

AUGUST 2019



**WIM #43
US 10,
MP 7.5
MOORHEAD,
MINNESOTA**

**MONTHLY
REPORT**



Your Destination...Our Priority



WIM Site Location

WIM #43 is located on US 10 near Moorhead in Clay county.

System Operation

WIM #43 was operational for the entire month of August 2019. Volume was computed using all monthly data.

System Calibration

WIM #43 was most recently calibrated on 2015-02-04. Table 1 summarizes the front axle weights of class 9s by 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 ². 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: 545644 | Passenger Vehicles: 502772 | Heavy Commercial Vehicles: 42872

Monthly Average Daily Traffic (MADT): 19757 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1383

See Table 2 for vehicle class breakdown

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

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

Passenger Vehicles (PVs)

Volume trends. On an average 24-hour day (see Figure 5), EB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, WB PVs peaked in volume between 07 AM and 05 PM

Heavy Commercial Vehicles (HCVs)

Volume trends. On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 03 PM and 05 PM, while volume going WB peaked between 07 AM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

Overweight HCVs

Volume trends. Of a total of 42872 HCVs, 3123 of them were overweight ³. These overweight HCVs contributed to 0.6% of total monthly volume, and 7.3% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Wednesdays, with lowest volumes reported on Sundays. WB 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 13 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 51.3% of all overweight vehicles traveling WB 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 October.

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 ⁴.

Using normal load limits ,157 EB vehicles exceeded 88,000 pounds (89 vehicles were Class 13's; 38 vehicles were Class 10's). Of vehicles traveling WB,

257 EB vehicles exceeded 88,000 pounds (171 vehicles were Class 13's; 75 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from August 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in August 2019. Data suggests that there were greater numbers of empty Class 9's than fully_loaded Class 9's traveling EB, while there were more fully_loaded Class 9's than empty traveling WB. Data also suggests that there were more empty Class 10's than fully_loaded traveling in the EB direction. In the WB direction, there were more fully_loaded class 10 vehicles.

Freight Totals. A total of 305306 tons of freight was recorded to have crossed the WIM. More freight was shipped WB (60.2%) than EB (39.8%). See Table 4 and Figure 11 for more freight information.

####Infrastructure Considerations Bridge. Bridge No. 8528 (a box culvert) is approximately 1.3 miles east of WIM #43. Bridges No. 14001 and 5854 are approximately 0.8 miles west of WIM #43. US 10 also crosses the Buffalo River, specifically via Bridges No. 14001 (carrying EB traffic) and 5854 (carrying WB traffic). WIM #43 recorded a total of 545644 vehicles with a combined GVW of 3971399 kips (1 kip = 1,000 pounds = 0.5 tons) in August 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 23214 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 51% of all ESALs were recorded WB while 49% was observed EB. In particular, 51% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 20% 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).

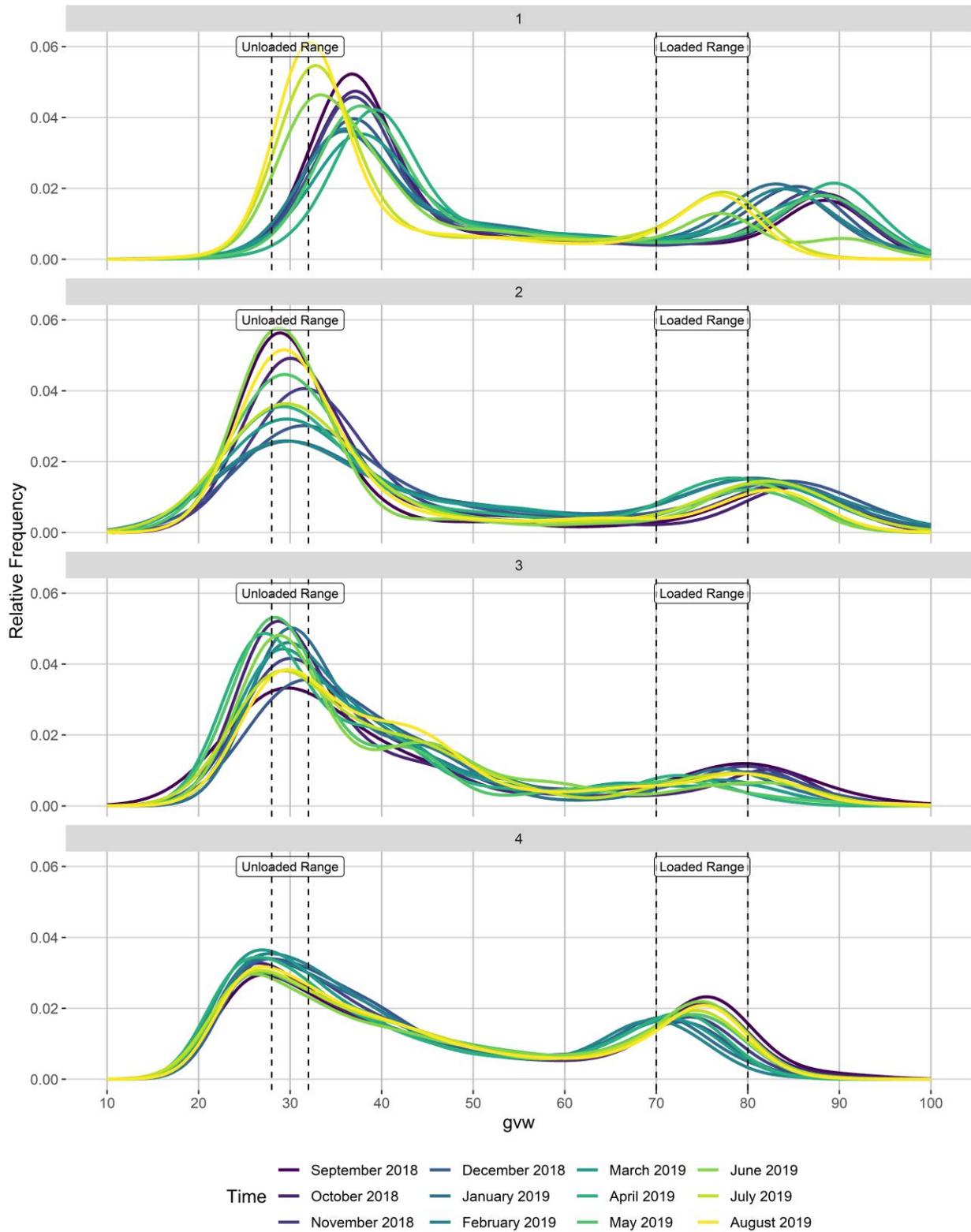
#####WIM monthly reports can be found at:

<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>

- ¹ 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
- ² 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.
- ³ 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
- ⁴ 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.

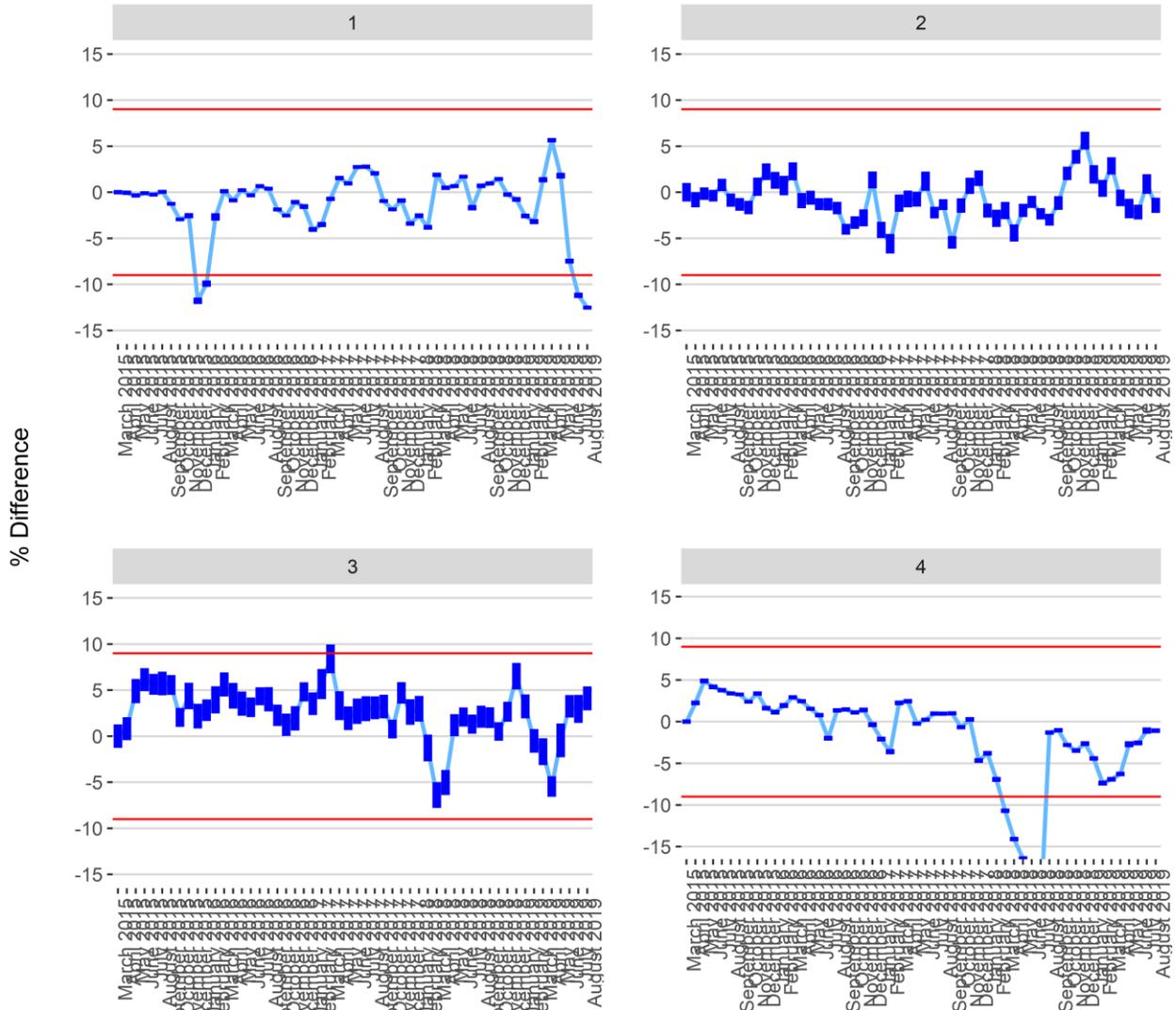
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Figure 1 - Monthly Class 9 GVW Histogram



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

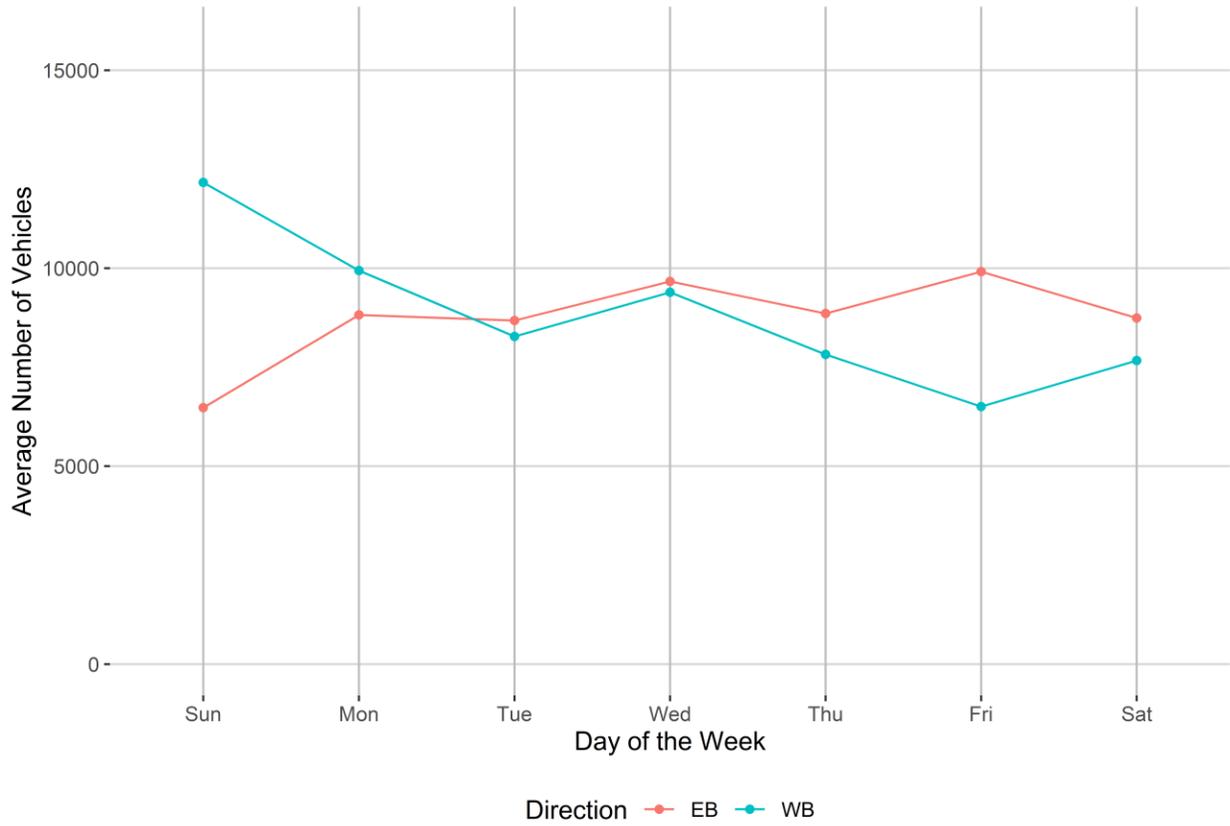


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

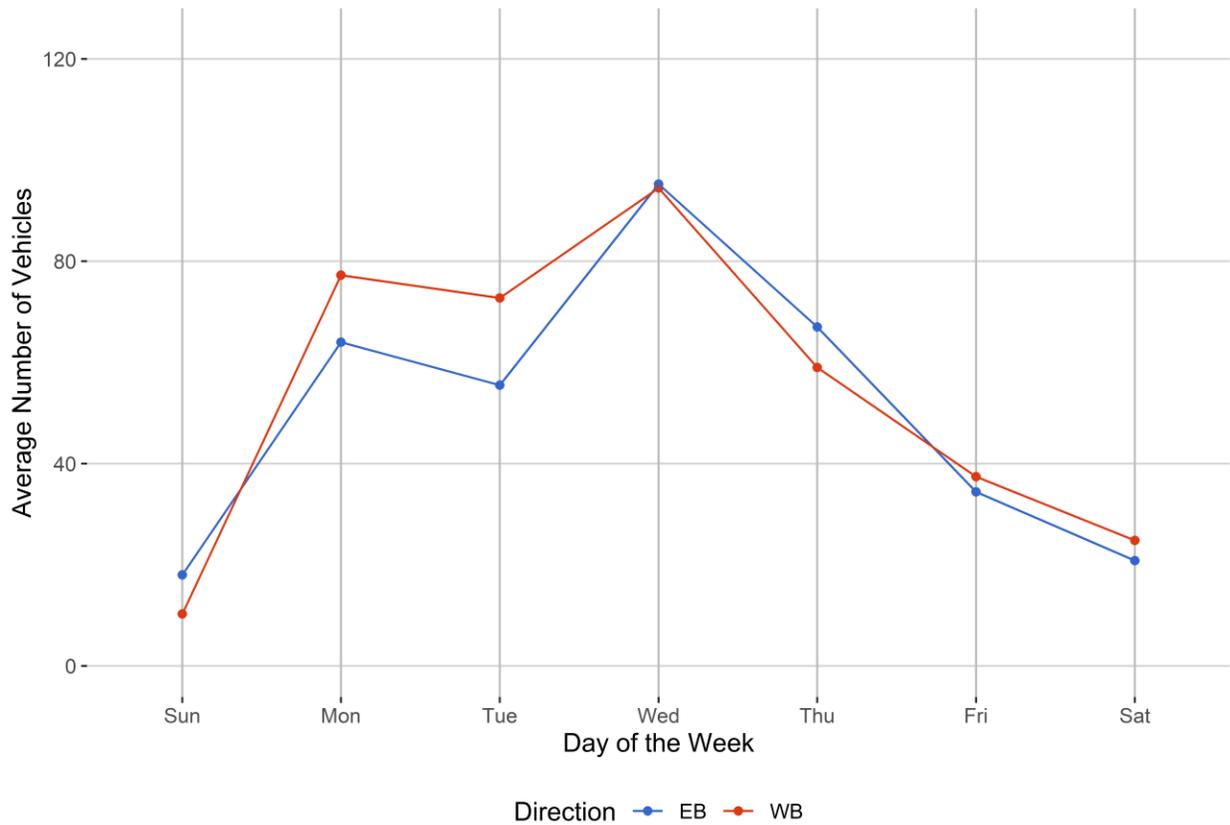


Figure 4 - Passenger Vehicles vs. Hour of the Day

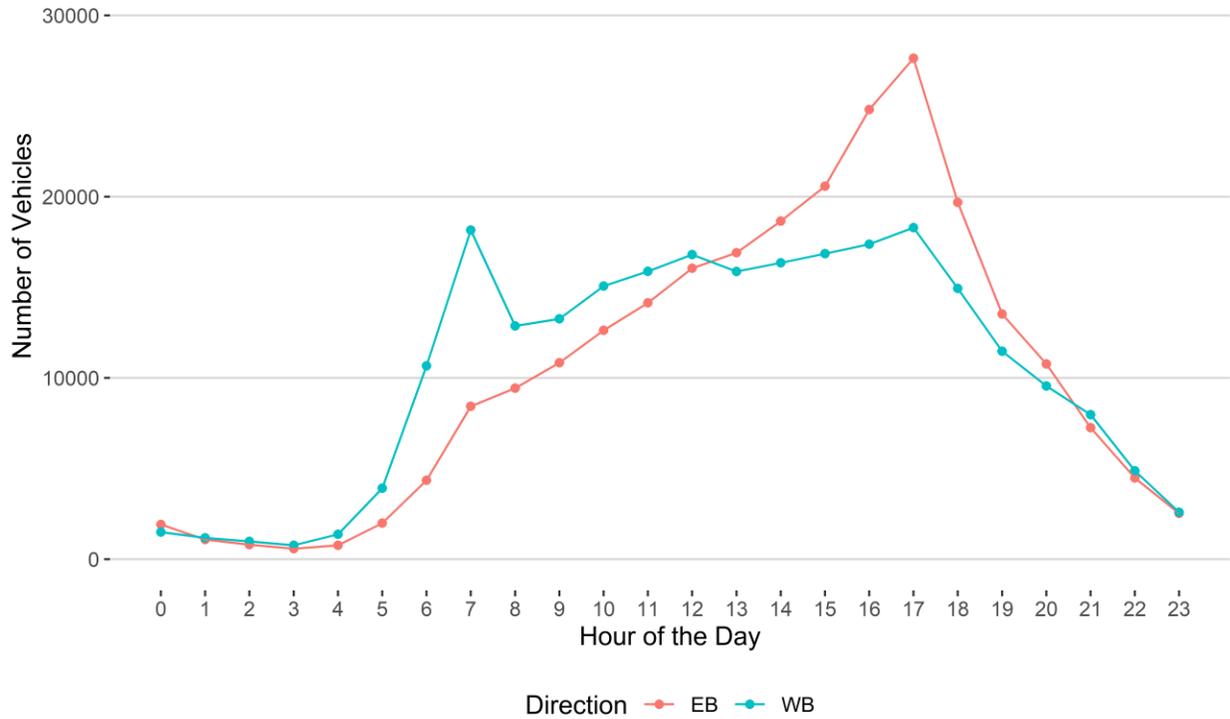


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

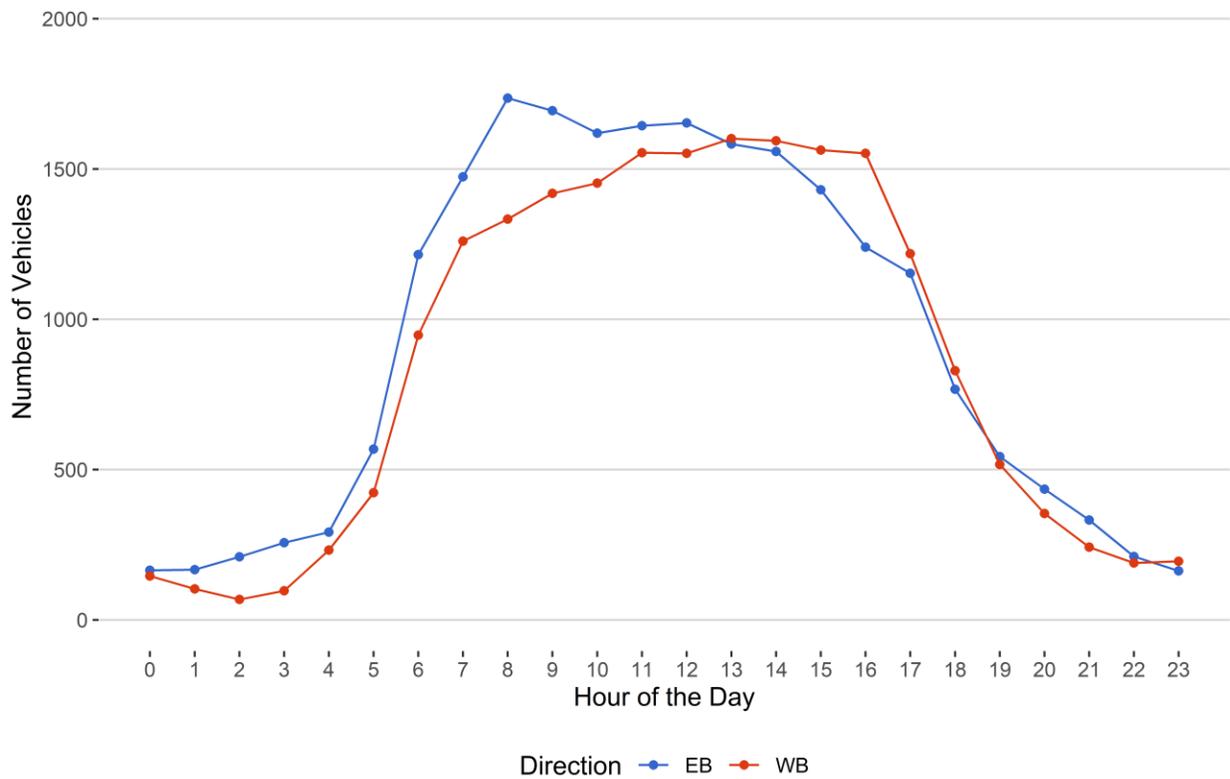


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

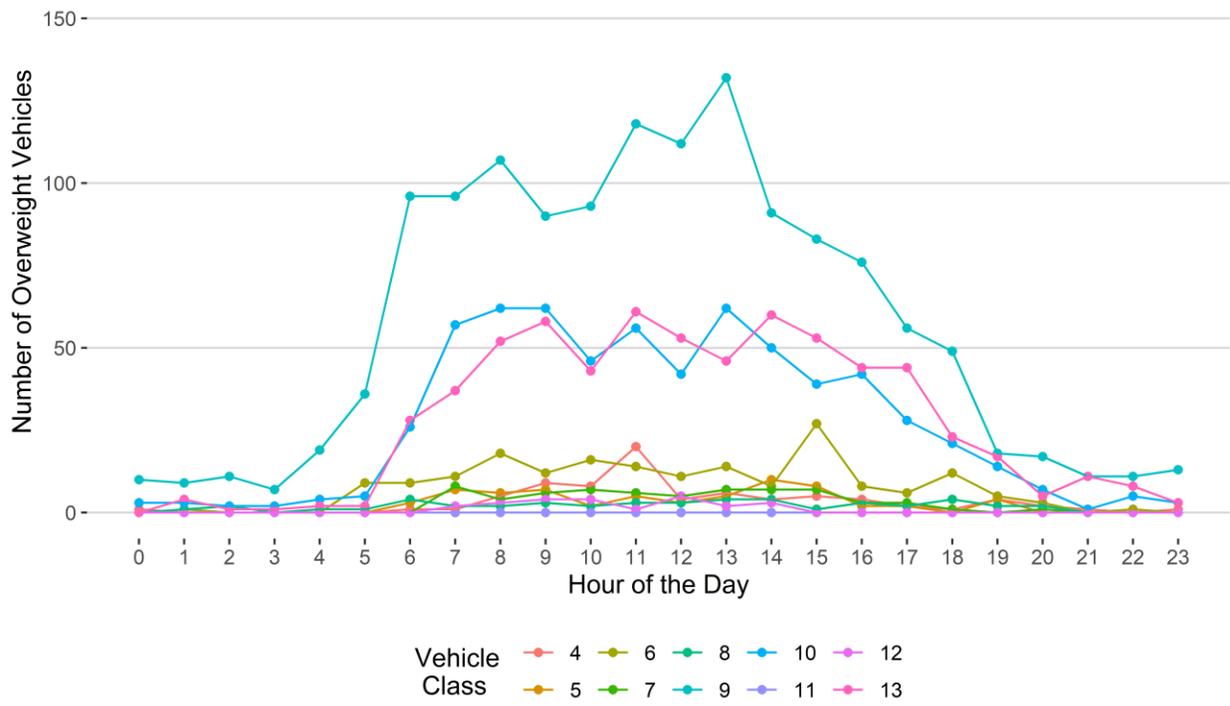


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

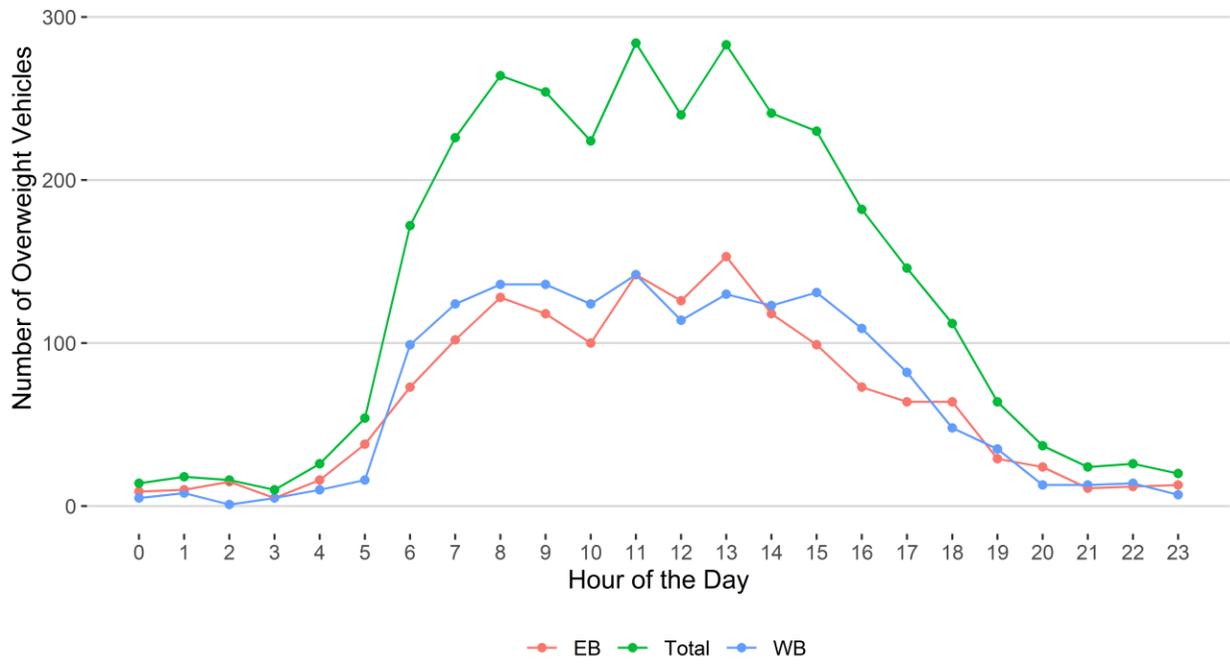
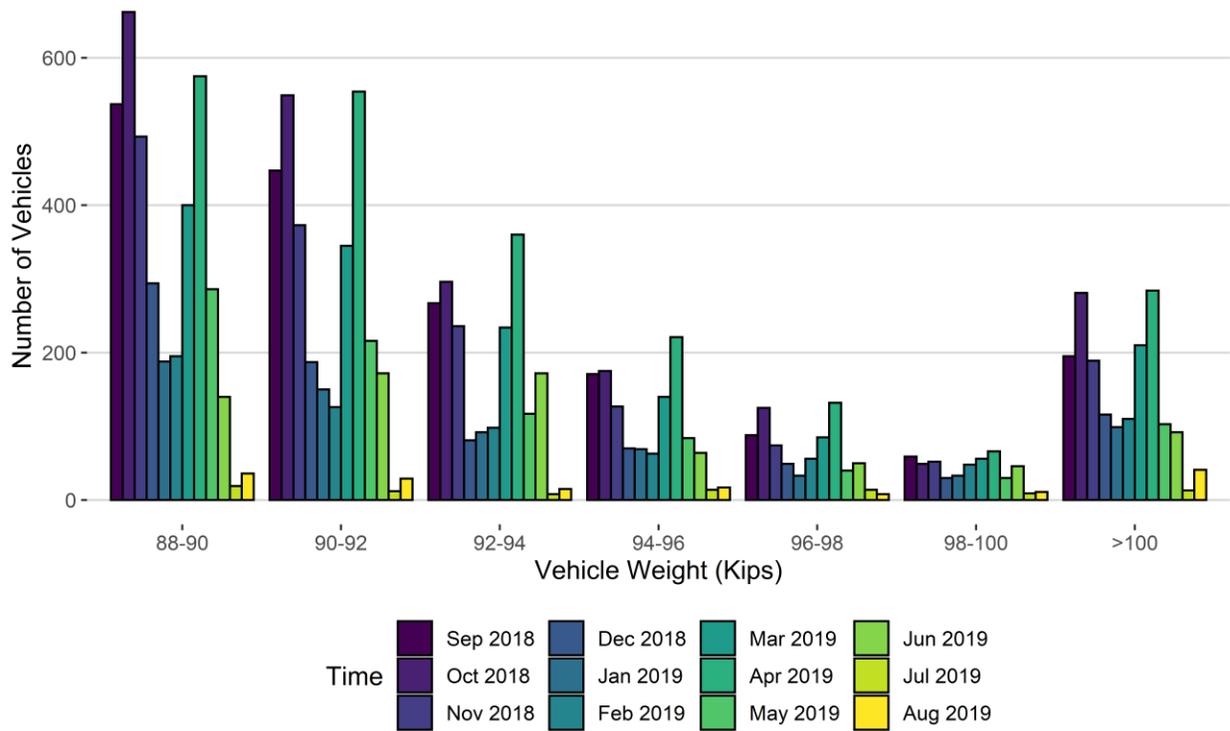
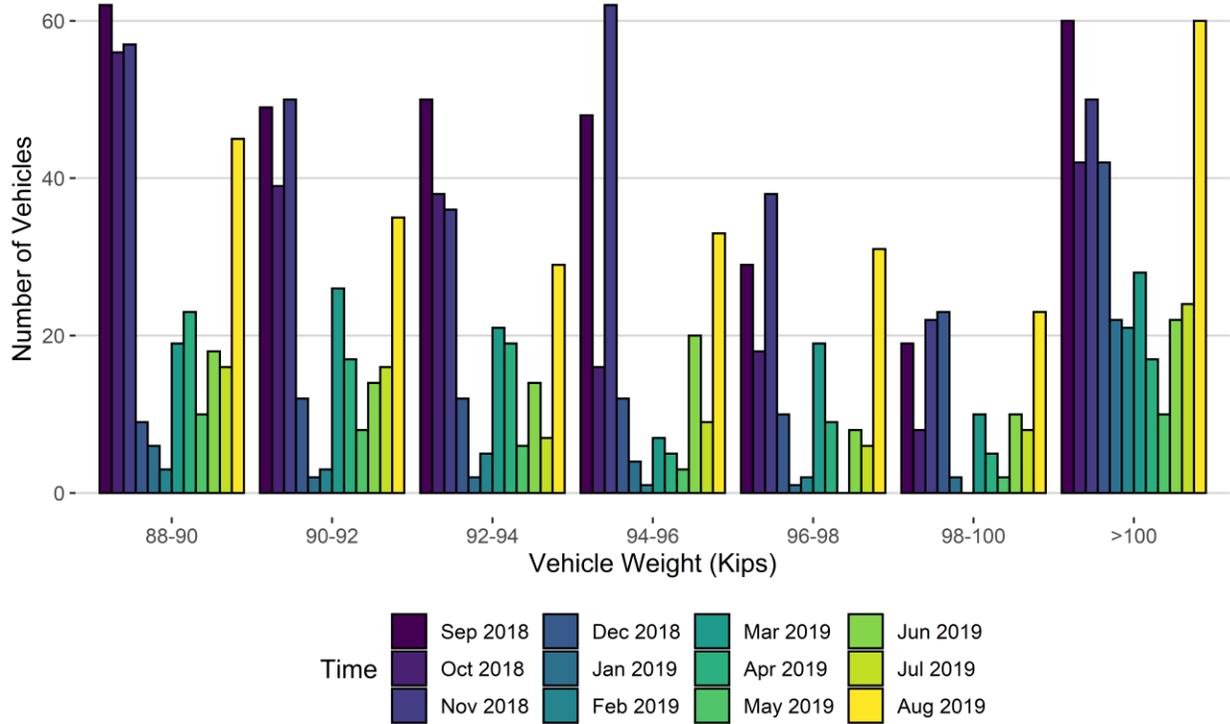


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019
88-90	537	662	493	294	188	195	400	575	286	140	19	36
90-92	447	549	373	187	150	126	345	554	216	172	12	29
92-94	267	296	236	81	92	98	234	360	117	172	8	15
94-96	171	175	127	70	69	63	140	221	84	64	14	17
96-98	88	125	74	49	33	56	85	132	40	50	14	8
98-100	59	49	52	30	33	48	56	66	30	46	9	11
>100	195	281	189	116	99	110	210	284	103	92	13	41
Total	1764	2137	1544	827	664	696	1470	2192	876	736	89	157

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



Vehicle Weights (Kips)	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019
88-90	62	56	57	9	6	3	19	23	10	18	16	45
90-92	49	39	50	12	2	3	26	17	8	14	16	35
92-94	50	38	36	12	2	5	21	19	6	14	7	29
94-96	48	16	62	12	4	1	7	5	3	20	9	33
96-98	29	18	38	10	1	2	19	9	0	8	6	31
98-100	19	8	22	23	2	0	10	5	2	10	8	23
>100	60	42	50	42	22	21	28	17	10	22	24	60
Total	317	217	315	120	39	35	130	95	39	106	86	256

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

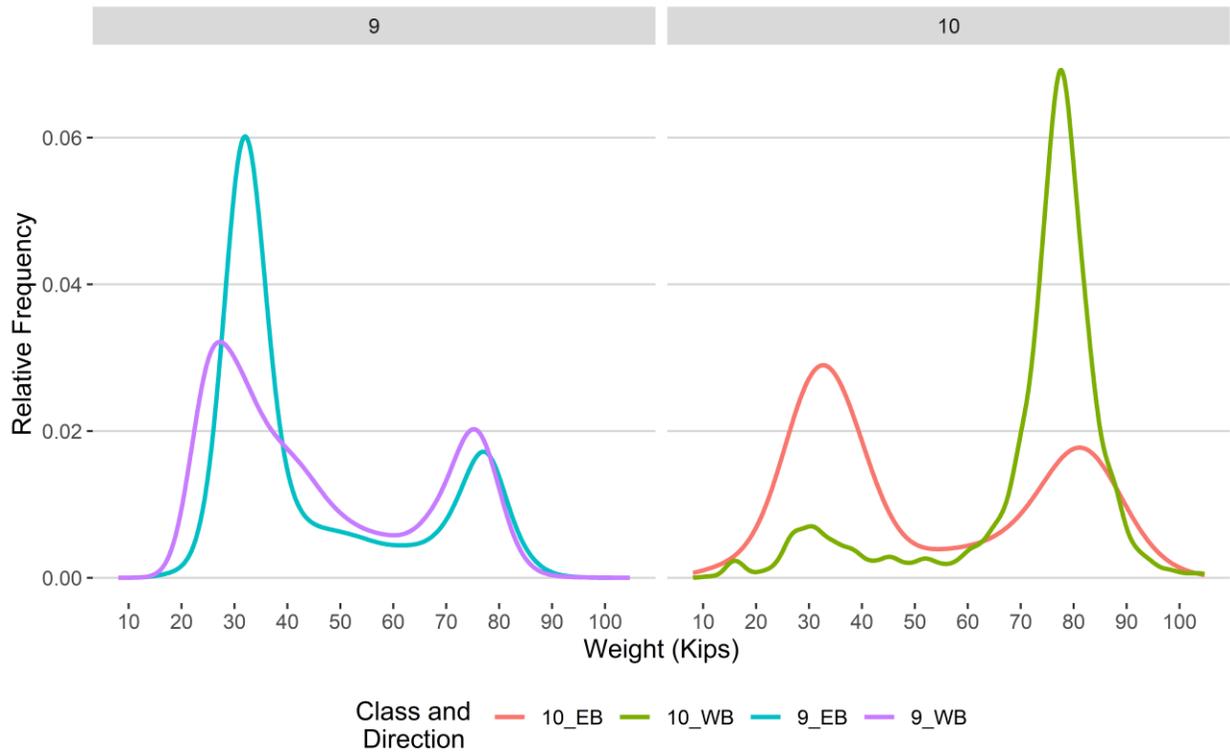


Figure 9 - Freight Percentage by Direction and Class

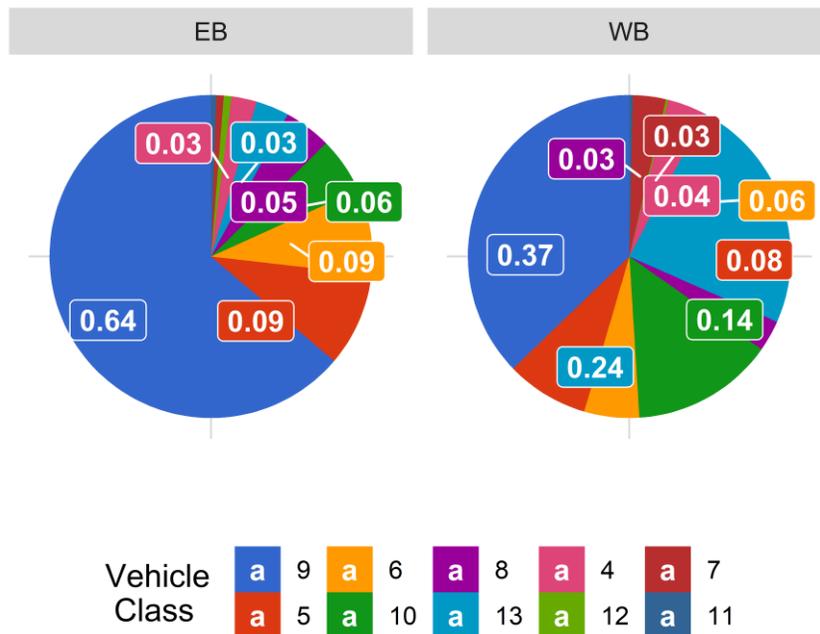


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

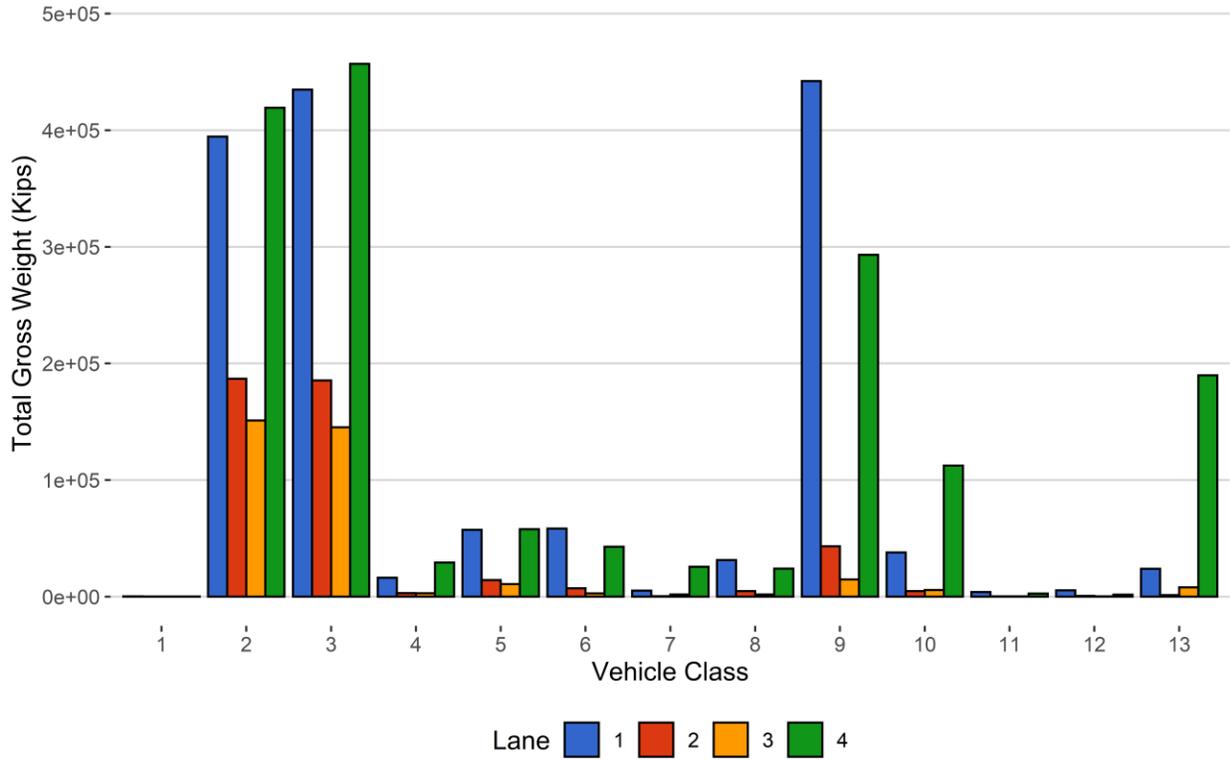


Figure 11 - Total Gross Vehicle Weight t

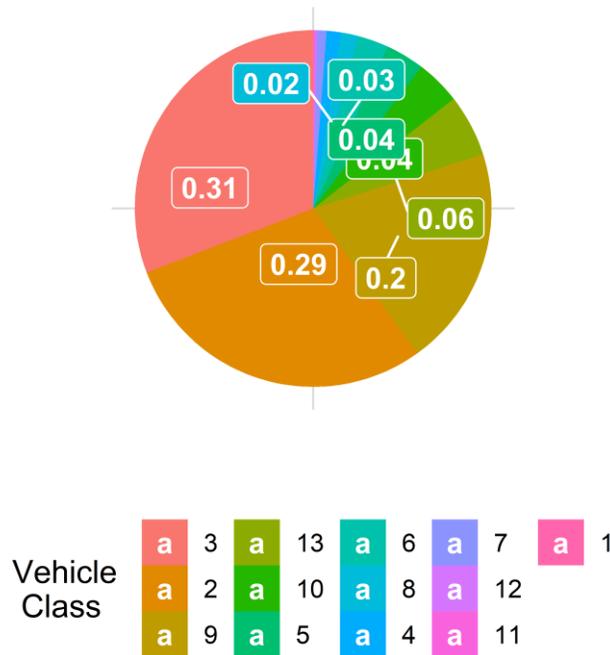


Figure 12 - Total ESALs by Class and Lane

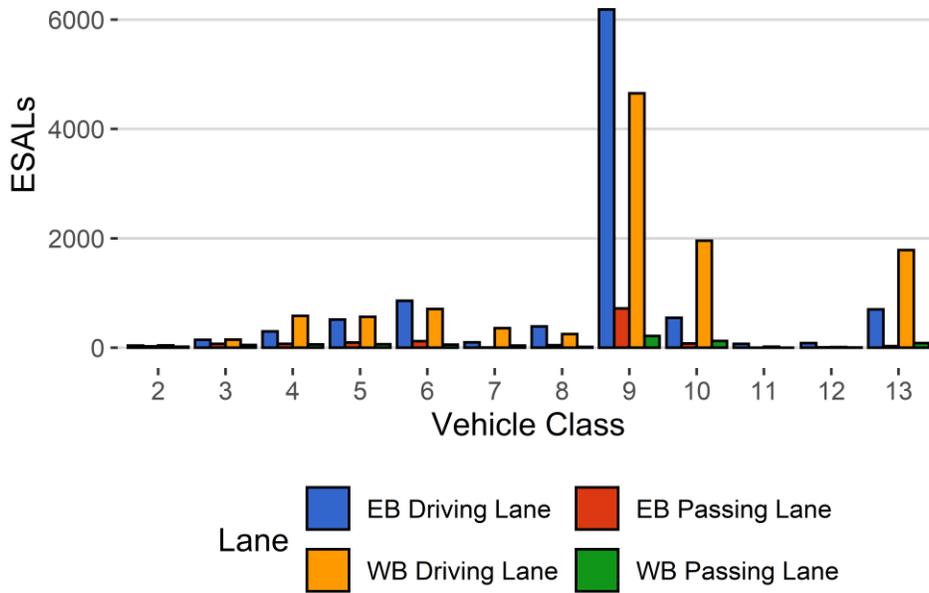


Figure 13 - ESALs by Class

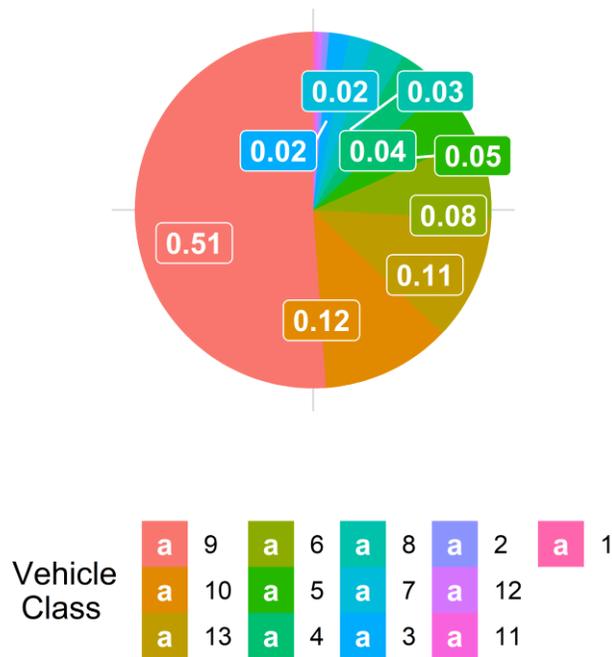


Table 1 Class 9 Front Axle Weight by Lane

<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>
March 2015	12.58	0.00	11.72	0.00	10.94	0.00	10.81	0.00
April 2015	12.58	-0.06	11.63	-0.82	11.03	0.81	11.05	2.25
May 2015	12.54	-0.36	11.70	-0.16	11.47	4.90	11.34	4.88
June 2015	12.57	-0.11	11.68	-0.38	11.61	6.13	11.26	4.17
July 2015	12.55	-0.25	11.81	0.79	11.55	5.63	11.22	3.77
August 2015	12.59	0.04	11.62	-0.86	11.56	5.72	11.18	3.38
September 2015	12.42	-1.27	11.57	-1.32	11.55	5.56	11.16	3.26
October 2015	12.21	-2.95	11.53	-1.66	11.16	2.04	11.07	2.39
November 2015	12.26	-2.55	11.79	0.60	11.41	4.37	11.18	3.37
December 2015	11.10	-11.79	11.98	2.22	11.18	2.18	10.99	1.62
January 2016	11.33	-9.93	11.87	1.28	11.25	2.82	10.93	1.14
February 2016	12.25	-2.68	11.81	0.72	11.37	3.95	11.02	1.94
March 2016	12.60	0.11	11.99	2.26	11.55	5.61	11.13	2.92
April 2016	12.47	-0.88	11.62	-0.91	11.42	4.39	11.08	2.45
May 2016	12.61	0.22	11.65	-0.59	11.32	3.54	10.98	1.54
June 2016	12.54	-0.34	11.57	-1.30	11.28	3.14	10.90	0.78
July 2016	12.67	0.66	11.57	-1.31	11.41	4.33	10.60	-1.98
August 2016	12.63	0.37	11.52	-1.72	11.38	4.01	10.96	1.35
September 2016	12.35	-1.88	11.25	-4.02	11.18	2.26	10.97	1.46
October 2016	12.26	-2.54	11.34	-3.30	11.07	1.24	10.93	1.10
November 2016	12.45	-1.08	11.40	-2.79	11.15	1.94	10.96	1.41
December 2016	12.39	-1.56	11.88	1.33	11.46	4.80	10.77	-0.36
January 2017	12.07	-4.05	11.24	-4.09	11.32	3.53	10.59	-2.09
February 2017	12.14	-3.51	11.07	-5.59	11.56	5.66	10.42	-3.61
March 2017	12.49	-0.72	11.58	-1.19	11.86	8.40	11.05	2.24

April 2017	12.78	1.54	11.64	-0.73	11.30	3.31	11.08	2.46
May 2017	12.70	0.96	11.63	-0.76	11.15	1.94	10.79	-0.24
June 2017	12.93	2.73	11.86	1.19	11.23	2.71	10.84	0.23
July 2017	12.93	2.77	11.46	-2.21	11.26	2.99	10.92	0.97
August 2017	12.84	2.05	11.56	-1.35	11.27	3.08	10.92	0.96
September 2017	12.46	-0.96	11.08	-5.44	11.29	3.21	10.92	0.99
October 2017	12.35	-1.86	11.55	-1.45	11.02	0.78	10.74	-0.67
November 2017	12.47	-0.91	11.80	0.69	11.45	4.70	10.84	0.27
December 2017	12.15	-3.41	11.90	1.51	11.22	2.62	10.31	-4.67
January 2018	12.26	-2.55	11.49	-1.99	11.26	2.98	10.40	-3.80
February 2018	12.10	-3.81	11.39	-2.84	10.80	-1.28	10.06	-6.93
March 2018	12.82	1.88	11.49	-1.99	10.24	-6.39	9.66	-10.70
April 2018	12.64	0.47	11.20	-4.43	10.39	-5.03	9.29	-14.10
May 2018	12.67	0.66	11.49	-1.98	11.07	1.19	9.04	-16.43
June 2018	12.80	1.69	11.60	-1.05	11.16	2.08	8.86	-18.02
July 2018	12.37	-1.68	11.45	-2.34	11.08	1.30	8.36	-22.67
August 2018	12.67	0.70	11.37	-2.98	11.17	2.11	10.67	-1.31
September 2018	12.70	0.95	11.59	-1.17	11.16	2.01	10.70	-1.03
October 2018	12.76	1.44	11.96	2.05	10.99	0.51	10.51	-2.80
November 2018	12.55	-0.25	12.17	3.85	11.23	2.65	10.44	-3.47
December 2018	12.48	-0.78	12.38	5.60	11.65	6.51	10.53	-2.64
January 2019	12.26	-2.58	11.95	1.93	11.29	3.24	10.33	-4.42
February 2019	12.18	-3.19	11.77	0.41	10.88	-0.51	10.01	-7.38
March 2019	12.75	1.35	12.06	2.86	10.75	-1.68	10.06	-6.92
April 2019	13.29	5.64	11.65	-0.62	10.34	-5.46	10.13	-6.28
May 2019	12.81	1.79	11.52	-1.77	10.89	-0.46	10.52	-2.71
June 2019	11.64	-7.48	11.47	-2.16	11.29	3.25	10.54	-2.56
July 2019	11.18	-11.19	11.83	0.89	11.26	2.96	10.70	-1.08
August 2019	11.01	-12.52	11.56	-1.42	11.39	4.10	10.70	-1.08

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	9	281	0.1	0	0
2	9697	300594	55.1	0	0
3	6513	201897	37	0	0
4	55	1708	0.3	79	2.5
5	364	11291	2.1	65	2.1
6	122	3793	0.7	185	5.9
7	19	603	0.1	65	2.1
8	69	2150	0.4	46	1.5
9	570	17662	3.2	1361	43.6
10	80	2482	0.5	642	20.6
11	5	163	0	0	0
12	4	136	0	24	0.8
13	93	2885	0.5	656	21
TOTAL	17601	545644	100	3123	100

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>
2019-08-03	Saturday	12:26:55	10	WB	4	104.71
2019-08-04	Sunday	18:41:11	10	WB	4	104.19
2019-08-28	Wednesday	19:39:06	10	WB	4	103.68
2019-08-05	Monday	18:07:31	9	EB	2	103.43
2019-08-01	Thursday	20:15:27	10	WB	4	102.5
2019-08-28	Wednesday	16:37:50	10	WB	3	101.14
2019-08-31	Saturday	06:36:30	10	WB	4	100.64
2019-08-20	Tuesday	18:58:23	10	EB	1	100.2
2019-08-12	Monday	06:27:45	9	WB	4	99.79
2019-08-14	Wednesday	17:53:15	10	EB	1	99.14

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	EB	15	723	142	19.6	17414	1800	4350
5	EB	8	5681	912	16.1	64863	6547	13356
6	EB	19	2260	166	7.3	62573	2831	11394
7	EB	11.5	104	2	1.9	5532	22	2180
8	EB	31	1196	602	50.3	22388	13649	1987
9	EB	33	10855	4271	39.3	357339	128089	70033
10	EB	33.5	815	268	32.9	34868	7736	8272
11	EB	36.5	86	20	23.3	3562	461	577
12	EB	36.5	99	17	17.2	5428	543	1218
13	EB	31.5	291	0	0	25200	0	8017
TOTAL	****	****	22110	6400	****	599169	****	121382
<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	WB	15	972	139	14.3	30346	1741	8926
5	WB	8	5525	1218	22	59811	8696	12678
6	WB	19	1505	248	16.5	41384	4185	8751
7	WB	11.5	494	1	0.2	27406	9	10868
8	WB	31	938	586	62.5	13081	12684	1084
9	WB	33	6675	2462	36.9	241091	66865	51031
10	WB	33.5	1648	119	7.2	114844	3175	31811
11	WB	36.5	76	30	39.5	2053	746	187
12	WB	36.5	36	2	5.6	1725	42	242
13	WB	31.5	2572	0	0	197712	0	58347
TOTAL	****	****	20441	4805	****	729453	****	183925
GRAND TOTAL	****	****	42551	11205	413	1328622	259819	305306

Table 5 Gross Vehicle Weight by Class and Lane

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	148	28	33	124	334	0
2	394597	186799	151018	419244	1151657	29.1
3	434833	185383	145223	456935	1222374	30.8
4	16172	3042	2883	29204	51301	1.3
5	57296	14115	10734	57773	139917	3.5
6	58339	7065	2775	42795	110974	2.8
7	5157	397	1754	25660	32968	0.8
8	31323	4714	1780	23985	61802	1.6
9	442226	43202	14724	293232	793384	20
10	37886	4718	5667	112351	160622	4.1
11	3877	146	196	2603	6823	0.2
12	5421	550	139	1628	7738	0.2
13	23909	1291	7879	189833	222911	5.6
TOTAL	1511184	451449	344805	1655368	3962806	100
GVW/LANE	38.13	11.39	8.7	41.77	100	0

Table 6 ESALs by Class and Lane and Flexible ESAL Factors

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.0036
2	40	25	19	42	126	0.55	9e-04
3	144	70	49	147	410	1.78	0.0041
4	298	70	60	581	1009	4.39	1.19
5	517	95	65	566	1242	5.4	0.22
6	859	120	56	707	1742	7.57	0.93
7	100	6	38	357	503	2.18	1.68
8	388	46	15	250	698	3.04	0.66
9	6183	719	215	4651	11768	51.15	1.35
10	546	77	122	1956	2700	11.74	2.19
11	71	2	1	18	93	0.4	1.14
12	86	9	3	12	111	0.48	1.59
13	702	29	86	1786	2603	11.32	1.82
TOTAL	9935	1268	729	11074	23006	100	13
ESALS/LANE	43.2	5.5	3.2	48.1	100	-	-

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>
Sep 2018	547486	18250	1506	502315	91.7	45170.6	8.3	89.3	10.7
Oct 2018	529466	17080	1570	480795	90.8	48670.8	9.2	89.9	10.1
Nov 2018	430849	15388	1183	395350	91.8	35498.8	8.2	89	11
Dec 2018	433085	14436	902	405135	93.5	27950	6.5	89.7	10.3
Jan 2019	406644	13118	916	378257	93	28386.7	7	89.3	10.7
Feb 2019	369962	13213	920	344189	93	25772.6	7	88.3	11.7
Mar 2019	438978	14161	1022	407281	92.8	31697	7.2	89.5	10.5
Apr 2019	482019	16067	1245	444670	92.3	37348.8	7.7	90.3	9.7
May 2019	236187	7873	669	215440	91.2	20747.2	8.8	89.1	10.9
Jun 2019	158627	5470	585	141064	88.9	17562.6	11.1	90.6	9.4
Jul 2019	325723	19835	655	305421	93.8	20302.4	6.2	88.4	11.6
Aug 2019	545644	19757	1383	502772	92.1	42872.3	7.9	89.2	10.8
TOTAL	4904670	-	-	4522689	-	381980	-	-	-
AVERAGE	408722	14554	1046	376891	92	31832	8	89	11

###ESALS

<i>Month</i>	<i>ESALS EB Passing Lane</i>	<i>ESALS EB Driving Lane</i>	<i>ESALS WB Driving Lane</i>	<i>ESALS WB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Sep 2018	18309	1493	802	13104	33709	93	7	40.7
Oct 2018	21183	1561	720	13103	36568	94	6	42.3
Nov 2018	16981	1449	650	8651	27730	92	8	38.1
Dec 2018	12116	983	430	5471	19000	93	7	29.2
Jan 2019	11889	941	448	5234	18512	92	8	26.3

Feb 2019	10649	1069	422	4110	16250	91	9	32.8
Mar 2019	15090	1062	361	5540	22053	94	6	44.2
Apr 2019	19732	967	307	7119	28125	95	5	49.7
May 2019	9540	682	235	4839	15296	94	6	38.2
Jun 2019	12544	1004	510	8942	23000	93	7	22.8
Jul 2019	5016	764	370	5206	11356	90	10	3.8
Aug 2019	10078	1286	729	11121	23214	91	9	2.8
TOTAL	163127	13263	5985	92440	274814	-	-	-
AVERAGE	13594	1105	499	7703	22901	93	7	31

###Gross Vehicle Weight

<i>Month</i>	<i>GVW EB Passing Lane</i>	<i>GVW EB Driving Lane</i>	<i>GVW WB Passing Lane</i>	<i>GVW WB Driving Lane</i>	<i>Total GVW Kips</i>
Sep 18	1772922	435625	369201	1713661	4291408
Oct 18	1828907	443941	363248	1696927	4333023
Nov 18	1535083	394342	304696	1360820	3594942
Dec 18	1310112	327610	267904	1120597	3026224
Jan 19	1229340	286706	250586	1044234	2810866
Feb 19	1126534	266155	229583	907774	2530046
Mar 19	1408617	318406	250134	1119744	3096901
Apr 19	1646316	343358	277000	1276356	3543029
May 19	796985	176918	168702	754041	1896647
Jun 19	1154431	206749	265609	1228408	2855197
Jul 19	837616	248199	237830	953213	2276857
Aug 19	1516618	452124	344868	1657788	3971399
TOTAL	16163480	3900134	3329363	14833561	38226538
AVERAGE	1346957	325011	277447	1236130	3185545

###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>
Sep 2018	6002	1.1	13.3	2081	333
Oct 2018	6412	1.2	13.2	2356	381
Nov 2018	5096	1.1	13.3	1860	313
Dec 2018	3237	0.7	11.4	947	211
Jan 2019	3050	0.8	10.8	703	156
Feb 2019	2654	0.7	10.3	733	180
Mar 2019	3701	0.8	11.7	1601	305
Apr 2019	4614	1	12.4	2287	372
May 2019	2538	1.1	12	915	145

Jun 2019	3218	1	8.8	842	170
Jul 2019	1491	0.4	7.1	175	54
Aug 2019	3167	0.6	7.4	414	135
TOTAL	45180	-	-	14914	2755
AVERAGE	3765	0.9	11	1242.8	229.6

###Freight

<i>Month</i>	<i>EB Freight Tons</i>	<i>WB Freight Tons</i>	<i>Total Freight</i>	<i>EB Freight %</i>	<i>WB Freight %</i>
Sep 2018	177219	202462	379681	46.7	53.3
Oct 2018	205680	203542	409222	50.3	49.7
Nov 2018	168189	136273	304462	55.2	44.8
Dec 2018	123430	79692	203122	60.8	39.2
Jan 2019	122311	69881	192193	63.6	36.4
Feb 2019	110574	57944	168518	65.6	34.4
Mar 2019	147797	80463	228260	64.7	35.3
Apr 2019	184738	107111	291849	63.3	36.7
May 2019	92972	78551	171524	54.2	45.8
Jun 2019	134462	149183	283644	47.4	52.6
Jul 2019	63083	85875	148957	42.3	57.7
Aug 2019	121382	183925	305306	39.8	60.2
TOTAL	1651837	1434901	3086738	-	-
AVERAGE	137653.1	119575.1	257228.2	54.5	45.5