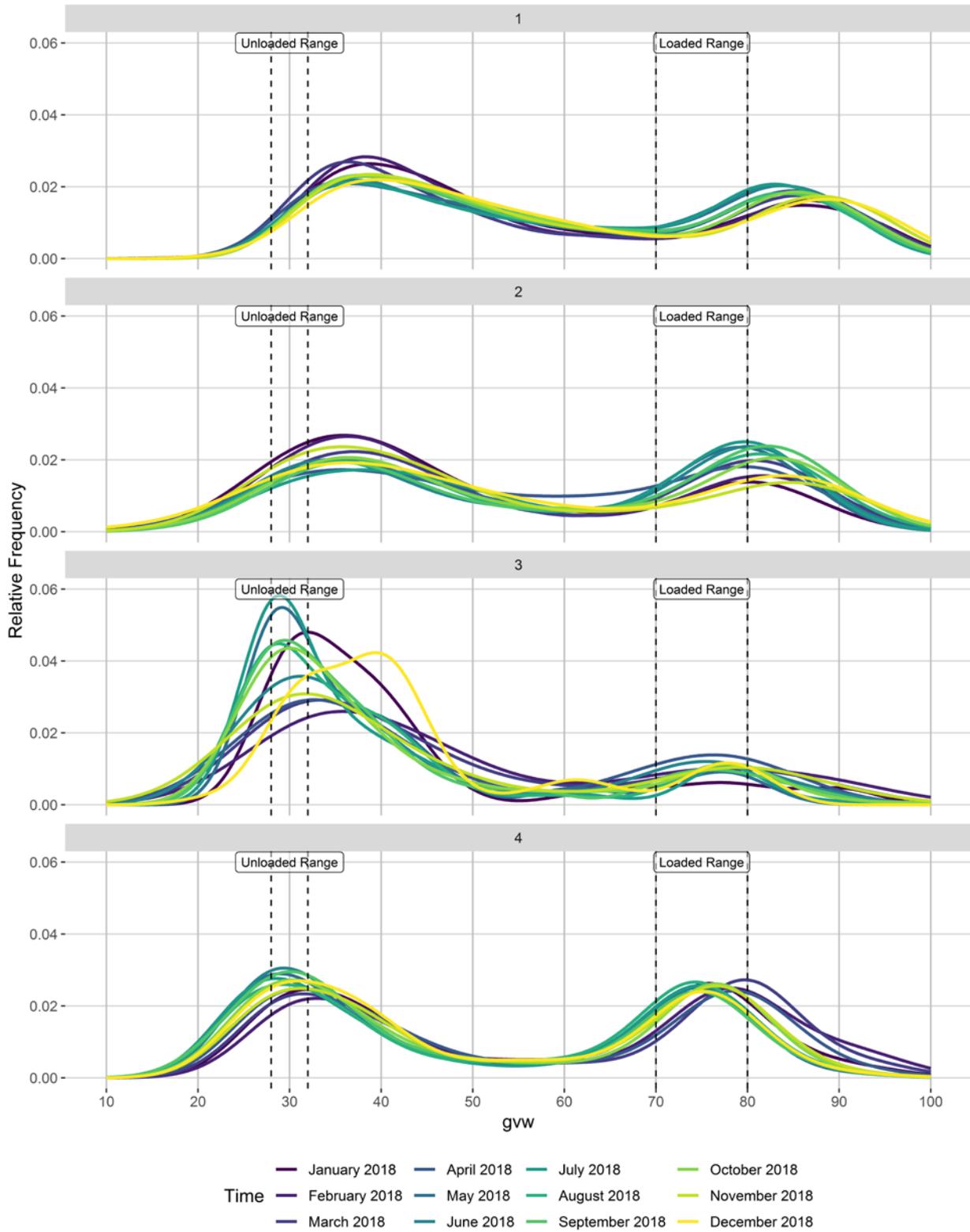
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

MnDOT's vehicle classification scheme and vehicle class groupings for traffic forecasting can be found at: <http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- <sup>1</sup> Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- <sup>2</sup> Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- <sup>3</sup> An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes: [http://www.mrr.dot.state.mn.us/research/seasonal\\_load\\_limits/sllindex.asp](http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp)
- <sup>4</sup> For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

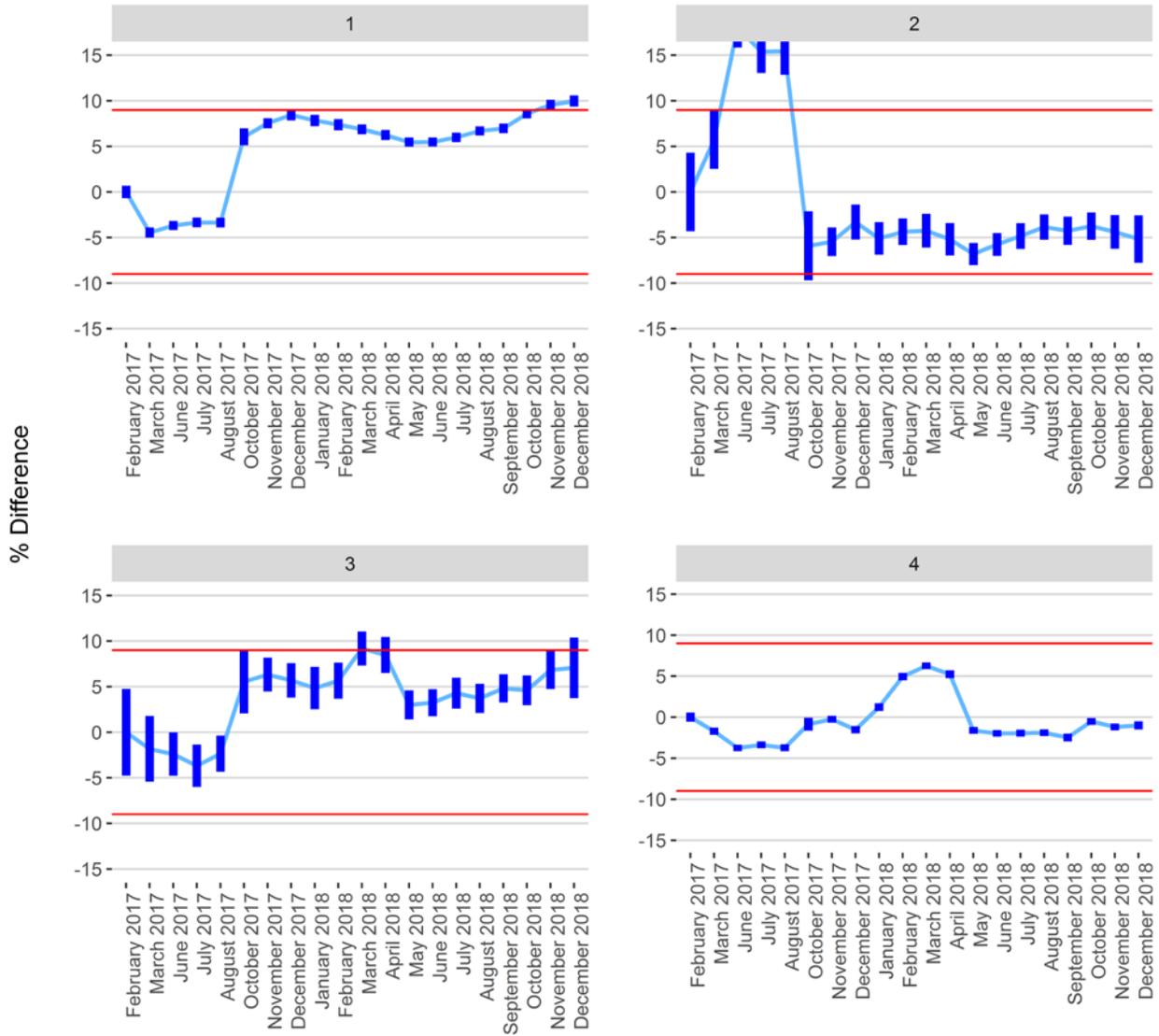
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Figure 1 - Monthly Class 9 GVW Histogram



Months that have not passed QC parameters are not displayed

Figure 2 - Percent Difference of Front Axle Weight from Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

Figure 2 - Average Vehicle Volume vs. Day of the Week

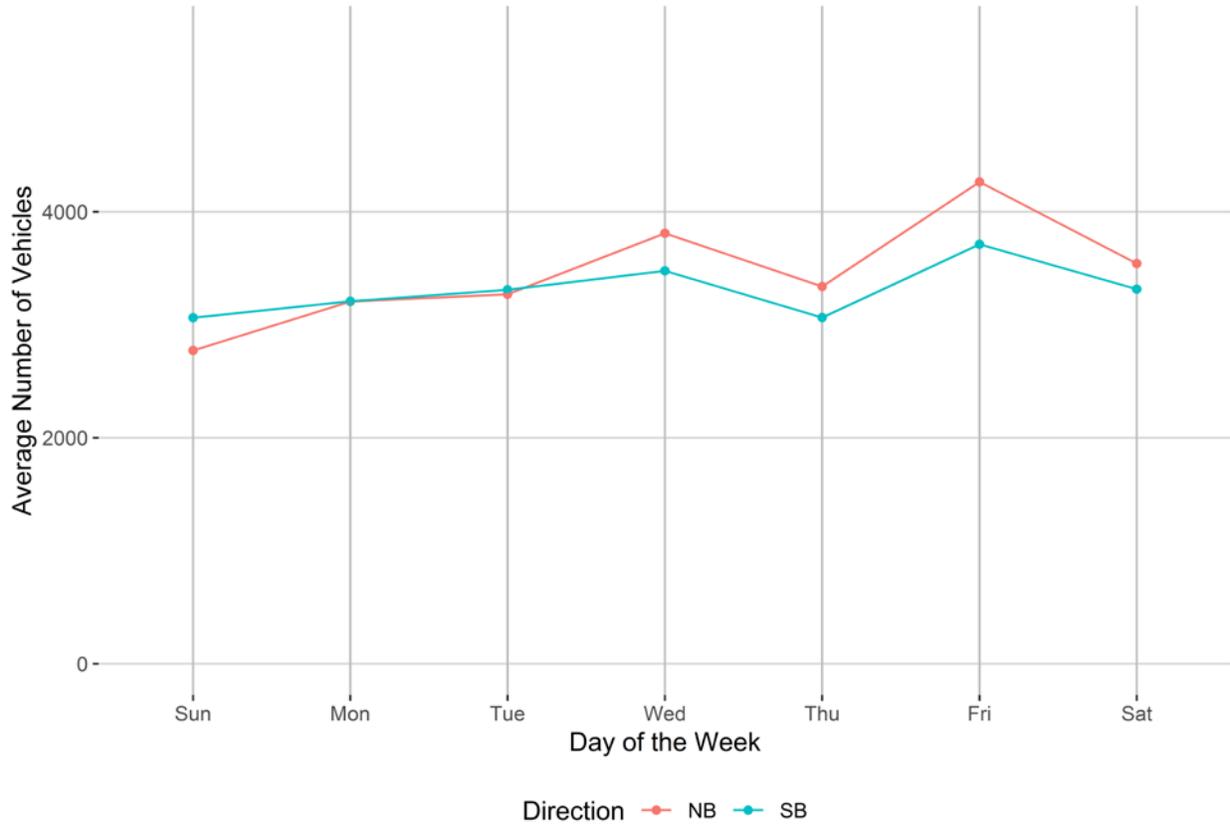


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

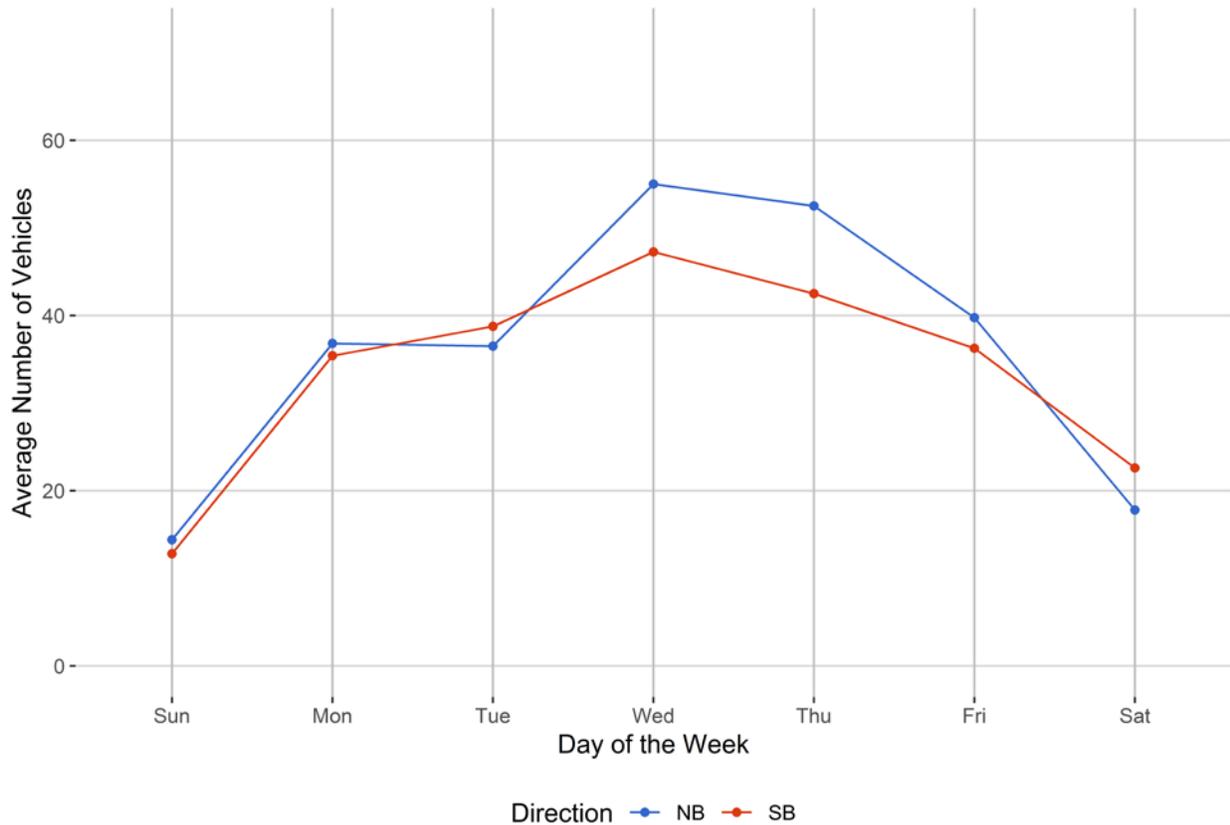


Figure 4 - Passenger Vehicles vs. Hour of the Day

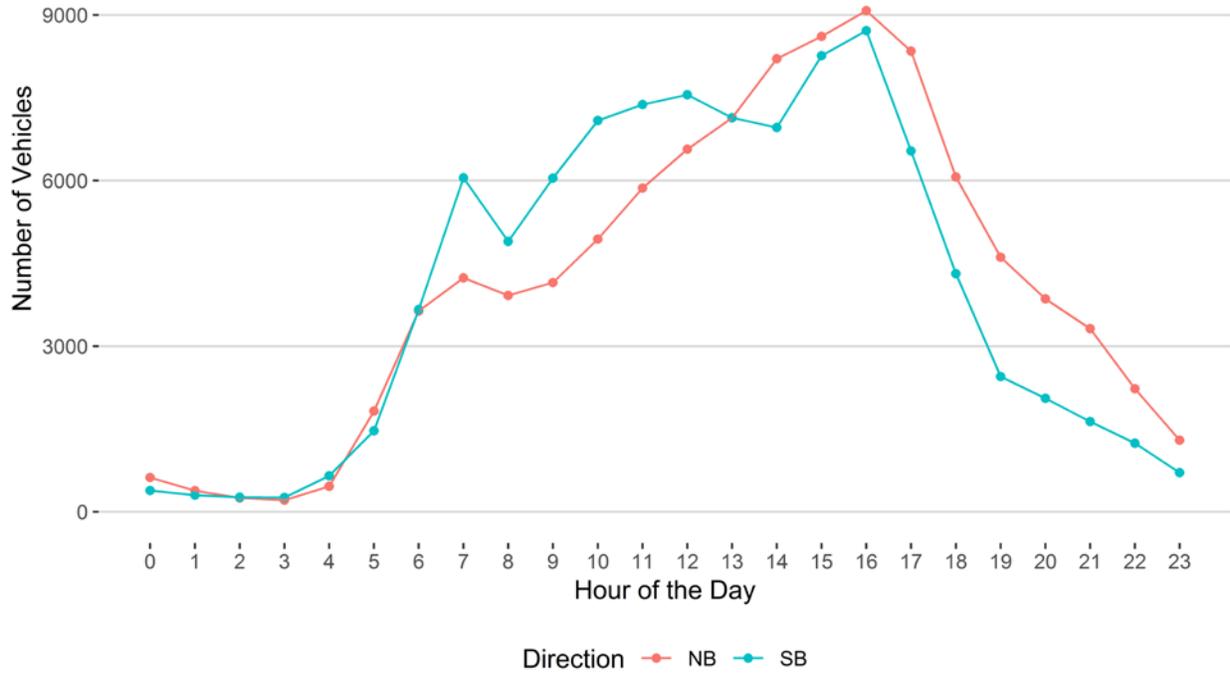


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

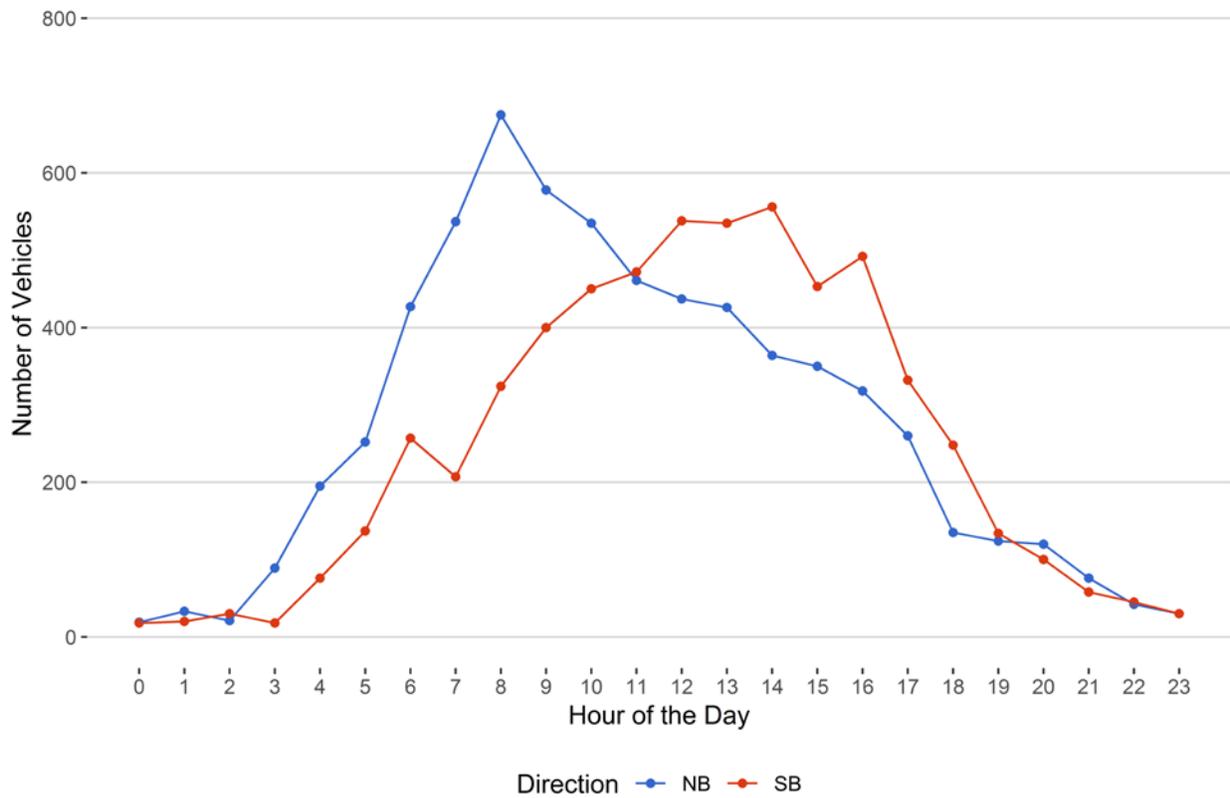


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

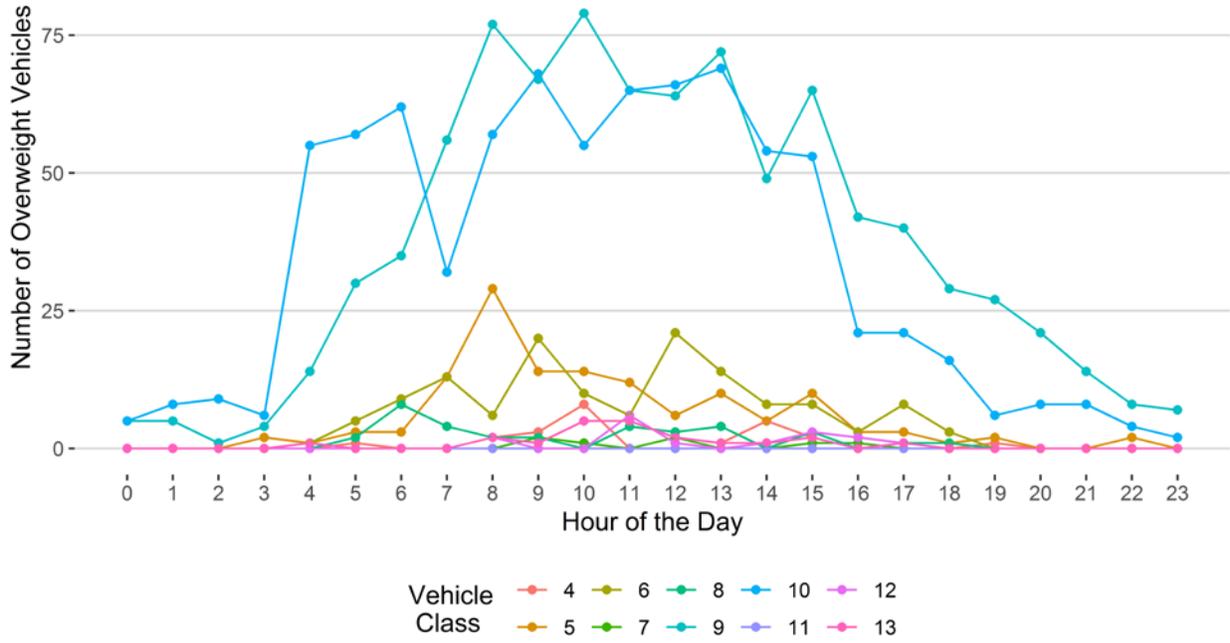


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

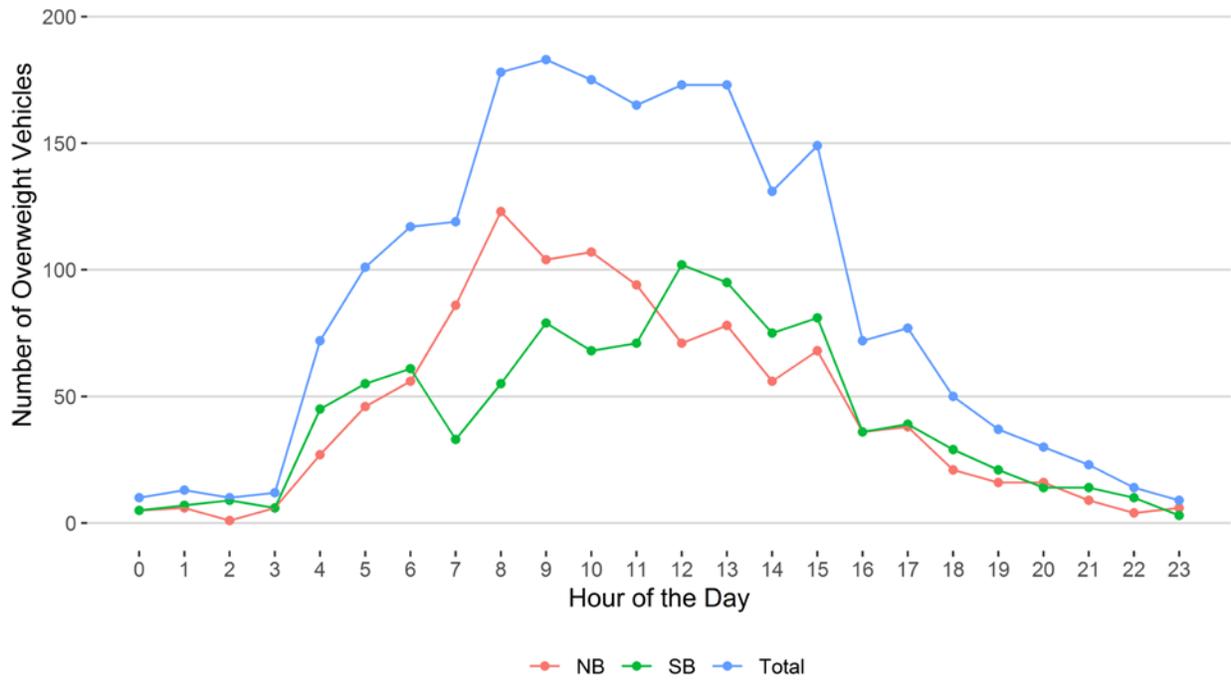
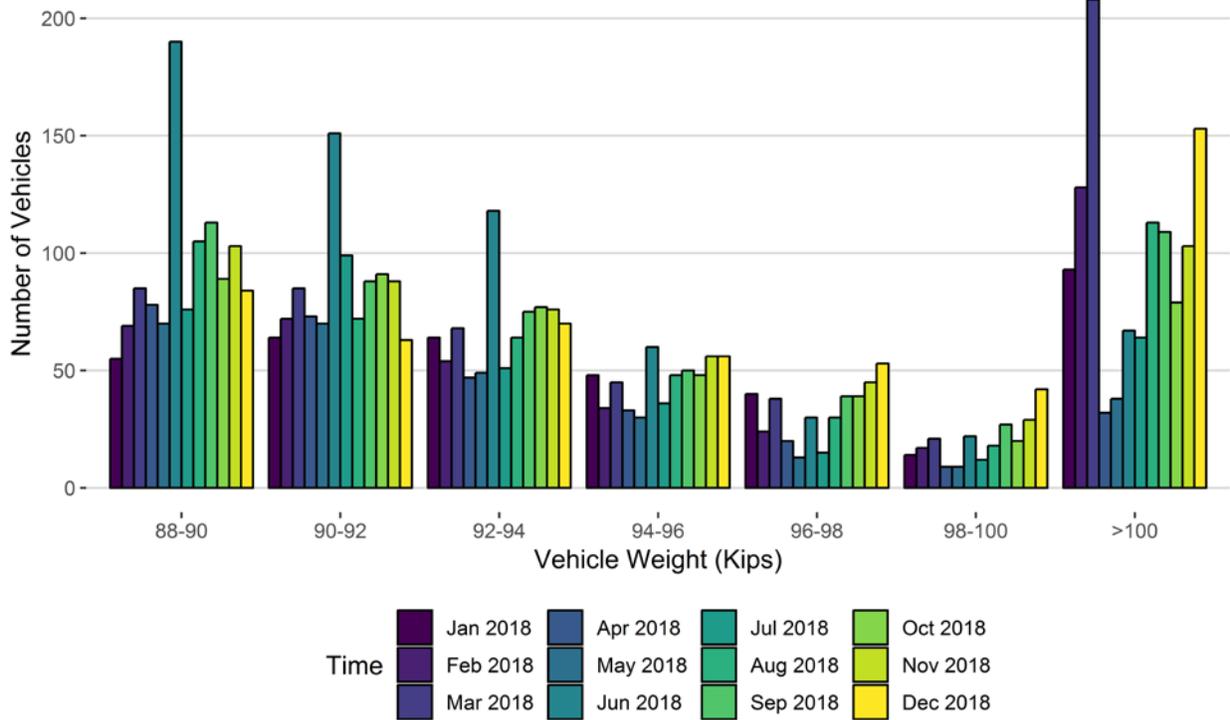
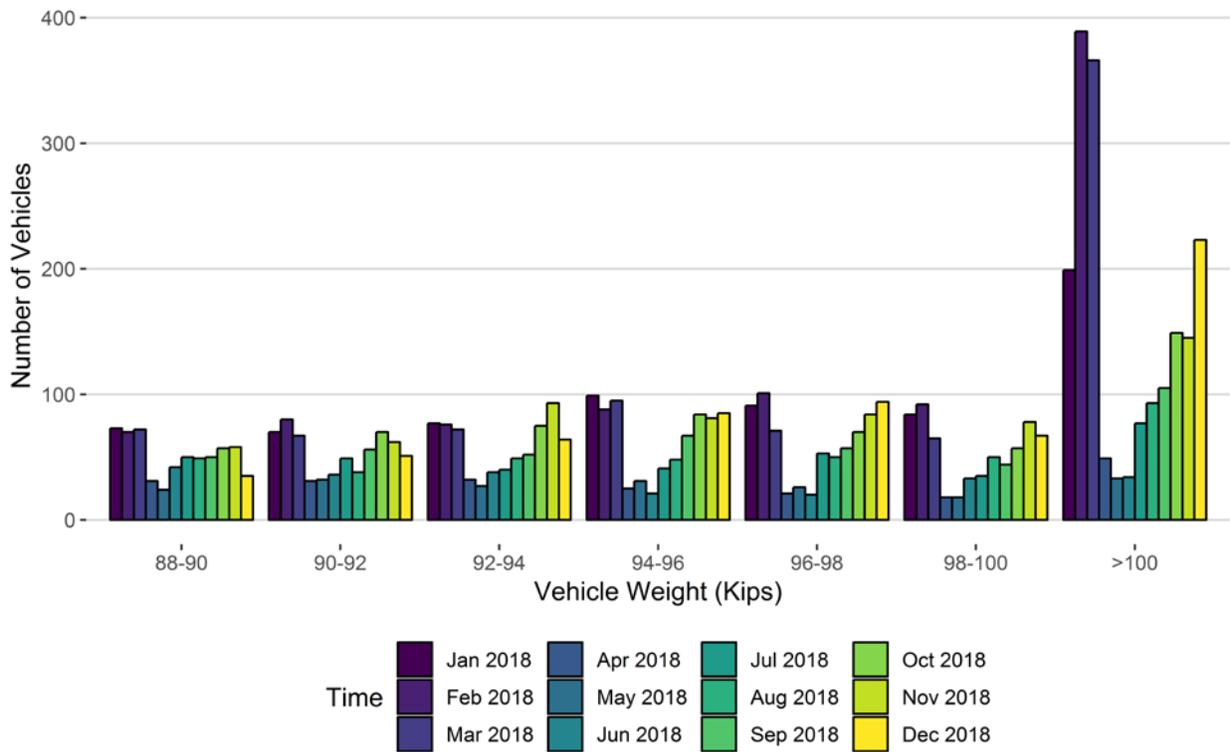


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
88-90	55	69	85	78	70	190	76	105	113	89	103	84
90-92	64	72	85	73	70	151	99	72	88	91	88	63
92-94	64	54	68	47	49	118	51	64	75	77	76	70
94-96	48	34	45	33	30	60	36	48	50	48	56	56
96-98	40	24	38	20	13	30	15	30	39	39	45	53
98-100	14	17	21	9	9	22	12	18	27	20	29	42
>100	93	128	208	32	38	67	64	113	109	79	103	153
Total	378	398	550	292	279	638	353	450	501	443	500	521

Figure 8 - Histogram of SB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
88-90	73	70	72	31	24	42	50	49	50	57	58	35
90-92	70	80	67	31	32	36	49	38	56	70	62	51
92-94	77	76	72	32	27	38	40	49	52	75	93	64
94-96	99	88	95	25	31	21	41	48	67	84	81	85
96-98	91	101	71	21	26	20	53	50	57	70	84	94
98-100	84	92	65	18	18	33	35	50	44	57	78	67
>100	199	389	366	49	33	34	77	93	105	149	145	223
Total	693	896	808	207	191	224	345	377	431	562	601	619

Figure 8 - Class 9's and 10's by Direction vs Gross Vehicle Weight

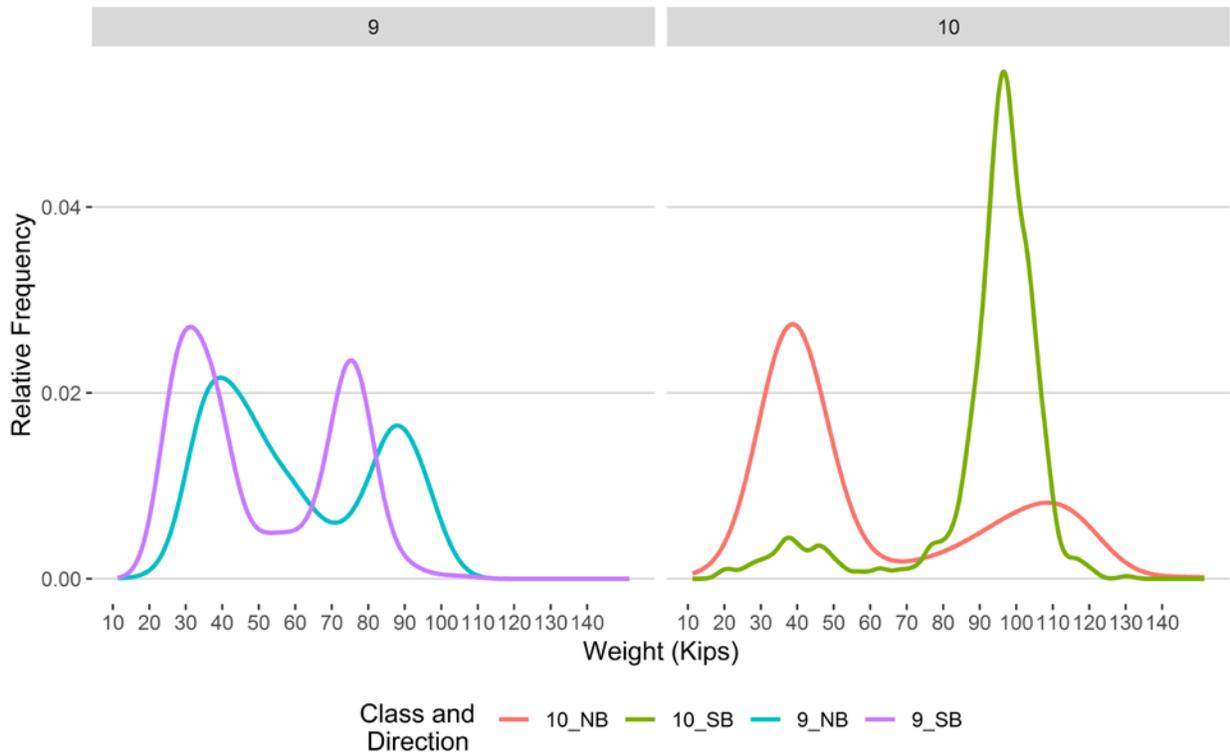


Figure 9 - Freight Percentage by Direction and Class

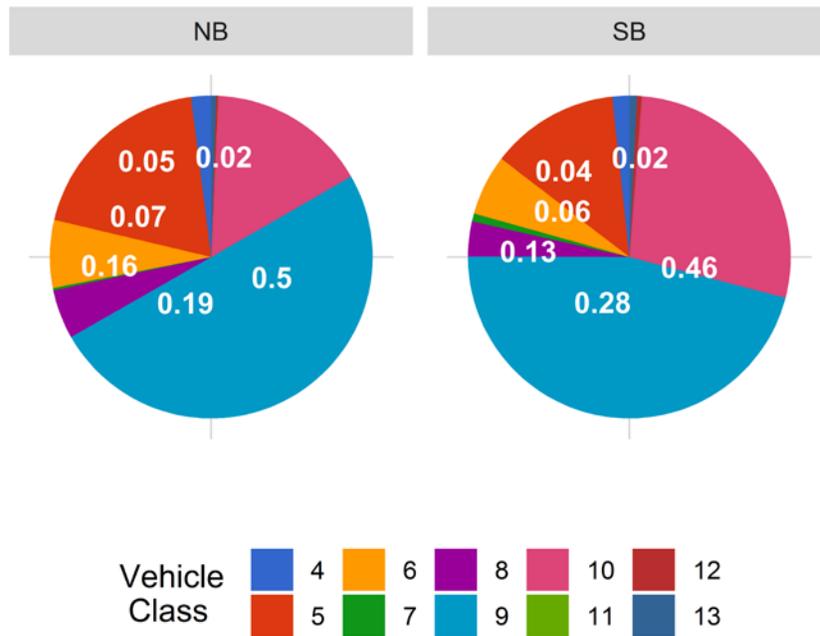


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

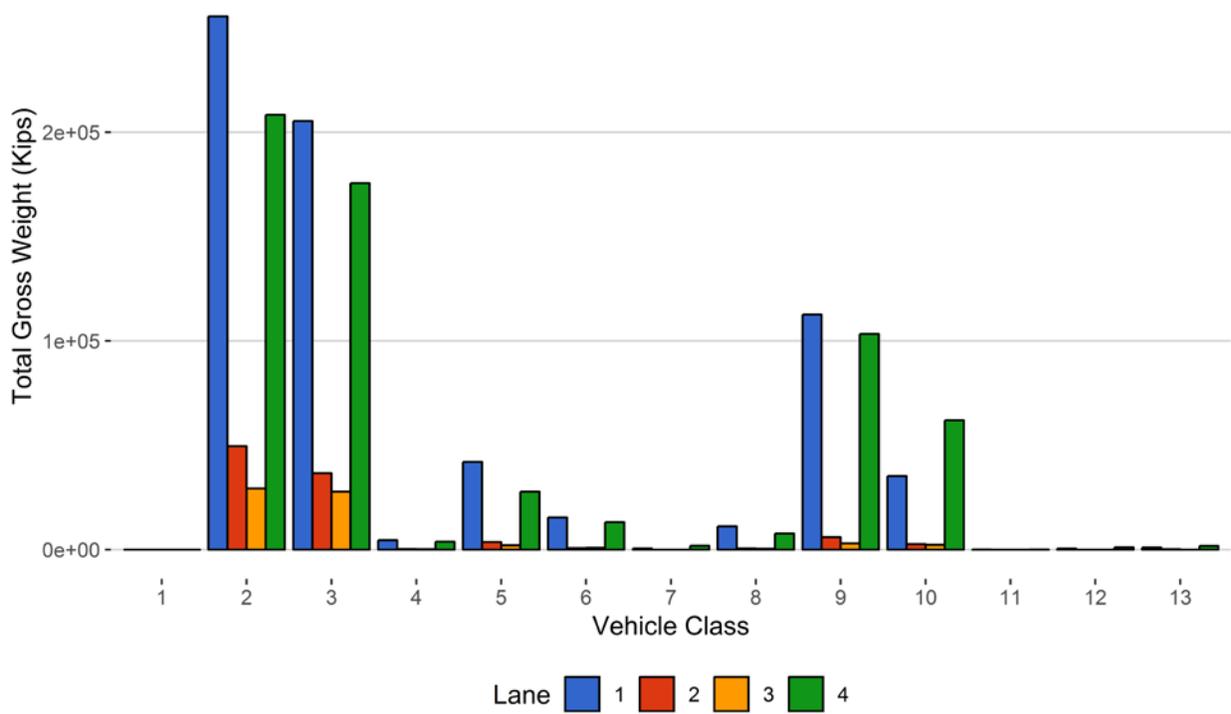


Figure 11 - Total Gross Vehicle Weight t

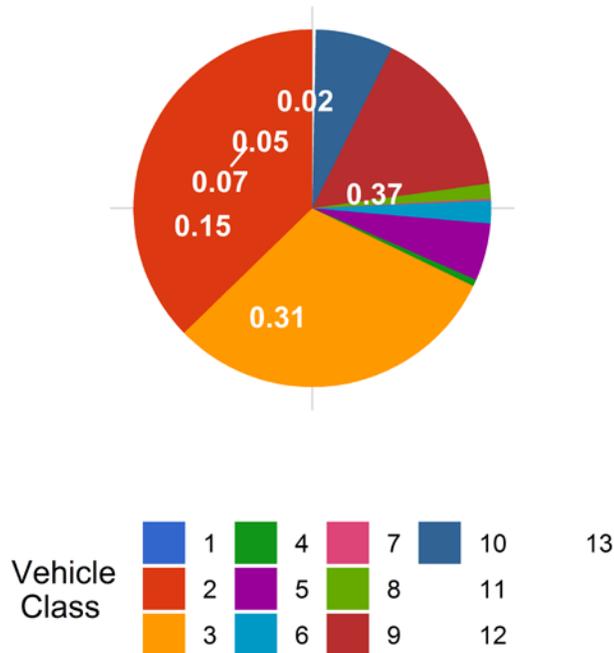


Figure 12 - Total ESALs by Class and Lane

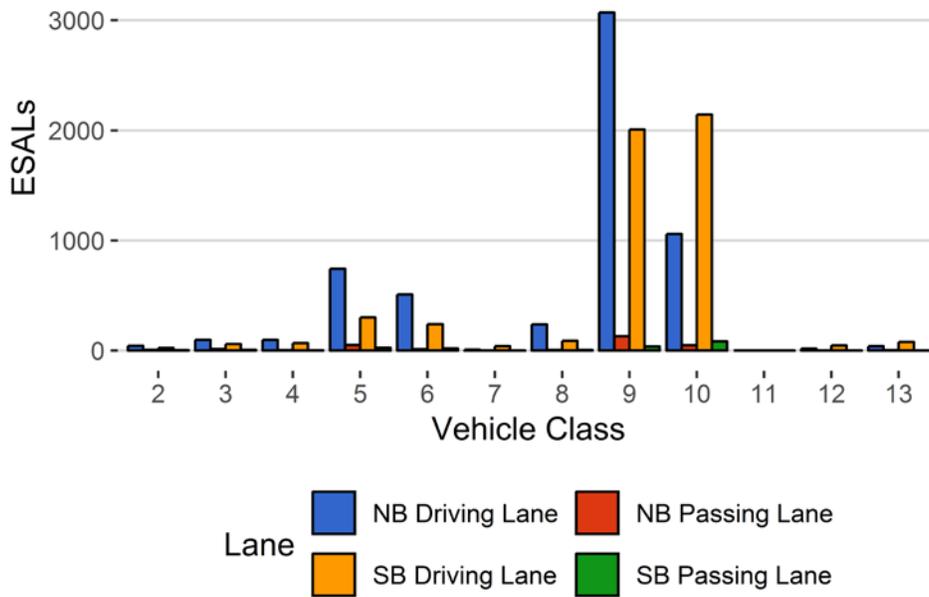
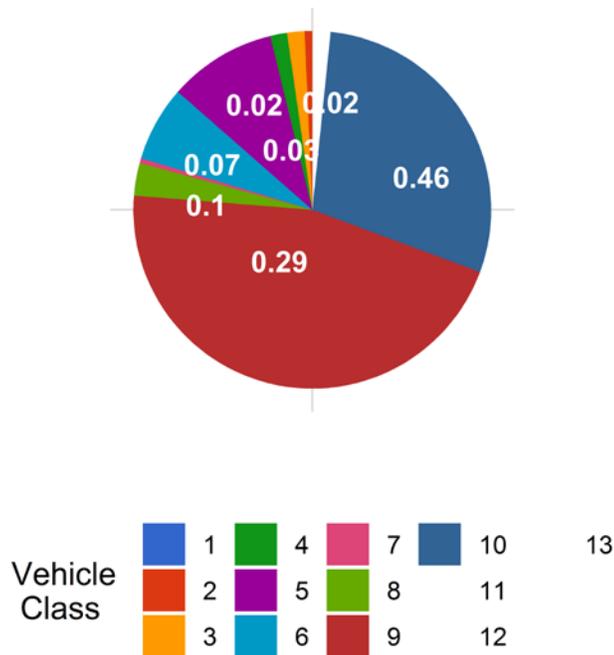


Figure 13 - ESALs by Class



**Table 1 Class 9 Front Axle Weight by Lane**

<i>Month</i>	<i>Lane 1 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 2 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 3 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 4 (kips)</i>	<i>Front Axle +/- 9%</i>
February 2017	11.62	0.00	12.12	0.00	10.33	0.00	11.31	0.00
March 2017	11.10	-4.45	12.82	5.74	10.14	-1.83	11.11	-1.71
June 2017	11.19	-3.68	14.31	18.03	10.08	-2.40	10.88	-3.75
July 2017	11.23	-3.35	13.99	15.41	9.95	-3.68	10.93	-3.36
August 2017	11.23	-3.36	13.99	15.43	10.09	-2.35	10.89	-3.73
October 2017	12.32	6.06	11.40	-5.91	10.91	5.55	11.21	-0.85
November 2017	12.49	7.54	11.46	-5.46	10.99	6.32	11.28	-0.25
December 2017	12.60	8.45	11.72	-3.32	10.92	5.69	11.14	-1.52
January 2018	12.53	7.84	11.50	-5.10	10.83	4.84	11.45	1.24
February 2018	12.47	7.38	11.59	-4.37	10.92	5.64	11.87	4.95
March 2018	12.41	6.87	11.61	-4.25	11.28	9.19	12.01	6.26
April 2018	12.34	6.25	11.49	-5.19	11.21	8.47	11.90	5.24
May 2018	12.25	5.47	11.30	-6.81	10.64	3.00	11.12	-1.61
June 2018	12.25	5.47	11.42	-5.75	10.67	3.24	11.08	-1.97
July 2018	12.31	5.98	11.54	-4.83	10.78	4.29	11.09	-1.94
August 2018	12.39	6.70	11.65	-3.85	10.72	3.72	11.09	-1.88
September 2018	12.43	6.97	11.60	-4.27	10.83	4.82	11.03	-2.48
October 2018	12.61	8.58	11.67	-3.76	10.81	4.59	11.25	-0.51
November 2018	12.73	9.56	11.59	-4.38	11.04	6.84	11.17	-1.18
December 2018	12.77	9.97	11.49	-5.17	11.06	7.06	11.19	-1.00

**Table 2 Vehicle Classification Data**

<i>Vehicle Class</i>	<i>Monthly Average Daily Volume</i>	<i>Monthly Total Volume</i>	<i>Monthly Total Volume Percentage</i>	<i>Monthly Total Overweight Vehicles</i>	<i>Monthly Total Overweight Percentage</i>
1	0	2	0	0	0
2	3967	122984	60.8	0	0
3	2171	67288	33.3	0	0
4	9	293	0.1	25	1.2
5	162	5029	2.5	133	6.5
6	26	815	0.4	135	6.6
7	1	45	0	7	0.3
8	20	622	0.3	34	1.7
9	126	3908	1.9	876	42.6
10	42	1290	0.6	807	39.3
11	0	2	0	0	0
12	1	16	0	16	0.8
13	1	29	0	21	1
<b>TOTAL</b>	<b>6527</b>	<b>202323</b>	<b>100</b>	<b>2054</b>	<b>100</b>

**Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10**

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2018-12-31	Monday	10:14:02	10	NB	1	151.59
2018-12-06	Thursday	07:02:25	10	NB	1	146.45
2018-12-18	Tuesday	06:50:31	10	NB	1	137.05
2018-12-29	Saturday	09:11:10	10	SB	4	130.3
2018-12-10	Monday	07:23:11	10	NB	1	127.17
2018-12-30	Sunday	07:39:03	10	NB	1	126.06
2018-12-01	Saturday	15:05:37	10	NB	1	125.13
2018-12-11	Tuesday	07:21:13	10	NB	1	124.54
2018-12-07	Friday	10:48:32	10	NB	1	124.23
2018-12-11	Tuesday	06:17:49	10	NB	1	123.45

**Table 4 Freight Summary**

<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	NB	15	163	13	8	4588	173	1169
5	NB	8	2961	104	3.5	44933	757	11038
6	NB	19	410	6	1.5	15996	95	4160
7	NB	11.5	13	0	0	567	0	209
8	NB	31	350	114	32.6	9570	2126	1127
9	NB	33	1963	145	7.4	114253	4343	27130
10	NB	33.5	627	64	10.2	35889	1964	8514
11	NB	36.5	1	1	100	0	30	0
12	NB	36.5	5	0	0	463	0	140
13	NB	31.5	11	0	0	1186	0	420
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>6504</b>	<b>447</b>	<b>****</b>	<b>227445</b>	<b>****</b>	<b>53907</b>
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	SB	15	139	33	23.7	3513	422	961
5	SB	8	2229	379	17	27069	2695	6134
6	SB	19	431	14	3.2	13805	247	2941
7	SB	11.5	33	0	0	1842	0	731
8	SB	31	292	192	65.8	3786	4334	343
9	SB	33	2070	591	28.6	89744	16578	20468
10	SB	33.5	704	17	2.4	63837	466	20411
11	SB	36.5	1	1	100	0	32	0
12	SB	36.5	12	0	0	1122	0	342
13	SB	31.5	19	4	21.1	1684	62	606
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>5930</b>	<b>1231</b>	<b>****</b>	<b>206401</b>	<b>****</b>	<b>52938</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>12434</b>	<b>1678</b>	<b>425</b>	<b>433846</b>	<b>34326</b>	<b>106845</b>

**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	1	0	0	0	1	0
2	255540	49501	29319	208381	542741	37.3
3	205344	36611	27710	175636	445300	30.6
4	4511	250	200	3736	8697	0.6
5	42040	3650	2055	27709	75454	5.2
6	15356	735	883	13169	30143	2.1
7	567	0	0	1842	2409	0.2
8	11110	585	447	7672	19815	1.4
9	112643	5954	2962	103360	224918	15.4
10	35257	2597	2311	61992	102157	7
11	30	0	0	32	62	0
12	463	0	0	1122	1585	0.1
13	1007	179	0	1746	2932	0.2
<b>TOTAL</b>	<b>683870</b>	<b>100061</b>	<b>65888</b>	<b>606396</b>	<b>1456214</b>	<b>100</b>
<b>GVW/LANE</b>	<b>46.96</b>	<b>6.87</b>	<b>4.52</b>	<b>41.64</b>	<b>100</b>	<b>0.01</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.3333
2	44	8	4	25	79	0.69	0.0013
3	98	15	8	60	181	1.57	0.0053
4	98	5	3	69	174	1.52	1.16
5	743	51	27	302	1123	9.76	0.44
6	510	13	19	241	783	6.81	1.86
7	10	0	0	42	51	0.45	2.08
8	239	5	5	89	339	2.94	1.06
9	3070	131	38	2008	5248	45.61	2.61
10	1060	50	85	2144	3338	29.02	5.01
11	0	0	0	0	0	0	0.89
12	18	0	0	47	65	0.57	4.93
13	41	4	0	78	123	1.07	6.04
<b>TOTAL</b>	<b>5931</b>	<b>281</b>	<b>189</b>	<b>5104</b>	<b>11505</b>	<b>100</b>	<b>26</b>
<b>ESALS/LANE</b>	<b>51.6</b>	<b>2.4</b>	<b>1.6</b>	<b>44.4</b>	<b>100</b>	<b>-</b>	<b>-</b>

**Table 7 Site Summary: Volume and Vehicle Class**

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
Jan 2018	203332	6559	416	190447	93.7	12885.2	6.3	94.4	5.6
Feb 2018	187761	6706	445	175314	93.4	12446.9	6.6	93.7	6.3
Mar 2018	227467	7338	458	213260	93.8	14206.9	6.2	93.5	6.5
Apr 2018	208109	6937	390	196423	94.4	11686.2	5.6	93.5	6.5
May 2018	275473	8886	486	260406	94.5	15066.6	5.5	91.8	8.2
Jun 2018	306452	10215	626	287683	93.9	18769.5	6.1	90.8	9.2
Jul 2018	350547	11308	574	332764	94.9	17782.9	5.1	90.2	9.8
Aug 2018	358059	11550	592	339709	94.9	18350	5.1	90.6	9.4
Sep 2018	313915	10464	604	295806	94.2	18109.5	5.8	90.9	9.1
Oct 2018	288734	9314	557	271460	94	17274.5	6	91.5	8.5
Nov 2018	213943	7131	471	199800	93.4	14142.7	6.6	92.7	7.3
Dec 2018	202323	6977	389	190274	94	12049.2	6	93.6	6.4
<b>TOTAL</b>	<b>313615</b>	<b>-</b>	<b>-</b>	<b>2953346</b>	<b>-</b>	<b>182770</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>261343</b>	<b>8615</b>	<b>501</b>	<b>246112</b>	<b>94</b>	<b>15231</b>	<b>6</b>	<b>92</b>	<b>8</b>

## ESALS

<i>Month</i>	<i>ESALS NB Passing Lane</i>	<i>ESALS NB Driving Lane</i>	<i>ESALS SB Driving Lane</i>	<i>ESALS SB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Jan 2018	5226	297	153	5862	11538	96	4	70
Feb 2018	5255	266	317	7250	13089	96	4	91.1
Mar 2018	6638	321	340	7817	15116	96	4	71.8
Apr 2018	4677	226	180	4274	9357	96	4	29.7
May 2018	5870	397	196	4186	10649	94	6	19.6
Jun 2018	8117	587	372	5176	14252	93	7	29.4
Jul 2018	6965	535	336	5229	13065	93	7	23.1
Aug 2018	7274	628	412	5605	13919	93	7	29.6
Sep 2018	7125	574	424	5493	13615	93	7	31.5
Oct 2018	7067	554	340	6223	14184	94	6	31.9
Nov 2018	6376	331	315	5768	12790	95	5	48.1
Dec 2018	5978	281	7355	5121	18736	59	41	85.7
<b>TOTAL</b>	<b>76568</b>	<b>4997</b>	<b>10740</b>	<b>68005</b>	<b>160311</b>	-	-	-
<b>AVERAGE</b>	<b>6381</b>	<b>416</b>	<b>895</b>	<b>5667</b>	<b>13359</b>	<b>91</b>	<b>9</b>	<b>47</b>

## Gross Vehicle Weight

<i>Month</i>	<i>GVW NB Passing Lane</i>	<i>GVW NB Driving Lane</i>	<i>GVW SB Passing Lane</i>	<i>GVW SB Driving Lane</i>	<i>Total GVW Kips</i>
Jan 2018	642847	77552	51867	631608	1403875
Feb 2018	612031	73787	60261	626261	1372339
Mar 2018	725128	97474	95556	725911	1644069
Apr 2018	624365	79369	76549	597736	1378018
May 2018	805267	135068	123381	716964	1780680
Jun 2018	956809	179159	163542	840328	2139837
Jul 2018	989942	190861	199906	891495	2272204
Aug 2018	1029912	206482	199903	915971	2352268
Sep 2018	928245	167946	179934	843547	2119672
Oct 2018	874341	151885	156271	815285	1997782
Nov 2018	703774	103950	86051	644760	1538536
Dec 2018	685139	100086	67487	606959	1459670
<b>TOTAL</b>	<b>9577800</b>	<b>1563619</b>	<b>1460707</b>	<b>8856825</b>	<b>21458952</b>
<b>AVERAGE</b>	<b>798150</b>	<b>130302</b>	<b>121726</b>	<b>738069</b>	<b>1788246</b>

## Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
Jan 2018	2101	1.1	16.5	1071	390
Feb 2018	2416	1.3	19.6	1294	626
Mar 2018	2872	1.3	20.3	1363	661
Apr 2018	1663	0.8	14.3	499	108
May 2018	1827	0.7	12.2	470	98
Jun 2018	2892	1	15.4	866	157
Jul 2018	2415	0.7	13.6	700	189
Aug 2018	2476	0.7	13.5	830	275
Sep 2018	2546	0.8	14.1	934	286
Oct 2018	2727	0.9	15.8	1007	305
Nov 2018	2379	1.1	16.9	1102	355
Dec 2018	2093	1	16.5	1147	489
<b>TOTAL</b>	<b>28407</b>	<b>-</b>	<b>-</b>	<b>11283</b>	<b>3939</b>
<b>AVERAGE</b>	<b>2367.2</b>	<b>1</b>	<b>15.7</b>	<b>940.2</b>	<b>328.2</b>

## Freight

<i>Month</i>	<i>NB Freight Tons</i>	<i>SB Freight Tons</i>	<i>Total Freight</i>	<i>NB Freight %</i>	<i>SB Freight %</i>
Jan 2018	49987	59879	109866	45.5	54.5
Feb 2018	48947	66785	115732	42.3	57.7
Mar 2018	61186	72833	134019	45.7	54.3
Apr 2018	46511	43976	90486	51.4	48.6
May 2018	61664	47687	109351	56.4	43.6
Jun 2018	88451	64157	152607	58	42
Jul 2018	72207	58420	130627	55.3	44.7
Aug 2018	73261	62083	135345	54.1	45.9
Sep 2018	75479	60417	135896	55.5	44.5
Oct 2018	71194	66929	138122	51.5	48.5
Nov 2018	59228	61355	120584	49.1	50.9
Dec 2018	53907	52938	106845	50.5	49.5
<b>TOTAL</b>	<b>762022</b>	<b>717457</b>	<b>1479480</b>	-	-
<b>AVERAGE</b>	<b>63501.9</b>	<b>59788.1</b>	<b>123290</b>	<b>51.3</b>	<b>48.7</b>