

COMMUTER RAIL SYSTEM
ON-TIME PERFORMANCE REPORT

July 2017



COMMUTER RAIL ON-TIME PERFORMANCE

July 2017

This report presents an analysis of the July 2017 train delays as reported for Metra's eleven commuter rail lines. On-time is defined, for this analysis, as those regularly scheduled trains arriving at their last station stop less than six minutes behind schedule. Trains that are six minutes or more behind schedule, including annulled trains (trains that do not complete their scheduled runs), are regarded as late. "Extra" trains (trains added to handle special events but not shown in the regularly published timetables) are excluded from on-time performance calculations unless shown in special-event schedules that include all intermediate station stop times and are distributed publicly via Metra's website or on paper flyers. Cancelled (not annulled) trains and non-revenue trains are also excluded from on-time performance calculations.

On-Time Performance Tables

Table 1 presents the number of train delays by rail line and service period. During July 2017, Metra operated 16,773 scheduled trains, including scheduled "extras", if any. 754 of these trains were delayed (late or annulled), representing an on-time performance rate of 95.5%. Table 2 lists on-time percentages by line for each month and year since 2012.

Table 3 lists each train that was on time for less than 85% of its weekday runs in July 2017, in order of line, train, and dates delayed. The codes in the 'Delay Code' column of Table 3 are defined in Table 4 and shown sorted by delay-cause category and carrier designation in Table 5. Effective January 1, 2012, January 1, 2014, and July 1, 2016, Metra is using an expanded set of delay codes, to provide more detail about the cause of and responsibility for each train delay.

Table 6.a shows the frequency of train delays by delay-cause control and by line during July 2017. Of the 754 delays systemwide in July 2017, all but 309 (41%) were beyond Metra's control. Table 6.b shows the average frequencies over the previous five Julys, and Table 6.c shows the differences between Table 6.a and Table 6.b., illustrating that in July 2017, 79 fewer delays than the average over the previous five Julys were controllable. Table 6.d shows the delay-cause control frequencies since the beginning of the year. Of the 4,514 delays in 2017, all but 2,179 (48%) were beyond Metra's control.

Table 7 provides a daily listing of the number of delays by line and branch for July 2017.

Table 8.a shows the frequency of train delays by delay-cause category and by line during July 2017. Table 8.b shows the average frequencies over the previous five Julys, and Table 8.c shows the differences between Table 8.a and Table 8.b. There were 754 delays systemwide in July 2017, 138 less than the average over the previous five Julys. Table 9.a shows delays from the beginning of the year through July 2017. Table 9.b shows the average frequencies from the beginning of the year through July of each of the previous five years, and Table 9.c shows the differences between Table 9.a and Table 9.b. Tables 10.a and 10.b display the systemwide frequency of train delays by cause and by month, for 2017 and 2016 respectively, and Table 10.c shows the difference between the two. From January through July of 2017, a total of 4,514 trains were delayed, compared to 4,605 trains delayed in the same seven months of 2016.

In Tables 8 through 10, delays by cause are separated into 'Metra/PSA' and 'Foreign' designations, where applicable. 'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation. 'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific

freight operations. See Table 5 for a detailed breakdown of delay codes by cause category and carrier designation.

Table 11 shows, by line and month, all train delays caused by freight operations over the past 24 months. In July 2017 freight operations delayed 74 trains systemwide, compared to 82 a year earlier. Tables 12.a and 12.b display the frequency of lift-deployment train delays by line and month, for 2017 and 2016 respectively. A total of 29 trains were delayed by lift deployment in July 2017.

A review of July 2017 late trains by duration of delay is shown in Table 13. The range with the greatest number of delays was, as usual, six-to-ten minutes, accounting for 46.2% of all late trains. Table 14 shows that the average length of delay was 18.8 minutes in July 2017. It should be noted that these averages relate only to reportable delays (i.e., trains late by six minutes or more).

Changes in On-Time Performance Reporting Calculations

“Extra” Trains

“Extra” trains (trains added to handle special events but not shown in the regularly published schedules) are excluded from on-time performance calculations, except for those “extra” trains whose special-event schedules include all intermediate station stop times and are distributed publicly via Metra's website or on paper flyers.

Intermediate station departure times and final station arrival times for some “extra” trains are either unknown (departures of some “extra” trains are held until after the completion of the respective special event) or not published. On-time performance for these two types of “extra” trains cannot be calculated, as arrival times are not known ahead of time; these trains are therefore excluded from on-time performance calculations. However, on-time performance can be calculated for “extra” trains that have full published schedules.

Temporary Schedules and Notices, for Construction and Special Events

Planned construction projects or special events can adversely affect on-time performance. Metra occasionally publishes full temporary schedules, which supersede the standard published schedules, to inform riders of possible delays or modifications to regular service. Metra also may publish informational notices to accompany temporary schedules. On-time performance is calculated using the temporary schedules and any accompanying notices.

**TABLE 1: SCHEDULED AND DELAYED TRAINS, AND ON-TIME PERFORMANCE BY SERVICE PERIOD AND LINE
July 2017**

	Weekdays									Weekends						Total		
	Peak*			Off-Peak**			Total			Saturdays			Sundays & Holidays			Trains Scheduled	Trains Late	Percent On-Time
	Trains Scheduled	Trains Late	Percent On-Time	Trains Scheduled	Trains Late	Percent On-Time	Trains Scheduled	Trains Late	Percent On-Time	Trains Scheduled	Trains Late	Percent On-Time	Trains Scheduled	Trains Late	Percent On-Time			
BNSF	1,080	43	96.0%	807	30	96.3%	1,887	73	96.1%	147	5	96.6%	114	3	97.4%	2,148	81	96.2%
Elec -ML	900	8	99.1%	680	13	98.1%	1,580	21	98.7%	230	1	99.6%	120	14	88.3%	1,930	36	98.1%
-BI	280	3	98.9%	460	3	99.3%	740	6	99.2%	150	1	99.3%		--		890	7	99.2%
-SC	<u>340</u>	<u>1</u>	99.7%	<u>740</u>	<u>3</u>	99.6%	<u>1,080</u>	<u>4</u>	99.6%	<u>240</u>	<u>2</u>	99.2%	<u>120</u>	<u>5</u>	95.8%	<u>1,440</u>	<u>11</u>	99.2%
Subtotal	1,520	12	99.2%	1,880	19	99.0%	3,400	31	99.1%	620	4	99.4%	240	19	92.1%	4,260	54	98.7%
Heritage	120	11	90.8%	20	2	90.0%	140	13	90.7%	--			--			140	13	90.7%
Milw -N	499	57	88.6%	701	70	90.0%	1,200	127	89.4%	120	26	78.3%	120	14	88.3%	1,440	167	88.4%
-W	<u>539</u>	<u>16</u>	97.0%	<u>621</u>	<u>23</u>	96.3%	<u>1,160</u>	<u>39</u>	96.6%	<u>120</u>	<u>6</u>	95.0%	<u>108</u>	<u>7</u>	93.5%	<u>1,388</u>	<u>52</u>	96.3%
Subtotal	1,038	73	93.0%	1,322	93	93.0%	2,360	166	93.0%	240	32	86.7%	228	21	90.8%	2,828	219	92.3%
NCS	220	10	95.5%	220	13	94.1%	440	23	94.8%	--			--			440	23	94.8%
RI	720	34	95.3%	760	37	95.1%	1,480	71	95.2%	160	9	94.4%	168	5	97.0%	1,808	85	95.3%
SWS	220	8	96.4%	380	10	97.4%	600	18	97.0%	30	0	100.0%	--			630	18	97.1%
UP -N	594	28	95.3%	784	21	97.3%	1,378	49	96.4%	134	16	88.1%	111	6	94.6%	1,623	71	95.6%
-NW	654	49	92.5%	642	32	95.0%	1,296	81	93.8%	121	19	84.3%	91	18	80.2%	1,508	118	92.2%
-W	<u>537</u>	<u>29</u>	94.6%	<u>643</u>	<u>33</u>	94.9%	<u>1,180</u>	<u>62</u>	94.7%	<u>100</u>	<u>5</u>	95.0%	<u>108</u>	<u>5</u>	95.4%	<u>1,388</u>	<u>72</u>	94.8%
Subtotal	1,785	106	94.1%	2,069	86	95.8%	3,854	192	95.0%	355	40	88.7%	310	29	90.6%	4,519	261	94.2%
SYSTEM	6,703	297	95.6%	7,458	290	96.1%	14,161	587	95.9%	1,552	90	94.2%	1,060	77	92.7%	16,773	754	95.5%

*Includes peak direction trains operating during weekday peak periods. **Includes all other weekday trains.

Delays data for most recent month is final (08/21/17) version from TOPS.

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TABLE 2: ON-TIME PERFORMANCE BY LINE/BRANCH

LINE	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN- JUL	AVG
BNSF	2012	94.4	97.3	95.2	98.4	97.2	91.8	95.0	94.2	98.0	96.9	95.0	98.5	95.6%	96.0%
	2013	95.8	93.9	94.6	93.3	96.0	88.5	95.2	97.1	97.2	94.0	95.8	92.2	94.0%	94.5%
	2014	78.6	84.6	95.6	92.0	82.2	82.0	94.1	91.4	94.1	92.2	95.2	94.1	87.1%	89.7%
	2015	90.9	90.1	96.8	97.5	96.6	92.4	93.0	95.4	95.8	93.6	93.5	97.4	93.9%	94.4%
	2016	93.2	93.8	95.9	96.8	94.0	93.5	93.8	91.4	91.3	95.2	95.4	93.1	94.4%	94.0%
	2017	95.9	95.6	96.2	96.3	95.4	93.7	96.2						95.6%	95.6%
	2012-2016 average	90.5	92.0	95.6	95.6	93.2	89.7	94.2	93.9	95.2	94.4	95.0	95.1	93.0%	93.7%
Electric	2012	93.7	98.4	97.9	98.7	98.0	97.0	97.3	97.7	97.5	96.6	97.1	98.2	97.3%	97.3%
	2013	98.1	99.0	98.5	98.0	98.0	98.3	92.4	96.4	97.2	97.3	96.9	97.0	97.4%	97.2%
	2014	93.7	95.3	97.7	98.8	98.3	97.4	96.7	98.1	98.7	98.4	98.6	98.7	96.8%	97.5%
	2015	96.3	95.4	98.4	98.4	98.3	97.7	96.5	98.2	97.9	97.8	97.8	99.0	97.3%	97.6%
	2016	98.0	98.6	98.8	98.9	98.9	96.5	97.9	98.5	97.1	98.6	97.7	97.7	98.2%	98.1%
	2017	95.6	98.9	98.3	98.9	98.7	97.1	98.7						98.0%	98.0%
	2012-2016 average	95.9	97.4	98.3	98.5	98.3	97.4	96.1	97.8	97.7	97.7	97.6	98.1	97.4%	97.6%
Heritage	2012	95.2	99.2	94.7	98.4	97.7	92.1	91.3	95.7	98.2	94.9	92.9	96.7	95.5%	95.6%
	2013	97.0	99.2	94.4	97.7	94.7	92.5	97.7	99.2	97.5	96.4	98.3	92.1	96.2%	96.4%
	2014	79.5	75.8	88.1	93.2	92.1	94.4	94.7	93.7	92.1	97.8	96.5	98.5	88.4%	91.4%
	2015	92.1	90.0	96.2	88.6	85.8	89.4	92.0	85.7	86.5	98.5	85.0	90.9	90.7%	90.2%
	2016	90.0	92.9	97.4	97.3	95.2	94.8	87.9	94.4	94.6	98.0	94.6	91.8	93.8%	94.2%
	2017	93.9	94.3	96.9	96.4	94.2	89.0	90.7						93.6%	93.6%
	2012-2016 average	90.7	91.5	94.3	95.1	93.3	92.7	92.7	93.9	93.7	97.1	93.5	93.9	92.9%	93.6%
Milw - N	2012	95.1	96.4	94.0	95.3	93.5	93.2	84.8	92.9	94.3	94.9	95.4	95.5	93.2%	93.8%
	2013	95.5	92.4	94.1	95.7	95.3	89.6	92.8	93.6	94.4	93.3	95.7	87.5	93.7%	93.3%
	2014	73.1	81.9	89.5	97.9	95.1	91.1	96.0	95.2	95.5	96.2	95.4	93.5	89.3%	91.7%
	2015	91.8	87.9	93.5	95.1	95.4	94.8	97.1	94.9	95.6	97.9	97.0	96.8	93.7%	94.9%
	2016	95.3	94.2	95.7	96.8	92.5	92.9	95.0	93.1	93.8	97.5	95.1	93.8	94.6%	94.6%
	2017	95.3	95.6	96.5	96.1	95.9	93.4	88.4						94.5%	94.5%
	2012-2016 average	90.1	90.6	93.4	96.2	94.4	92.3	93.2	93.9	94.7	95.9	95.7	93.4	92.9%	93.7%
Milw - W	2012	94.4	95.1	95.3	97.5	97.1	95.6	93.7	94.1	89.3	93.9	94.6	95.5	95.5%	94.7%
	2013	96.6	91.3	96.3	95.8	96.2	90.9	93.2	93.2	92.6	96.5	93.9	93.7	94.4%	94.2%
	2014	84.8	88.4	91.4	97.6	95.9	92.2	94.0	93.5	96.7	95.5	97.7	94.6	92.1%	93.5%
	2015	93.6	93.0	94.8	97.7	97.2	95.4	96.6	96.8	97.8	99.0	98.2	96.5	95.5%	96.4%
	2016	94.0	95.3	94.4	96.0	94.9	93.6	92.1	95.2	97.4	97.0	95.6	93.3	94.3%	94.9%
	2017	96.9	95.2	95.2	95.6	97.5	95.8	96.3						96.1%	96.1%
	2012-2016 average	92.7	92.7	94.4	96.9	96.2	93.5	94.0	94.6	94.8	96.4	96.0	94.7	94.4%	94.7%
NCS	2012	94.8	94.4	94.4	85.1	95.2	94.8	82.5	91.9	95.7	93.9	92.0	94.8	91.6%	92.4%
	2013	95.0	87.5	93.7	90.9	94.0	92.7	93.6	95.0	92.5	93.1	90.0	87.4	92.6%	92.2%
	2014	76.0	81.1	88.5	96.3	88.5	89.2	94.0	88.5	95.2	90.9	97.8	91.9	87.8%	89.9%
	2015	93.9	82.5	92.6	94.8	95.7	94.8	96.0	92.6	95.2	97.1	96.1	93.6	93.0%	93.8%
	2016	92.3	95.5	91.7	93.3	94.4	96.3	95.0	96.4	96.1	95.5	95.2	92.6	94.0%	94.5%
	2017	92.6	91.6	95.1	95.2	95.5	95.7	94.8						94.4%	94.4%
	2012-2016 average	90.4	88.3	92.2	92.1	93.6	93.6	92.3	93.0	95.0	94.0	94.2	92.1	91.8%	92.6%

TABLE 2 (continued): ON-TIME PERFORMANCE BY LINE/BRANCH

LINE	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN- JUL	AVG
RI	2012	94.3	96.8	94.8	96.1	95.8	94.1	92.9	93.7	96.8	95.6	97.1	96.4	95.0%	95.3%
	2013	96.5	98.1	97.9	94.0	95.5	91.5	93.6	95.5	98.3	96.5	91.7	94.0	95.3%	95.3%
	2014	82.5	83.4	93.4	95.3	95.7	92.5	95.1	97.2	96.6	97.3	97.9	98.6	91.2%	93.8%
	2015	97.4	95.3	98.9	98.7	97.8	97.4	94.2	97.0	96.3	97.3	97.1	97.4	97.1%	97.1%
	2016	92.6	96.2	95.8	96.5	97.9	96.2	93.5	96.3	96.0	98.2	97.9	95.3	95.5%	96.1%
	2017	95.2	97.1	97.8	98.0	94.6	96.0	95.3						96.3%	96.3%
	2012-2016 average	92.6	94.0	96.2	96.1	96.5	94.4	93.9	96.0	96.8	97.0	96.4	96.3	94.8%	95.5%
SWS	2012	94.2	96.6	94.8	95.3	95.8	93.2	95.3	94.5	93.8	94.3	93.7	96.3	95.0%	94.8%
	2013	94.7	97.1	97.3	97.7	95.0	91.0	98.0	96.8	97.1	98.2	93.2	91.1	95.8%	95.6%
	2014	83.0	92.0	93.5	94.9	93.2	92.8	93.9	95.2	94.2	92.0	90.2	96.2	91.9%	92.6%
	2015	94.7	89.7	95.6	96.1	96.3	91.1	92.4	93.8	97.6	96.8	96.0	94.4	93.7%	94.5%
	2016	95.6	97.2	97.8	95.6	91.9	95.3	94.1	93.3	91.6	97.4	96.6	96.2	95.4%	95.2%
	2017	96.2	94.1	96.4	97.3	92.8	97.1	97.1						95.8%	95.8%
	2012-2016 average	92.4	94.6	95.8	95.9	94.4	92.7	94.7	94.7	94.9	95.7	94.0	94.9	94.4%	94.6%
UP - N	2012	94.6	98.4	97.9	98.1	95.1	95.1	95.9	95.1	96.3	97.3	96.6	95.8	96.4%	96.4%
	2013	98.3	97.3	97.9	96.6	96.7	93.0	96.0	94.9	97.0	96.5	96.9	98.0	96.6%	96.6%
	2014	91.2	92.1	97.4	97.8	97.4	97.2	97.6	98.1	97.6	97.4	97.8	98.3	95.8%	96.7%
	2015	98.6	95.6	98.3	97.1	97.7	98.2	97.0	95.9	98.2	97.0	97.6	98.4	97.5%	97.5%
	2016	96.9	98.6	97.1	98.3	98.3	98.2	97.0	96.0	98.1	99.1	98.0	98.1	97.8%	97.8%
	2017	95.6	99.0	98.3	97.0	97.3	97.3	95.6						97.2%	97.2%
	2012-2016 average	95.9	96.4	97.7	97.6	97.0	96.4	96.7	96.0	97.4	97.4	97.4	97.7	96.8%	97.0%
UP - NW	2012	95.9	98.6	96.4	98.9	95.9	96.0	94.8	96.7	97.8	94.2	94.6	96.6	96.6%	96.3%
	2013	96.3	97.7	96.0	95.1	93.3	89.2	93.9	93.7	96.3	94.6	94.6	94.2	94.5%	94.6%
	2014	86.6	91.1	96.3	98.6	95.6	95.2	94.7	97.4	98.3	95.0	97.1	96.2	94.0%	95.2%
	2015	96.0	91.6	97.6	96.3	96.9	96.8	94.1	96.5	96.1	97.5	96.7	97.5	95.7%	96.2%
	2016	97.0	98.1	97.8	98.1	96.0	96.6	94.9	96.8	96.9	96.5	93.2	93.4	96.9%	96.3%
	2017	96.2	97.4	98.1	93.7	97.2	93.3	92.2						95.5%	95.5%
	2012-2016 average	94.3	95.5	96.8	97.4	95.5	94.8	94.5	96.2	97.1	95.6	95.2	95.6	95.5%	95.7%
UP - W	2012	93.1	97.1	95.2	95.5	95.6	92.4	93.8	94.3	97.2	97.2	96.0	96.4	94.7%	95.3%
	2013	96.5	96.2	96.9	94.4	93.7	89.2	95.0	93.0	96.6	96.6	94.0	91.5	94.6%	94.5%
	2014	85.9	90.9	94.4	96.7	96.4	94.8	96.4	94.3	96.7	94.6	95.9	96.2	93.7%	94.4%
	2015	93.9	91.1	96.1	96.3	97.5	93.9	93.9	95.9	96.0	96.1	97.3	96.8	94.7%	95.4%
	2016	97.8	93.4	97.2	96.7	90.1	94.4	96.6	96.0	96.2	95.6	94.0	92.9	95.2%	95.1%
	2017	95.0	96.5	96.1	92.9	93.8	92.4	94.8						94.5%	94.5%
	2012-2016 average	93.4	93.7	96.0	95.9	94.6	93.0	95.1	94.7	96.5	96.0	95.4	94.7	94.5%	94.9%
SYSTEM excluding South Shore	2012	94.3	97.4	96.1	97.2	96.3	94.7	94.0	95.2	96.2	95.9	95.8	96.9	95.7%	95.8%
	2013	96.8	96.1	96.7	95.7	95.9	92.4	94.0	95.2	96.4	95.9	95.1	93.8	95.4%	95.4%
	2014	85.6	89.3	94.9	96.8	94.5	93.1	95.6	95.7	96.8	95.9	96.9	96.5	92.8%	94.3%
	2015	94.9	92.5	97.0	97.2	97.2	95.8	95.3	96.3	96.8	97.0	96.8	97.5	95.7%	96.2%
	2016	95.8	96.4	96.8	97.4	95.8	95.5	95.4	95.7	95.7	97.4	96.2	95.2	96.2%	96.1%
	2017	95.6	96.9	97.2	96.6	96.5	95.3	95.5						96.2%	96.2%
	2012-2016 average	93.4	94.4	96.3	96.9	96.0	94.3	94.9	95.6	96.4	96.4	96.2	96.0	95.2%	95.6%

Delays data for most recent month is final (08/21/17) version from TOPS.

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'2012-2016 average' calculated by summing the delays over the five years, summing the trains run over the five years, and calculating their ratio.

**TABLE 3: LIST OF WEEKDAY TRAINS LESS THAN 85% ON-TIME
July 2017**

Line	Train	Date	Minutes Delay		Delay Explanation
			Late	Code	
HC	918 80% OT	Wed, Jul 05	19	D	17M DELAY CORWITH ACCT X-TRAFFIC, QSBDCI302L ENG. BNSF8173 WITH 86 CARS.
		Mon, Jul 17	10	D	10M DELAY CORWITH ACCT X-TRAFFIC EAST QSTOCHI613L ENG BN3769 W/64C, 6500'
		Thu, Jul 20	13	GF1	20M DOWN DUE TO FREIGHT AHEAD EXPERIENCING SWITCH FAILURE AT CP ROMEOVILLE.
		Mon, Jul 31	6	D	ARRIVED CUS 6M LATE, 12' AT BRIGHTON PARK.
MN	2115 80% OT	Mon, Jul 03	46	E	45" MECHANICAL PROBLEMS ENGINE #100. UNABLE TO MAKE TRACK SPEEDONLY GETTING UP TO 10-30 MPH;5" WAITING ON #2136 TO CLEAR, RONDOUT.
		Fri, Jul 07	18	JM	4" STOP TO COPY CANCELLATION OF FREMANS CANCEL'S FORM B N2471; 16" MEDICAL EMERGENCY, LIBERYVILLE
		Wed, Jul 12	0	KW1	ANNULLED FLOODING, WASHOUT & TREE'S DOWN
		Mon, Jul 31	12	CC	10" STOP SIGNAL, MAYFAIR; WAITING ON #2132 TO CLEAR. X/O 1-2MT MAYFAIR-MORTON GROVE
MN	2122 80% OT	Mon, Jul 10	18	G1	4" STOP SIGNAL, RONDOUT; 5" SLOW PASSENGER LOADING DUE TO B/O CAR #8209 FLOODED CAR CLOSED DOWN; 10" FOLLOWING #2120 TO CUS
		Wed, Jul 12	0	XKW	ANNULLED FLOODING, WASHOUT MP42 RT120; 3 TREE'S DOWN, LIBERTYVILLE
		Thu, Jul 20	22	EA1	16" STOPPED DISABLED AMTRAK 330, DEERFIELD; 10" FOLLOWING #2120/AMTRAK 330 COMBO
		Fri, Jul 21	6	CC	4" LATE DEPARTING TRACK CONSTRUCTION, FOX LAKE
MN	2125 70% OT	Thu, Jul 06	8	U	3" EACH ADA'S, GLENVIEW, LAKE COOK & LIBERTYVILLE
		Fri, Jul 07	12	G	12" RESTRICTED SPEED RONDOUT TO LIBERTYVILLE MILWAUKEE AVE, SIGNAL PROBLEM
		Wed, Jul 12	36	KW1	36" WAITING ON #1246
		Fri, Jul 14	8	U1	12" WAIT FOR #2146 TO CLEAR, RONDOUT
		Thu, Jul 20	9	KP1	5" WAIT FOR #2146 TO CLEAR, RONDOUT; 3" ADA, LIBERTYVILLE
		Fri, Jul 21	10	GW1	5" WAIT FOR LATE #2146 TO CLEAR, RONDOUT; 3" ADA, LIBERTYVILLE GLENVIEW LIGHTNING STRIKE.
MN	2132 80% OT	Mon, Jul 03	15	I	11" SLOW PASSENGER LOADING; 4" STOPPED TO COPY TEMPORARY SPEED RESTRICTION, MAYFAIR;2" ADA TO CUS, HEALY;10 MPH ON #1, A-6.
		Thu, Jul 06	7	CC	6" STOP SIGNAL, WAITING ON O/B, DEERFIELD; 3" X/O DERFFIELD TO A-20; 5" HEAVY/SLOW PASSENGER LOADING(TASTE/CUB)
		Fri, Jul 07	10	I	5" PASSENGER LOADING; 3" UNSPECIFIED YELLOW/RED FLAG, MP8.5 FOREMAN CANCEL; 2" ADA, LAKE COOK RD; 3" TALKING W/FOREMAN CANCEL OVER UNSP
		Mon, Jul 17	8	KW	6" RECEIVED PARTIAL MOVEMENT AUTHORITY FOX LK-INGLESIDE & HOLD MT POSSIBLE WASHOUT MP46; 3" ADAM INGLESIDE-LIBERTYVILLE; 3" ADA, GLENVIEW
MN	2135 74% OT	Wed, Jul 12	0	KW1	ANNULLED WASHOUT MAIN LINE NEAR LIBERTYVILLE
		Thu, Jul 13	6	U	2" STOP SIGNAL, MAYFAIR; 2" ADA, LIBERTYVILLE; 2" SPEED RESTRICTIONS, EN ROUTE
		Wed, Jul 19	6	I	5" SLOW PASSENGER LOADING, EN ROUTE; 3" ADA, LIBERTYVILLE
		Thu, Jul 20	6	I	3" ADA, LIBERTYVILLE; 5" SLOW PASSENGER LOADING, EN ROUTE
		Fri, Jul 21	21	GW	21" SIGNAL PROBLEMS, MORTON GROVE- A-20. GLENVIEW LIGHTNING STRIKE.
MN	2136 60% OT	Fri, Jul 07	15	JM1	15" WAIT ON @2115 TO CLEAR MT, GRAYSLAKE
		Mon, Jul 10	7	I	7" PASSENGER LOADING
		Wed, Jul 12	32	KW1	28" TURNED FOR #2127; STOP SIGNAL, CN
		Thu, Jul 13	8	R	9" AIR PROBLEM CREW DUMPED AIR, FOX LAKE
		Fri, Jul 14	12	S	14" UNSPECIFIED YELLOW-RED FLAG
		Mon, Jul 17	8	CC	7" TRACK WORK; 5" ITEM 1, CANAL ST
		Tue, Jul 25	8	U	8" TRYING TO CONTACT FOREMAN ALEXANDER(GRAND AVE); 6" 2 ADA'S
		Mon, Jul 31	8	CC1	8" WAITING ON LATE #2115 TO CLEAR
MN	2140 80% OT	Wed, Jul 12	25	KW1	25" TURNED FOR #2235
		Fri, Jul 14	13	G	3" APPROACH, MP 42.6;3" RESTRICTING, MP 41.8;3" RESTRICTED SPD;3" CLEAR SIGNAL, MP 18.6;3" EFFICIENCY TESTING.
		Thu, Jul 20	8	D1	7" WAITING ON #2119 TO TAKE SIDING, GRAYSLAKE
		Fri, Jul 28	12	U	14" LATE, 15' ENROUTE 3 ADA LIFTS;HEAVY PASSENGER LOADING
MN	2143 80% OT	Wed, Jul 05	13	D	5" FOLLOWING #2141; 12" STOP SIGNAL CN XING
		Wed, Jul 12	8	D1	16" FOLLOWING #2141
		Mon, Jul 17	14	H	11" BRAKE PROBLEMS W/ LOCO 115; 5" COPYING ITEM 2 FOR HOWARD ST
		Fri, Jul 21	8	GW	10" SIGNAL PROBLEMS, MORTON GROVE-A-20. GLENVIEW LIGHTNING STRIKE.
MN	2148 80% OT	Thu, Jul 06	8	A	8" LATE TURN FROM #2127; MAYFAIR
		Wed, Jul 19	7	F	3" LATE TURN FROM #2127; 4" CREW HAD STOW DRAGGING AIR HOSE, B-END CAR 8537
		Fri, Jul 21	25	GW	17" SIGNAL PROBLEMS, MORTON GROVE- A-20. GLENVIEW LIGHTNING STRIKE.
		Mon, Jul 31	6	CC1	6" LATE TURN FROM #2127
MN	2149 80% OT	Thu, Jul 06	12	H	12" SWAPPING EQUIPMENT W/#2147/2158 AT GRAYSLAKE, #2147 LOCO 420 LOST HEP AFTER ARRIVING
		Wed, Jul 12	9	KW1	11" WAITING ON #2156 TO CLEAR J-LINE
		Thu, Jul 20	25	VE	27" SWAPPED EQUIPMENT W #2158, LOCO 215 LOST HEP TWICE WHILE INTHE SIDING, GRAYSLAKE
		Fri, Jul 21	15	GW1	17" WAITING ON #2156, GLENVIEW LIGHTNING STRIKE.
MN	2155 75% OT	Wed, Jul 12	19	KW1	18" LATE TURN FROM #2158
		Fri, Jul 14	8	D1	8" WAITING ON #2160, RONDOUT
		Wed, Jul 19	7	D1	5" LATE TURN FROM #2158
		Fri, Jul 21	12	A	6" X-TRAFFIC, MAYFAIR
		Wed, Jul 26	23	GT	26" CTC LOST BOARD, HAND LINE ROUTE, RONDOUT

**TABLE 3 (continued): LIST OF WEEKDAY TRAINS LESS THAN 85% ON-TIME
July 2017**

Line	Train	Date	Minutes Delay		Delay Explanation	
			Late	Code		
RI	508	Wed, Jul 05	8	I	3M 35MPH @ MP35.5, 2M MOKENA WAITING ON RI505, 2M BROADWAY WAITING ON RI507, 2M NEW LENOX, 80TH AVE, OAK FOREST, 111TH ACCOMMODATING PASSENGER	
		70% OT	Fri, Jul 07	11	I	1" JOLIET, NO REASON GIVEN. 3" JOLIET COACH YARD PICK UP. 1" EJE CROSSING WAITING FOR CN TESTMAN TO CLEAR (CN DEVITO).2M MID ADA/4M ENROUTE
		Mon, Jul 10	8	DE1	8M LATE SINGLE TRACKING AROUND FREIGHT TRAIN & SINGLE TRACKING AROUND UNPLANNED TRACK WORK ON BSD	
		Mon, Jul 17	28	E1	16M LATE DEPARTING JOLIET DUE TO LATE TURN OF EQUIPMENT FROM EARLIER DELAY/12M ENROUTE SLOW LOADING & SINGLE TRACKING @ 16TH ST DUE TO TRACK	
		Tue, Jul 25	8	U	6M FOR ADA'S FROM BLUE ISLAND TO ROBBINS	
		Fri, Jul 28	18	U	6" MOKENA WAITING FOR RI505 TO CLEAR (IA516 ON TK1). 12" ADAS (MIDLOTHIAN TO 103, ROBBINS TO 95)	
RI	509	Wed, Jul 12	15	N	5M 16TH ST INTERMITTENT TRACK CIRCUIT DOWN TK#2/5M & 5M CP 46TH ST CP PERSHING POWER OUTAGE DUE TO WEATHER	
		80% OT	Mon, Jul 17	21	E1	22M LATE DEPARTING LSS DUE TO TRAINS ARRIVING LATE IN THE YARD TO MAKE-UP OUTBOUND DEPARTURES/ACCT RI608 W/MECH PROBLEMS
		Mon, Jul 24	20	RD	20M EJE FOR X-TRAFFIC, CNL521, BN3803+2 W/ 140 CARS, 9843 FT.	
		Fri, Jul 28	6	U1	2" GRESHAM WAITING FOR RI508 TO CLEAR. 1" 95TH GATE MALF. 2 1/2" BI RED SIGNAL (GROVE&ROBBINS). 1 1/2" NEW LENOX WAITING FOR RI512 TO CLEAR.	
UPN	317	Wed, Jul 12	21	KW1	20" LATE TURN FROM #308 OF TRAIN CREW	
		80% OT	Thu, Jul 20	13	H1	17" LATE TURN OFF CRWE OF #308
		Tue, Jul 25	6	E	6" STOP @ MP16.75 ACCT UNABLE TO GET CLEARANCE ON FORM B, B/O RADIO ON METX133 CONDUCTOR USED CAB RADIO FOR CLEARANCE; 50MPH, DAVIS ST	
		Wed, Jul 26	0	M1	ANNULLED & TURNED @ CENTRAL ST TO MAKE ALL STOPS TO CPT DUE TO #320 STRUCK PEDESTRIAN @ WILMETTE	
UPNW	630	Mon, Jul 10	7	D1	7" BEHIND #628 @ BARRINGTON; XH, MP10.31	
		80% OT	Thu, Jul 13	74	E1	74" STOPPED NORTH OF MT PROPECT ACCT #620 ENGINE TROUBLE & #622 TYING ON, WAIT FOR COMBO TO CLEAR DEVAL; FOLLOWING TRAINS AHEAD
		Fri, Jul 21	153	M1	153" STOPPED NORTH OF BARRINGTON DUE TO #626 STRUCK TRESPASSER @MP22.31	
		Mon, Jul 31	29	H1	29" FOLLOW TRAINS AHEAD	
UPNW	640	Mon, Jul 10	7	I	7" HEAVY PASSENGER LOADING, ALL STOPS	
		80% OT	Tue, Jul 18	13	U	13" 2 ADA'S; WAIT FOR FREIGHT TO CLEAR, DEVAL
		Fri, Jul 21	46	M1	43" LATE DEPARTING ACCT #626 STRUCK TRESPASSER @M P22.31	
		Tue, Jul 25	31	CC	31" SINGLE TRACK(SURFACING), MP45.7-41.9	
UPNW	655	Fri, Jul 21	10	GW	10" RESTRICTED SIGNAL @ CN DIAMOND, RAN RESTRICTED SPEED TO NEXT SIGNAL(BAD INSULATED PLATE)	
		84% OT	Thu, Jul 27	59	M1	59" STAGED @ CPT ACCT #647 STRUCK PEDESTRIAN @ MP16.86
		Mon, Jul 31	10	E1	10" RAN RESTRICTED SPEED THROUGH ARLINGTON PARK DUE TO #653 MAKING COMBO TRAIN W/#647; SLOW LOADING PASSENGERS FROM #653 GOING TO CRYSTAL	
UPNW	656	Fri, Jul 07	7	E1	7" LATE TURN FROM #633	
		79% OT	Tue, Jul 18	13	N	13" COPY & COMPLY W/ 2 XH ORDERS @ MP23.08 & 23.78; LATE TURN FROM EQUIPMENT FROM #633
		Mon, Jul 24	14	D1	16" LATE TURN FROM #633 THAT WAS BLOCKED BY Q11651-19 CLEARING THE CN BARRINGTON INT	
		Thu, Jul 27	113	M1	113" LATE DEPARTING BARRINGTON ACCT #647 STRUCK PEDESTRIAN @ MP16.86	
UPW	35	Tue, Jul 18	10	I	15" SLOW/HEAVY LOADING, WHEATON; SLOW & HEAVY UNLOADING, WINFIELD; XH ORDER, MP24.85	
		80% OT	Mon, Jul 24	15	S	15" MEET #50, PARK; FTX, PARK; XH, WOLF RD
		Tue, Jul 25	15	S	6" WAIT FOR EQUIP TO BE CLEANED DUE TO NO POWER TO EQUIPMENT TILL1320, CPT; COPY XH, MP13.75; WAIT FOR CLEAR SINGLE TRK, PARK; FORM B CANC	
		Wed, Jul 26	8	I	8" TRAIN CONTROL 25TH AVE MEET #50; TRAIN CONTROL, WINFIELD- WEST CHICAGO	
UPW	51	Thu, Jul 06	6	RF1	6" FOLLOWING #49	
		84% OT	Fri, Jul 21	10	K	10" REPORT OF BRIDGE STRIKE, MP8.12 WIT FOR TRACKS TO BE RELEASED
		Thu, Jul 27	34	J1	34" #41'S PD ACTIVITY @ ELMHURST	
UPW	55	Wed, Jul 12	10	D	10" M34041-10, CN	
		84% OT	Fri, Jul 21	10	K	10" REPORT OF A BRIDGE STRIKE @ MP8.12 WAIT FOR TRACK TO BE RELEASED
		Thu, Jul 27	35	J1	35" #41'S PD ACTIVITY @ ELMHURST	

Data is final (08/21/17) version from TOPS.

TABLE 4: DELAY INCIDENT CODES AND DEFINITIONS

Codes						Codes					
Primary	Secondary	Annulled	Definition	Delay Class	Responsibility	Primary	Secondary	Annulled	Definition	Delay Class	Responsibility
A	A1	XA	Passenger Train Interference	Transportation	Controllable	L	L1	XL	Unauthorized People On Tracks/Near Miss	Incidental	Uncontrollable
AA	AA1	XAA	Rule 9.9 Delayed in Block/Rule 6.30	Transportation	Controllable	M	M1	XM	Right of Way Accident/Misc.	Incidental	Uncontrollable
AD	AD1	XAD	Non-Revenue Passenger Train Interference	Transportation	Controllable	MW	MW1	XMW	Right of Way Accident/Misc., Weather	Incidental	Uncontrollable
AM	AM1	XAM	Amtrak Caused Delay	Transportation	Controllable	N	N1	XN	Electricity Utility Failure	Incidental	Uncontrollable
AS	AS1	XAS	NICTD Train Interference	Transportation	Controllable	NW	NW1	XNW	Electricity Utility Failure, Weather	Incidental	Uncontrollable
AW	AW1	XAW	Pass. Train Interference, Weather	Transportation	Uncontrollable	O	O1	XO	AC/DC System Failure	Engineering	Controllable
B	B1	XB	Human Error, Eng. Dept.	Engineering	Controllable	OW	OW1	XOW	AC/DC System Failure, Weather	Engineering	Uncontrollable
BA	BA1	XBA	Amtrak Engineering Human Error	Engineering	Controllable	Q	Q1	XQ	Late Issuance of Track Warrant	Transportation	Controllable
C	C1	XC	Unscheduled Track Work	Engineering	Controllable	R	R1	XR	Human Error, Transportation	Transportation	Controllable
CA	CA1	XCA	Amtrak Engineering	Engineering	Semi-controllable	RA	RA1	XRA	Human Error, Amtrak Transportation	Transportation	Controllable
CC	CC1	XCC	Scheduled Track Work	Engineering	Controllable	RD	RD1	XRD	Human Error, Metra Dispatcher	Transportation	Controllable
CF	CF1	XCF	Engineering Equipment Malfunction	Engineering	Controllable	RF	RF1	XRF	Freight Dispatcher/Opr/Non-Freight Train Error	Transportation	Controllable
CG	CG1	XCG	Scheduled Signal Work	Engineering	Controllable	RL	RL1	XRL	Human Error, Job Action/Employee No Show (CMS Error)	Transportation	Controllable
CH	CH1	XCH	Contractor Failure	Engineering	Controllable	RN	RN1	XRN	Human Error, Job Action/Employee No Show (Non-CMS)	Transportation	Controllable
CO	CO1	XCO	Scheduled Wire Work	Engineering	Controllable	RO	RO1	XRO	Human Error, Tower Operator	Transportation	Controllable
CM	CM1	XCM	Switch Malfunction (Track Dept.)	Engineering	Controllable	RS	RS1	XRS	Human Error, NICTD Transportation	Transportation	Controllable
CW	CW1	XCW	M of W Work, Weather	Engineering	Uncontrollable	RW	RW1	XRW	Train Crew Issues, Weather	Transportation	Uncontrollable
D	D1	XD	Freight Train Interference	Transportation	Semi-controllable	RZ	RZ1	XRZ	ETMS Train Crew Error [obsolete 2015]	Transportation	Controllable
DD	DD1	XDD	Freight Dispatcher/Opr/Freight Train Error	Transportation	Controllable	S	S1	XS	Operational (Efficiency) Testing	Transportation	Uncontrollable
DE	DE1	XDE	Freight Mechanical Malfunction	Transportation	Semi-controllable	T	T1	XT	Property Vandalism	Incidental	Uncontrollable
DM	DM1	XDM	Freight-Accident/Incident	Incidental	Uncontrollable	U	U1	XU	Accessibility Related (ADA)	Ridership	Uncontrollable
DR	DR1	XDR	Freight-Human Error	Transportation	Semi-controllable	UF	UF1	XUF	ADA Lift Failure	Mechanical	Controllable
DW	DW1	XDW	Freight Train Interference, Weather	Transportation	Uncontrollable	UW	UW1	XUW	Accessibility, Weather	Ridership	Uncontrollable
E	E1	XE	Locomotive Malfunction	Mechanical	Controllable	VE	VE1	XVE	Locomotive Problem Reported, Nothing Found	Incidental	Controllable
EA	EA1	XEA	Amtrak Locomotive/Car Malfunction	Mechanical	Uncontrollable	VF	VF1	XVF	Cab Car Problem Reported, Nothing Found	Incidental	Controllable
EW	EW1	XEW	Locomotive Malfunction, Weather	Mechanical	Uncontrollable	VG	VG1	XVG	Broken Gate Crossing Reported, Nothing Found	Incidental	Uncontrollable
EZ	EZ1	XEZ	ETMS Malfunction on Locomotive [obsolete 2015]	Mechanical	Controllable	W	W1	XW	Gas Leak	Incidental	Uncontrollable
F	F1	XF	Cab Car/Trailer/MU Malfunction	Mechanical	Controllable	YB	YB1	XYB	Derailment - Human Error, Engineering	Engineering	Controllable
FS	FS1	XFS	NICTD MU Malfunction	Mechanical	Uncontrollable	YC	YC1	XYC	Derailment - Engineering	Engineering	Controllable
FW	FW1	XFW	Cab Car/TRL/MU Malfunction, Weather	Mechanical	Uncontrollable	YE	YE1	XYE	Derailment - Mechanical	Mechanical	Controllable
FZ	FZ1	XFZ	ETMS Malfunction on Cab Car [obsolete 2015]	Mechanical	Controllable	YF	YF1	XYF	Derailment - Accident, Foreign Line	Incidental	Uncontrollable
G	G1	XG	Signal/Switch Malfunction (Signal Dept.)	Engineering	Controllable	YH	YH1	XYH	Derailment - Human Error, Mechanical	Mechanical	Controllable
GA	GA1	XGA	Signal/Switch Failure Amtrak (Signal Dept.)	Engineering	Semi-controllable	YM	YM1	XYM	Derailment - Accident	Incidental	Uncontrollable
GF	GF1	XGF	Signal/Switch Foreign Line	Engineering	Semi-controllable	YR	YR1	XYR	Derailment - Human Error, Transportation	Transportation	Controllable
GM	GM1	XGM	Gate Crossing Malfunction	Engineering	Controllable	YW	YW1	XYW	Derailment Accident, Weather	Incidental	Uncontrollable
GT	GT1	XGT	Telecom Failure	Engineering	Controllable	ZA	ZA1	XZA	PTC Amtrak Train (On-Board)	Mechanical	Uncontrollable
GW	GW1	XGW	Signal/Switch Malfunction Weather (Signal Dept.)	Engineering	Uncontrollable	ZB	ZB1	XZB	PTC Human Error, Engineering Dept.	Engineering	Controllable
GX	GX1	XGX	Broken Gate Crossing	Engineering	Uncontrollable	ZC	ZC1	XZC	PTC Construction/Maintenance	Engineering	Controllable
GZ	GZ1	XGZ	ETMS Signal Malfunction [obsolete 2015]	Engineering	Controllable	ZD	ZD1	XZD	PTC Freight Train (On-Board)	Transportation	Semi-controllable
H	H1	XH	Human Error, Mechanical Department	Mechanical	Controllable	ZE	ZE1	XZE	PTC Malfunction Locomotive	Mechanical	Controllable
HS	HS1	XHS	Human Error, NICTD Mechanical Dept.	Mechanical	Controllable	ZF	ZF1	XZF	PTC Malfunction Coach	Mechanical	Controllable
I	I1	XI	Passenger Handling, Running Time	Ridership	Uncontrollable	ZG	ZG1	XZG	PTC Wayside	Engineering	Controllable
IB	IB1	XIB	Passenger Handling, Bicycle	Ridership	Uncontrollable	ZH	ZH1	XZH	PTC Human Error, Mechanical	Mechanical	Controllable
IW	IW1	XIW	Passenger Handling, Weather	Ridership	Uncontrollable	ZN	ZN1	XZN	PTC Foreign Line (Non-Train)	Engineering	Semi-controllable
J	J1	XJ	Passenger Problems/Removal	Incidental	Uncontrollable	ZP	ZP1	XZP	PTC Dispatcher	Transportation	Controllable
JA	JA1	XJA	Amtrak Passenger Problems/Removal	Incidental	Uncontrollable	ZR	ZR1	XZR	PTC Human Error, Transportation	Transportation	Controllable
JM	JM1	XJM	Passenger Medical Emergency	Incidental	Uncontrollable	ZS	ZS1	XZS	PTC NICTD MU Train (On-Board)	Mechanical	Uncontrollable
K	K1	XK	Obstruction On Tracks	Incidental	Uncontrollable	ZT	ZT1	XZT	PTC Back Office	Engineering	Controllable
KD	KD1	XKD	Train Struck Debris	Incidental	Uncontrollable	ZW	ZW1	XZW	PTC Weather	Engineering	Uncontrollable
KP	KP1	XKP	Suspicious Package(s)/Person(s)/Activity	Incidental	Uncontrollable						
KW	KW1	XKW	Obstruction On Tracks, Weather	Incidental	Uncontrollable						

Effective July 1, 2016 Revised July 19, 2016

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TABLE 5: DELAY INCIDENT CODES SORTED BY CAUSE CATEGORY & CARRIER DESIGNATION

METRA/PSA DELAY CODES				METRA/PSA DELAY CODES (continued)				FOREIGN CARRIER DELAY CODES			
CATEGORY				CATEGORY				CATEGORY			
Codes				Codes				Codes			
Pri.	Sec.	Ann.	Definition	Pri.	Sec.	Ann.	Definition	Pri.	Sec.	Ann.	Definition
1 Passenger Train Interference				13 Human Error				1 Passenger Train Interference			
A	A1	XA	Passenger Train Interference	B	B1	XB	Human Error, Eng. Dept.	AM	AM1	XAM	Amtrak Caused Delay
AA	AA1	XAA	Rule 9.9 Delayed in Block/Rule 6.30	H	H1	XH	Human Error, Mechanical Department	AS	AS1	XAS	NICTD Train Interference
AD	AD1	XAD	Non-Revenue Passenger Train Interference	R	R1	XR	Human Error, Transportation	2 & 3 Freight Interference - Peak & Off-Peak			
4 Accident				RD	RD1	XRD	Human Error, Metra Dispatcher	D	D1	XD	Freight Train Interference
M	M1	XM	Right of Way Accident/Misc.	RL	RL1	XRL	Human Error, Job Action/Employee No Show (CMS Error)	DD	DD1	XDD	Freight Dispatcher/Opr/Freight Train Error
YC	YC1	XYC	Derailment - Engineering	RN	RN1	XRN	Human Error, Job Action/Employee No Show (Non-CMS)	DE	DE1	XDE	Freight Mechanical Malfunction
YE	YE1	XYE	Derailment - Mechanical	RO	RO1	XRO	Human Error, Tower Operator	DR	DR1	XDR	Freight-Human Error
YM	YM1	XYM	Derailment - Accident	RZ	RZ1	XRZ	ETMS Train Crew Error [obsolete 2015]	ZD	ZD1	XZD	PTC Freight Train (On-Board)
5 Passenger Loading				YB	YB1	XYB	Derailment - Human Error, Engineering	4 Accident			
I	I1	XI	Passenger Handling, Running Time	YH	YH1	XYH	Derailment - Human Error, Mechanical	DM	DM1	XDM	Freight-Accident/Incident
IB	IB1	XIB	Passenger Handling, Bicycle	YR	YR1	XYR	Derailment - Human Error, Transportation	YF	YF1	XYF	Derailment - Accident, Foreign Line
6 Lift Deployment				ZB	ZB1	XZB	PTC Human Error, Engineering Dept.	8 Signal/Switch Failure			
U	U1	XU	Accessibility Related (ADA)	ZH	ZH1	XZH	PTC Human Error, Mechanical	GA	GA1	XGA	Signal/Switch Failure Amtrak (Signal Dept.)
UF	UF1	XUF	ADA Lift Failure	ZP	ZP1	XZP	PTC Dispatcher	GF	GF1	XGF	Signal/Switch Foreign Line
7 Obstruction/Debris				ZR	ZR1	XZR	PTC Human Error, Transportation	ZN	ZN1	XZN	PTC Foreign Line (Non-Train)
K	K1	XK	Obstruction On Tracks	14 Sick, Injured, Unruly Passenger				9 Track Work			
KD	KD1	XKD	Train Struck Debris	J	J1	XJ	Passenger Problems/Removal	CA	CA1	XCA	Amtrak Engineering
KP	KP1	XKP	Suspicious Package(s)/Person(s)/Activity	JM	JM1	XJM	Passenger Medical Emergency	11 Non-Locomotive Equipment Failure			
8 Signal/Switch Failure				15 Weather				FS	FS1	XFS	NICTD MU Malfunction
CM	CM1	XCM	Switch Malfunction (Track Dept.)	AW	AW1	XAW	Pass. Train Interference, Weather	ZS	ZS1	XZS	PTC NICTD MU Train (On-Board)
G	G1	XG	Signal/Switch Malfunction (Signal Dept.)	CW	CW1	XCW	M of W Work, Weather	12 Locomotive Failure			
GM	GM1	XGM	Gate Crossing Malfunction	EW	EW1	XEW	Locomotive Malfunction, Weather	EA	EA1	XEA	Amtrak Locomotive/Car Malfunction
GT	GT1	XGT	Telecom Failure	FW	FW1	XFW	Cab Car/TRL/MU Malfunction, Weather	ZA	ZA1	XZA	PTC Amtrak Train (On-Board)
GX	GX1	XGX	Broken Gate Crossing	GW	GW1	XGW	Signal/Switch Malfunction Weather (Signal Dept.)	13 Human Error			
GZ	GZ1	XGZ	ETMS Signal Malfunction [obsolete 2015]	IW	IW1	XIW	Passenger Handling, Weather	BA	BA1	XBA	Amtrak Engineering Human Error
VG	VG1	XVG	Broken Gate Crossing Reported, Nothing Found	KW	KW1	XKW	Obstruction On Tracks, Weather	HS	HS1	XHS	Human Error, NICTD Mechanical Dept.
ZG	ZG1	XZG	PTC Wayside	MW	MW1	XMW	Right of Way Accident/Misc., Weather	RA	RA1	XRA	Human Error, Amtrak Transportation
ZT	ZT1	XZT	PTC Back Office	NW	NW1	XNW	Electricity Utility Failure, Weather	RF	RF1	XRF	Freight Dispatcher/Opr/Non-Freight Train Error
9 Track Work				OW	OW1	XOW	AC/DC System Failure, Weather	RS	RS1	XRS	Human Error, NICTD Transportation
C	C1	XC	Unscheduled Track Work	RW	RW1	XRW	Train Crew Issues, Weather	14 Sick, Injured, Unruly Passenger			
CC	CC1	XCC	Scheduled Track Work	UW	UW1	XUW	Accessibility, Weather	JA	JA1	XJA	Amtrak Passenger Problems/Removal
CF	CF1	XCF	Engineering Equipment Malfunction	YW	YW1	XYW	Derailment Accident, Weather	15 Weather			
CG	CG1	XCG	Scheduled Signal Work	ZW	ZW1	XZW	PTC Weather	DW	DW1	XDW	Freight Train Interference, Weather
CH	CH1	XCH	Contractor Failure	16 Other							
ZC	ZC1	XZC	PTC Construction/Maintenance	L	L1	XL	Unauthorized People On Tracks/Near Miss				
10 Catenary Failure				N	N1	XN	Electricity Utility Failure				
CO	CO1	XCO	Scheduled Wire Work	Q	Q1	XQ	Late Issuance of Track Warrant				
O	O1	XO	AC/DC System Failure	S	S1	XS	Operational (Efficiency) Testing				
11 Non-Locomotive Equipment Failure				T	T1	XT	Property Vandalism				
F	F1	XF	Cab Car/Trailer/MU Malfunction	VE	VE1	XVE	Locomotive Problem Reported, Nothing Found				
FZ	FZ1	XFZ	ETMS Malfunction on Cab Car [obsolete 2015]	VF	VF1	XVF	Cab Car Problem Reported, Nothing Found				
ZF	ZF1	XZF	PTC Malfunction Coach	W	W1	XW	Gas Leak				
12 Locomotive Failure											
E	E1	XE	Locomotive Malfunction								
EZ	EZ1	XEZ	ETMS Malfunction on Locomotive [obsolete 2015]								
ZE	ZE1	XZE	PTC Malfunction Locomotive								

Effective July 1, 2016

Revised July 19, 2016

'Metra/PSA' refers to delays that either directly affect or are directly attributable to Metra or its Purchase of Service Agreement partners (BNSF and Union Pacific) on Metra or PSA-controlled rail lines or trains in commuter operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

TABLES 6.a, 6.b, 6.c, & 6.d: FREQUENCY OF TRAIN DELAYS BY CONTROL AND LINE
July 2017

DELAY CONTROL	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM	
		ML	BI	SC		N	W				N	NW	W		
Controllable	51	14	5	5	3	62	15	8	60	14	16	36	20	309	41%
Semi-controllable	4	0	0	0	6	13	5	5	11	3	3	9	15	74	10%
Uncontrollable	26	22	2	6	4	92	32	10	14	1	52	73	37	371	49%
TOTAL TRAINS DELAYED	81	36	7	11	13	167	52	23	85	18	71	118	72	754	100%

July - Average Over Previous Five Years: 2012-2016

DELAY CONTROL	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM	
		ML	BI	SC		N	W				N	NW	W		
Controllable	71.2	41.0	11.8	30.4	4.0	43.2	30.8	12.0	40.4	10.4	25.8	38.8	28.0	387.8	43%
Semi-controllable	19.2	0.0	0.2	0.0	3.8	24.6	16.4	12.6	8.6	21.4	0.4	11.6	14.8	133.6	15%
Uncontrollable	41.0	50.4	10.4	24.8	2.0	34.6	40.6	12.0	55.8	3.8	30.0	37.2	28.4	371.0	42%
TOTAL TRAINS DELAYED	131.4	91.4	22.4	55.2	9.8	102.4	87.8	36.6	104.8	35.6	56.2	87.6	71.2	892.4	100%

July 2017 Divergence From July Average Over Previous Five Years

DELAY CONTROL	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM	
		ML	BI	SC		N	W				N	NW	W		
Controllable	-20.2	-27.0	-6.8	-25.4	-1.0	18.8	-15.8	-4.0	19.6	3.6	-9.8	-2.8	-8.0	-78.8	57%
Semi-controllable	-15.2	0.0	-0.2	0.0	2.2	-11.6	-11.4	-7.6	2.4	-18.4	2.6	-2.6	0.2	-59.6	43%
Uncontrollable	-15.0	-28.4	-8.4	-18.8	2.0	57.4	-8.6	-2.0	-41.8	-2.8	22.0	35.8	8.6	0.0	0%
TOTAL TRAINS DELAYED	-50.4	-55.4	-15.4	-44.2	3.2	64.6	-35.8	-13.6	-19.8	-17.6	14.8	30.4	0.8	-138.4	100%

January-July 2017

DELAY CONTROL	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM	
		ML	BI	SC		N	W				N	NW	W		
Controllable	376	183	89	96	30	283	178	52	270	89	183	140	210	2,179	48%
Semi-controllable	33	0	1	0	22	81	55	89	43	78	13	34	138	587	13%
Uncontrollable	264	122	38	69	14	203	156	42	163	25	135	317	200	1,748	39%
TOTAL TRAINS DELAYED	673	305	128	165	66	567	389	183	476	192	331	491	548	4,514	100%

Data for current month is final (08/21/17) version from TOPS.

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08/21/2017

TABLE 7: NUMBER OF DELAYS BY DATE
July 2017

WEEKDAY	3	5	6	7	10	11	12	13	14	17	18	19	20	21	24	25	26	27	28	31	TOTAL
	Mo	We	Th	Fr	Mo	Tu	We	Th	Fr	Mo	Tu	We	Th	Fr	Mo	Tu	We	Th	Fr	Mo	
BNSF	2	1	6	16	1	7	3	1	1	5	7	5	0	5	5	0	0	0	3	5	73
Elec -ML	1	1	0	0	0	0	0	6	1	0	1	2	1	2	2	1	0	2	1	0	21
-BI	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	6
-SC	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	4
Heritage	0	1	0	3	2	0	0	1	0	2	0	0	2	1	0	0	0	0	0	1	13
Milw -N	3	2	4	6	8	0	40	3	6	8	0	4	11	23	0	1	1	3	1	3	127
-W	0	2	0	1	2	0	3	0	1	0	1	1	2	18	6	0	0	0	2	0	39
NCS	0	0	0	0	4	3	8	0	3	0	0	0	0	0	0	4	0	1	0	0	23
RI	8	3	3	1	12	0	1	2	1	16	3	1	6	1	3	2	0	1	4	3	71
SWS	0	1	2	0	0	0	3	0	6	0	0	0	0	1	0	1	0	1	0	3	18
UP -N	2	0	2	1	1	0	12	0	2	0	0	1	3	1	0	2	13	4	5	0	49
-NW	1	1	1	5	2	1	0	8	0	0	10	0	0	15	5	4	2	12	3	11	81
-W	<u>1</u>	<u>3</u>	<u>7</u>	<u>5</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>6</u>	<u>15</u>	<u>3</u>	<u>0</u>	<u>62</u>
SYSTEM	18	16	26	38	32	12	75	24	22	34	26	16	26	70	22	18	23	40	22	27	587

SATURDAY	1	8	15	22	29	TOTAL	SUNDAY/HOLIDAY	2	4	9	16	23	30	TOTAL
BNSF	2	0	2	0	1	5	BNSF	2	0	1	0	0	0	3
Elec -ML	0	1	0	0	0	1	Elec -ML	4	1	7	0	1	1	14
-BI	0	0	0	0	1	1	-BI	-	-	-	-	-	-	0
-SC	0	2	0	0	0	2	-SC	0	2	0	0	3	0	5
Heritage	-	-	-	-	-	-	Heritage	-	-	-	-	-	-	0
Milw -N	6	6	4	4	6	26	Milw -N	4	0	2	0	6	2	14
-W	1	1	4	0	0	6	-W	0	2	5	0	0	0	7
NCS	-	-	-	-	-	-	NCS	-	-	-	-	-	-	0
RI	0	1	5	3	0	9	RI	1	1	1	2	0	0	5
SWS	0	0	0	0	0	0	SWS	-	-	-	-	-	-	0
UP -N	3	5	2	5	1	16	UP -N	2	1	0	1	2	0	6
-NW	6	4	2	6	1	19	-NW	4	4	3	0	5	2	18
-W	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>5</u>	-W	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>5</u>
SYSTEM	18	22	19	20	11	90	SYSTEM	18	12	20	3	17	7	77

Data is final (08/21/17) version from TOPS.

TABLE 8.a: FREQUENCY OF TRAIN DELAYS BY CAUSE AND LINE
July 2017

CAUSE CATEGORY	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM
		ML	BI	SC		N	W				N	NW	W	
Freight Interference - TOTAL	7	0	0	0	4	13	5	5	11	4	3	8	14	74
Freight Interference - Peak	3	0	0	0	4	4	1	3	3	1	0	5	7	31
Primary	3	0	0	0	4	2	1	2	1	1	0	1	5	20
Secondary	0	0	0	0	0	2	0	1	2	0	0	4	2	11
Freight Interference - Off-Peak	4	0	0	0	0	9	4	2	8	3	3	3	7	43
Primary	4	0	0	0	0	4	3	2	3	3	2	2	7	30
Secondary	0	0	0	0	0	5	1	0	5	0	1	1	0	13
Signal/Switch Failure - TOTAL	14	6	3	0	2	21	5	1	9	2	1	2	3	69
Signal/Switch Failure - Metra/PSA	12	6	3	0	0	21	5	1	9	2	1	1	2	63
Primary	10	5	3	0	0	19	4	1	9	2	1	0	1	55
Secondary	2	1	0	0	0	2	1	0	0	0	0	1	1	8
Signal/Switch Failure - Foreign	2	0	0	0	2	0	0	0	0	0	0	1	1	6
Primary	1	0	0	0	1	0	0	0	0	0	0	1	1	4
Secondary	1	0	0	0	1	0	0	0	0	0	0	0	0	2
Mechanical Failure - TOTAL	11	0	0	0	1	11	4	1	32	5	4	13	3	85
Mechanical Failure - Metra/PSA	11	0	0	0	1	6	4	1	32	5	4	13	3	80
Non-Locomotive Equipment Failure - Metra/PSA	5	0	0	0	0	1	4	0	0	5	0	0	1	16
Primary	1	0	0	0	0	1	1	0	0	2	0	0	1	6
Secondary	4	0	0	0	0	0	3	0	0	3	0	0	0	10
Locomotive Failure - Metra/PSA	6	0	0	0	1	5	0	1	32	0	4	13	2	64
Primary	3	0	0	0	1	2	0	1	8	0	3	2	1	21
Secondary	3	0	0	0	0	3	0	0	24	0	1	11	1	43
Mechanical Failure - Foreign	0	0	0	0	0	5	0	0	0	0	0	0	0	5
Passenger Train Interference - TOTAL	2	0	0	0	0	3	0	2	1	0	0	0	1	9
Passenger Train Interference - Metra/PSA	0	0	0	0	0	3	0	2	1	0	0	0	0	6
Passenger Train Interference - Foreign	2	0	0	0	0	0	0	0	0	0	0	0	1	3
Accident - TOTAL	3	0	0	0	0	1	1	0	0	0	15	23	2	45
Accident - Metra/PSA	0	0	0	0	0	1	1	0	0	0	15	23	0	40
Accident - Foreign	3	0	0	0	0	0	0	0	0	0	0	0	2	5
Track Work - TOTAL	11	5	0	4	0	19	2	1	11	1	4	8	5	71
Track Work - Metra/PSA	11	5	0	4	0	19	2	1	11	1	4	8	5	71
Track Work - Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Error - TOTAL	10	2	2	1	2	11	3	2	6	4	7	14	9	73
Human Error - Metra/PSA	6	1	2	1	0	7	3	1	6	1	6	12	2	48
Human Error - Foreign	4	1	0	0	2	4	0	1	0	3	1	2	7	25
Sick, Injured, Unruly Passenger - TOTAL	6	8	1	1	0	3	2	0	2	0	3	3	15	44
Sick, Injured, Unruly Passenger - Metra/PSA	6	8	1	1	0	3	2	0	2	0	3	3	15	44
Sick, Injured, Unruly Passenger - Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weather - TOTAL	5	0	0	1	0	56	19	7	0	0	12	4	0	104
Weather - Metra/PSA	5	0	0	1	0	56	19	7	0	0	12	4	0	104
Weather - Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Passenger Loading - TOTAL	5	13	0	3	0	10	8	0	3	0	15	27	10	94
Lift Deployment - TOTAL	2	1	0	0	0	14	0	1	4	0	2	2	3	29
Obstruction/Debris - TOTAL	1	0	0	1	4	2	2	3	1	1	4	3	2	24
Catenary Failure - TOTAL	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Other - TOTAL	4	0	1	0	0	3	1	0	5	1	1	11	5	32
TOTAL TRAINS DELAYED	81	36	7	11	13	167	52	23	85	18	71	118	72	754
Total Metra/PSA Delays	63	35	7	11	5	145	47	17	74	11	67	107	47	636
Total Foreign Carrier Delays	18	1	0	0	8	22	5	6	11	7	4	11	25	118

Data for current month is final (08/21/17) version from TOPS.

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'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

TABLE 8.b: FREQUENCY OF TRAIN DELAYS BY CAUSE AND LINE
July - Average Over Previous Five Years: 2012-2016

CAUSE CATEGORY	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM
		ML	BI	SC		N	W				N	NW	W	
Freight Interference - TOTAL	16.2	0.0	0.0	0.0	1.8	19.2	14.8	11.2	8.0	11.6	0.4	10.2	14.4	107.8
Freight Interference - Peak	4.2	0.0	0.0	0.0	1.8	2.4	3.6	4.4	2.2	3.6	0.0	4.4	3.4	30.0
Primary	3.2	0.0	0.0	0.0	1.8	1.6	1.6	3.6	1.2	3.2	0.0	2.8	2.2	21.2
Secondary	1.0	0.0	0.0	0.0	0.0	0.8	2.0	0.8	1.0	0.4	0.0	1.6	1.2	8.8
Freight Interference - Off-Peak	12.0	0.0	0.0	0.0	0.0	16.8	11.2	6.8	5.8	8.0	0.4	5.8	11.0	77.8
Primary	10.8	0.0	0.0	0.0	0.0	11.0	6.4	5.8	5.2	5.4	0.4	5.4	8.8	59.2
Secondary	1.2	0.0	0.0	0.0	0.0	5.8	4.8	1.0	0.6	2.6	0.0	0.4	2.2	18.6
Signal/Switch Failure - TOTAL	18.8	9.2	2.2	3.6	2.0	17.8	8.8	7.8	7.8	12.2	1.8	8.8	8.0	108.8
Signal/Switch Failure - Metra/PSA	11.4	9.2	2.0	3.6	0.0	12.4	7.2	6.4	7.0	2.6	1.8	7.2	7.4	78.2
Primary	8.8	6.0	1.6	3.0	0.0	5.6	5.6	3.2	4.8	1.4	1.6	2.2	3.6	47.4
Secondary	2.6	3.2	0.4	0.6	0.0	6.8	1.6	3.2	2.2	1.2	0.2	5.0	3.8	30.8
Signal/Switch Failure - Foreign	7.4	0.0	0.2	0.0	2.0	5.4	1.6	1.4	0.8	9.6	0.0	1.6	0.6	30.6
Primary	4.0	0.0	0.0	0.0	2.0	1.8	0.8	1.2	0.6	5.2	0.0	0.8	0.6	17.0
Secondary	3.4	0.0	0.2	0.0	0.0	3.6	0.8	0.2	0.2	4.4	0.0	0.8	0.0	13.6
Mechanical Failure - TOTAL	19.2	2.6	2.2	0.6	1.0	6.6	12.6	2.2	16.0	1.6	7.4	6.6	5.2	83.8
Mechanical Failure - Metra/PSA	19.2	2.6	2.0	0.6	1.0	6.6	12.6	2.2	16.0	1.6	7.4	6.6	5.2	83.6
Non-Locomotive Equipment Failure - Metra/PSA	6.4	2.6	2.0	0.6	0.2	0.8	2.4	0.4	2.8	0.4	0.0	2.6	2.8	24.0
Primary	2.0	1.2	1.0	0.4	0.2	0.4	1.0	0.2	1.0	0.4	0.0	0.8	1.4	10.0
Secondary	4.4	1.4	1.0	0.2	0.0	0.4	1.4	0.2	1.8	0.0	0.0	1.8	1.4	14.0
Locomotive Failure - Metra/PSA	12.8	0.0	0.0	0.0	0.8	5.8	10.2	1.8	13.2	1.2	7.4	4.0	2.4	59.6
Primary	4.2	0.0	0.0	0.0	0.6	2.4	3.8	1.0	4.0	0.4	2.8	2.0	0.8	22.0
Secondary	8.6	0.0	0.0	0.0	0.2	3.4	6.4	0.8	9.2	0.8	4.6	2.0	1.6	37.6
Mechanical Failure - Foreign	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Passenger Train Interference - TOTAL	1.0	2.6	0.6	0.0	0.6	8.2	1.0	1.0	2.0	1.6	0.0	0.8	1.6	21.0
Passenger Train Interference - Metra/PSA	0.0	0.4	0.4	0.0	0.0	4.4	0.8	1.0	0.8	0.4	0.0	0.8	1.4	10.4
Passenger Train Interference - Foreign	1.0	2.2	0.2	0.0	0.6	3.8	0.2	0.0	1.2	1.2	0.0	0.0	0.2	10.6
Accident - TOTAL	6.4	6.4	2.2	4.2	0.2	4.4	5.4	0.8	5.8	0.2	0.8	2.8	2.6	42.2
Accident - Metra/PSA	5.0	6.4	2.2	4.2	0.0	3.8	4.6	0.8	5.8	0.2	0.8	2.8	2.4	39.0
Accident - Foreign	1.4	0.0	0.0	0.0	0.2	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.2	3.2
Track Work - TOTAL	16.6	8.4	2.2	12.8	0.4	8.2	2.4	1.2	8.8	2.0	9.0	10.4	5.8	88.2
Track Work - Metra/PSA	15.0	8.4	2.2	12.8	0.4	8.2	2.4	1.2	8.8	0.8	9.0	10.4	5.8	85.4
Track Work - Foreign	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	2.8
Human Error - TOTAL	16.8	4.2	1.2	3.0	2.0	7.4	6.8	1.6	5.4	2.8	6.6	13.6	6.4	77.8
Human Error - Metra/PSA	12.6	4.2	1.2	3.0	0.2	5.2	6.0	1.0	5.4	0.2	2.2	6.6	0.8	48.6
Human Error - Foreign	4.2	0.0	0.0	0.0	1.8	2.2	0.8	0.6	0.0	2.6	4.4	7.0	5.6	29.2
Sick, Injured, Unruly Passenger - TOTAL	3.8	7.4	1.4	2.8	0.2	1.8	3.4	0.8	3.0	0.2	3.6	3.6	3.0	35.0
Sick, Injured, Unruly Passenger - Metra/PSA	3.8	7.4	1.4	2.8	0.2	1.8	3.4	0.8	3.0	0.2	3.6	3.6	3.0	35.0
Sick, Injured, Unruly Passenger - Foreign	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Weather - TOTAL	12.0	4.0	1.2	0.6	0.6	13.2	7.8	7.2	6.6	1.4	1.6	2.4	2.4	61.0
Weather - Metra/PSA	12.0	4.0	1.2	0.6	0.6	13.2	7.8	7.2	6.6	1.4	1.6	2.0	2.4	60.6
Weather - Foreign	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4
Passenger Loading - TOTAL	11.6	28.8	3.8	11.6	0.0	11.2	13.8	0.2	32.6	0.0	17.4	19.4	10.2	160.6
Lift Deployment - TOTAL	2.4	0.4	0.0	0.0	0.0	1.6	5.2	0.4	5.8	0.2	0.8	1.6	1.6	20.0
Obstruction/Debris - TOTAL	4.0	1.6	1.0	3.8	0.6	0.4	4.0	1.4	1.0	1.6	5.2	5.8	6.0	36.4
Catenary Failure - TOTAL	0.0	13.6	3.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.6
Other - TOTAL	2.6	2.2	0.6	2.0	0.4	2.4	1.8	0.8	2.0	0.2	1.6	1.6	4.0	22.2
TOTAL TRAINS DELAYED	131.4	91.4	22.4	55.2	9.8	102.4	87.8	36.6	104.8	35.6	56.2	87.6	71.2	892.4
Total Metra/PSA Delays	99.6	89.2	21.8	55.2	3.4	71.2	69.6	23.4	94.8	9.4	51.4	68.4	50.2	707.6
Total Foreign Carrier Delays	31.8	2.2	0.6	0.0	6.4	31.2	18.2	13.2	10.0	26.2	4.8	19.2	21.0	184.8

Data for latest month is final (08/12/16) version from TOPS.

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'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

TABLE 8.c: FREQUENCY OF TRAIN DELAYS BY CAUSE AND LINE
July 2017 Divergence From July Average Over Previous Five Years

CAUSE CATEGORY	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM
		ML	BI	SC		N	W				N	NW	W	
Freight Interference - TOTAL	-9.2	0.0	0.0	0.0	2.2	-6.2	-9.8	-6.2	3.0	-7.6	2.6	-2.2	-0.4	-33.8
Freight Interference - Peak	-1.2	0.0	0.0	0.0	2.2	1.6	-2.6	-1.4	0.8	-2.6	0.0	0.6	3.6	1.0
<i>Primary</i>	-0.2	0.0	0.0	0.0	2.2	0.4	-0.6	-1.6	-0.2	-2.2	0.0	-1.8	2.8	-1.2
<i>Secondary</i>	-1.0	0.0	0.0	0.0	0.0	1.2	-2.0	0.2	1.0	-0.4	0.0	2.4	0.8	2.2
Freight Interference - Off-Peak	-8.0	0.0	0.0	0.0	0.0	-7.8	-7.2	-4.8	2.2	-5.0	2.6	-2.8	-4.0	-34.8
<i>Primary</i>	-6.8	0.0	0.0	0.0	0.0	-7.0	-3.4	-3.8	-2.2	-2.4	1.6	-3.4	-1.8	-29.2
<i>Secondary</i>	-1.2	0.0	0.0	0.0	0.0	-0.8	-3.8	-1.0	4.4	-2.6	1.0	0.6	-2.2	-5.6
Signal/Switch Failure - TOTAL	-4.8	-3.2	0.8	-3.6	0.0	3.2	-3.8	-6.8	1.2	-10.2	-0.8	-6.8	-5.0	-39.8
Signal/Switch Failure - Metra/PSA	0.6	-3.2	1.0	-3.6	0.0	8.6	-2.2	-5.4	2.0	-0.6	-0.8	-6.2	-5.4	-15.2
<i>Primary</i>	1.2	-1.0	1.4	-3.0	0.0	13.4	-1.6	-2.2	4.2	0.6	-0.6	-2.2	-2.6	7.6
<i>Secondary</i>	-0.6	-2.2	-0.4	-0.6	0.0	-4.8	-0.6	-3.2	-2.2	-1.2	-0.2	-4.0	-2.8	-22.8
Signal/Switch Failure - Foreign	-5.4	0.0	-0.2	0.0	0.0	-5.4	-1.6	-1.4	-0.8	-9.6	0.0	-0.6	0.4	-24.6
<i>Primary</i>	-3.0	0.0	0.0	0.0	-1.0	-1.8	-0.8	-1.2	-0.6	-5.2	0.0	0.2	0.4	-13.0
<i>Secondary</i>	-2.4	0.0	-0.2	0.0	1.0	-3.6	-0.8	-0.2	-0.2	-4.4	0.0	-0.8	0.0	-11.6
Mechanical Failure - TOTAL	-8.2	-2.6	-2.2	-0.6	0.0	4.4	-8.6	-1.2	16.0	3.4	-3.4	6.4	-2.2	1.2
Mechanical Failure - Metra/PSA	-8.2	-2.6	-2.0	-0.6	0.0	-0.6	-8.6	-1.2	16.0	3.4	-3.4	6.4	-2.2	-3.6
Non-Locomotive Equipment Failure - Metra/PSA	-1.4	-2.6	-2.0	-0.6	-0.2	0.2	1.6	-0.4	-2.8	4.6	0.0	-2.6	-1.8	-8.0
<i>Primary</i>	-1.0	-1.2	-1.0	-0.4	-0.2	0.6	0.0	-0.2	-1.0	1.6	0.0	-0.8	-0.4	-4.0
<i>Secondary</i>	-0.4	-1.4	-1.0	-0.2	0.0	-0.4	1.6	-0.2	-1.8	3.0	0.0	-1.8	-1.4	-4.0
Locomotive Failure - Metra/PSA	-6.8	0.0	0.0	0.0	0.2	-0.8	-10.2	-0.8	18.8	-1.2	-3.4	9.0	-0.4	4.4
<i>Primary</i>	-1.2	0.0	0.0	0.0	0.4	-0.4	-3.8	0.0	4.0	-0.4	0.2	0.0	0.2	-1.0
<i>Secondary</i>	-5.6	0.0	0.0	0.0	-0.2	-0.4	-6.4	-0.8	14.8	-0.8	-3.6	9.0	-0.6	5.4
Mechanical Failure - Foreign	0.0	0.0	-0.2	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
Passenger Train Interference - TOTAL	1.0	-2.6	-0.6	0.0	-0.6	-5.2	-1.0	1.0	-1.0	-1.6	0.0	-0.8	-0.6	-12.0
Passenger Train Interference - Metra/PSA	0.0	-0.4	-0.4	0.0	0.0	-1.4	-0.8	1.0	0.2	-0.4	0.0	-0.8	-1.4	-4.4
Passenger Train Interference - Foreign	1.0	-2.2	-0.2	0.0	-0.6	-3.8	-0.2	0.0	-1.2	-1.2	0.0	0.0	0.8	-7.6
Accident - TOTAL	-3.4	-6.4	-2.2	-4.2	-0.2	-3.4	-4.4	-0.8	-5.8	-0.2	14.2	20.2	-0.6	2.8
Accident - Metra/PSA	-5.0	-6.4	-2.2	-4.2	0.0	-2.8	-3.6	-0.8	-5.8	-0.2	14.2	20.2	-2.4	1.0
Accident - Foreign	1.6	0.0	0.0	0.0	-0.2	-0.6	-0.8	0.0	0.0	0.0	0.0	0.0	1.8	1.8
Track Work - TOTAL	-5.6	-3.4	-2.2	-8.8	-0.4	10.8	-0.4	-0.2	2.2	-1.0	-5.0	-2.4	-0.8	-17.2
Track Work - Metra/PSA	-4.0	-3.4	-2.2	-8.8	-0.4	10.8	-0.4	-0.2	2.2	0.2	-5.0	-2.4	-0.8	-14.4
Track Work - Foreign	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.2	0.0	0.0	0.0	-2.8
Human Error - TOTAL	-6.8	-2.2	0.8	-2.0	0.0	3.6	-3.8	0.4	0.6	1.2	0.4	0.4	2.6	-4.8
Human Error - Metra/PSA	-6.6	-3.2	0.8	-2.0	-0.2	1.8	-3.0	0.0	0.6	0.8	3.8	5.4	1.2	-0.6
Human Error - Foreign	-0.2	1.0	0.0	0.0	0.2	1.8	-0.8	0.4	0.0	0.4	-3.4	-5.0	1.4	-4.2
Sick, Injured, Unruly Passenger - TOTAL	2.2	0.6	-0.4	-1.8	-0.2	1.2	-1.4	-0.8	-1.0	-0.2	-0.6	-0.6	12.0	9.0
Sick, Injured, Unruly Passenger - Metra/PSA	2.2	0.6	-0.4	-1.8	-0.2	1.2	-1.4	-0.8	-1.0	-0.2	-0.6	-0.6	12.0	9.0
Sick, Injured, Unruly Passenger - Foreign	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Weather - TOTAL	-7.0	-4.0	-1.2	0.4	-0.6	42.8	11.2	-0.2	-6.6	-1.4	10.4	1.6	-2.4	43.0
Weather - Metra/PSA	-7.0	-4.0	-1.2	0.4	-0.6	42.8	11.2	-0.2	-6.6	-1.4	10.4	2.0	-2.4	43.4
Weather - Foreign	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.0	-0.4
Passenger Loading - TOTAL	-6.6	-15.8	-3.8	-8.6	0.0	-1.2	-5.8	-0.2	-29.6	0.0	-2.4	7.6	-0.2	-66.6
Lift Deployment - TOTAL	-0.4	0.6	0.0	0.0	0.0	12.4	-5.2	0.6	-1.8	-0.2	1.2	0.4	1.4	9.0
Obstruction/Debris - TOTAL	-3.0	-1.6	-1.0	-2.8	3.4	1.6	-2.0	1.6	0.0	-0.6	-1.2	-2.8	-4.0	-12.4
Catenary Failure - TOTAL	0.0	-12.6	-3.8	-10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-26.6
Other - TOTAL	1.4	-2.2	0.4	-2.0	-0.4	0.6	-0.8	-0.8	3.0	0.8	-0.6	9.4	1.0	9.8
TOTAL TRAINS DELAYED	-50.4	-55.4	-15.4	-44.2	3.2	64.6	-35.8	-13.6	-19.8	-17.6	14.8	30.4	0.8	-138.4
Total Metra/PSA Delays	-36.6	-54.2	-14.8	-44.2	1.6	73.8	-22.6	-6.4	-20.8	1.6	15.6	38.6	-3.2	-71.6
Total Foreign Carrier Delays	-13.8	-1.2	-0.6	0.0	1.6	-9.2	-13.2	-7.2	1.0	-19.2	-0.8	-8.2	4.0	-66.8

Data for current month is final (08/21/17) version from TOPS.

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'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

TABLE 9.a: FREQUENCY OF TRAIN DELAYS BY CAUSE AND LINE
January - July 2017

CAUSE CATEGORY	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM
		ML	BI	SC		N	W				N	NW	W	
Freight Interference - TOTAL	41	0	1	0	18	56	33	66	43	64	14	33	133	502
Freight Interference - Peak	15	0	1	0	15	8	8	25	7	16	4	13	56	168
Primary	13	0	0	0	12	5	8	19	5	13	2	6	26	109
Secondary	2	0	1	0	3	3	0	6	2	3	2	7	30	59
Freight Interference - Off-Peak	26	0	0	0	3	48	25	41	36	48	10	20	77	334
Primary	23	0	0	0	3	31	19	36	27	33	6	15	55	248
Secondary	3	0	0	0	0	17	6	5	9	15	4	5	22	86
Signal/Switch Failure - TOTAL	70	59	32	39	8	89	65	35	38	38	20	22	53	568
Signal/Switch Failure - Metra/PSA	53	59	32	39	0	62	42	12	38	18	20	20	45	440
Primary	33	41	27	27	0	44	31	9	32	12	12	9	22	299
Secondary	20	18	5	12	0	18	11	3	6	6	8	11	23	141
Signal/Switch Failure - Foreign	17	0	0	0	8	27	23	23	0	20	0	2	8	128
Primary	9	0	0	0	5	6	15	11	0	13	0	2	7	68
Secondary	8	0	0	0	3	21	8	12	0	7	0	0	1	60
Mechanical Failure - TOTAL	83	14	2	5	4	65	48	13	125	13	77	39	44	532
Mechanical Failure - Metra/PSA	81	9	2	5	3	58	48	13	125	13	77	39	44	517
Non-Locomotive Equipment Failure - Metra/PSA	30	9	2	5	1	4	8	3	8	5	8	12	24	119
Primary	12	2	1	2	1	3	4	1	5	2	3	5	11	52
Secondary	18	7	1	3	0	1	4	2	3	3	5	7	13	67
Locomotive Failure - Metra/PSA	51	0	0	0	2	54	40	10	117	8	69	27	20	398
Primary	22	0	0	0	2	22	18	6	42	3	17	12	7	151
Secondary	29	0	0	0	0	32	22	4	75	5	52	15	13	247
Mechanical Failure - Foreign	2	5	0	0	1	7	0	0	0	0	0	0	0	15
Passenger Train Interference - TOTAL	7	1	3	4	8	14	0	5	2	15	0	0	3	62
Passenger Train Interference - Metra/PSA	0	0	3	1	0	11	0	5	2	0	0	0	2	24
Passenger Train Interference - Foreign	7	1	0	3	8	3	0	0	0	15	0	0	1	38
Accident - TOTAL	79	28	11	21	0	3	32	7	25	3	29	113	10	361
Accident - Metra/PSA	76	28	11	21	0	3	29	7	20	0	29	110	1	335
Accident - Foreign	3	0	0	0	0	0	3	0	5	3	0	3	9	26
Track Work - TOTAL	71	66	28	31	1	52	15	2	53	12	37	48	56	472
Track Work - Metra/PSA	71	66	28	31	1	52	15	2	53	12	37	48	56	472
Track Work - Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Human Error - TOTAL	123	21	12	6	14	88	63	16	42	20	45	32	53	535
Human Error - Metra/PSA	54	19	12	6	1	57	40	3	41	4	42	26	36	341
Human Error - Foreign	69	2	0	0	13	31	23	13	1	16	3	6	17	194
Sick, Injured, Unruly Passenger - TOTAL	22	35	4	9	0	23	27	3	17	0	15	27	42	224
Sick, Injured, Unruly Passenger - Metra/PSA	16	35	4	9	0	23	27	3	17	0	15	27	42	218
Sick, Injured, Unruly Passenger - Foreign	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Weather - TOTAL	52	22	8	15	4	85	43	12	30	1	28	17	7	324
Weather - Metra/PSA	52	22	8	15	4	84	43	12	30	1	28	17	7	323
Weather - Foreign	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Passenger Loading - TOTAL	16	24	6	8	0	19	16	1	25	0	37	73	48	273
Lift Deployment - TOTAL	13	4	0	1	0	37	6	1	21	0	10	16	20	129
Obstruction/Debris - TOTAL	71	20	13	17	8	29	23	18	36	18	6	43	52	354
Catenary Failure - TOTAL	0	5	2	6	0	0	0	0	0	0	0	0	0	13
Other - TOTAL	25	6	6	3	1	7	18	4	19	8	13	28	27	165
TOTAL TRAINS DELAYED	673	305	128	165	66	567	389	183	476	192	331	491	548	4,514
Total Metra/PSA Delays	528	297	127	162	18	442	307	81	427	74	314	447	380	3,604
Total Foreign Carrier Delays	145	8	1	3	48	125	82	102	49	118	17	44	168	910

Data for current month is final (08/21/17) version from TOPS.

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'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Antrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

TABLE 9.b: FREQUENCY OF TRAIN DELAYS BY CAUSE AND LINE
January - July - Average Over Previous Five Years: 2012-2016

CAUSE CATEGORY	BNSF	Electric				HER	Milw			NCS	RI	SWS	Union Pacific			SYSTEM
		ML	BI	SC	N		W	N	NW				W			
Freight Interference - TOTAL	137.8	0.0	0.0	0.0	19.8	96.4	92.6	85.4	43.2	86.8	9.2	39.2	119.0	729.4		
Freight Interference - Peak	55.8	0.0	0.0	0.0	19.2	20.8	19.6	33.6	11.4	27.8	1.8	19.0	29.0	238.0		
<i>Primary</i>	36.2	0.0	0.0	0.0	18.4	14.4	12.2	23.8	7.2	21.2	0.8	10.2	14.8	159.2		
<i>Secondary</i>	19.6	0.0	0.0	0.0	0.8	6.4	7.4	9.8	4.2	6.6	1.0	8.8	14.2	78.8		
Freight Interference - Off-Peak	82.0	0.0	0.0	0.0	0.6	75.6	73.0	51.8	31.8	59.0	7.4	20.2	90.0	491.4		
<i>Primary</i>	69.2	0.0	0.0	0.0	0.6	51.6	50.2	43.8	27.6	45.8	4.6	16.0	71.4	380.8		
<i>Secondary</i>	12.8	0.0	0.0	0.0	0.0	24.0	22.8	8.0	4.2	13.2	2.8	4.2	18.6	110.6		
Signal/Switch Failure - TOTAL	158.0	51.0	20.4	18.0	13.0	153.0	92.2	62.4	58.2	67.2	23.0	43.2	75.6	835.2		
Signal/Switch Failure - Metra/PSA	93.8	51.0	20.2	18.0	1.8	126.2	76.2	40.2	54.8	14.0	22.4	38.8	72.4	629.8		
<i>Primary</i>	67.0	35.6	14.8	13.8	1.6	59.4	43.6	22.0	38.6	9.6	11.6	14.8	25.4	357.8		
<i>Secondary</i>	26.8	15.4	5.4	4.2	0.2	66.8	32.6	18.2	16.2	4.4	10.8	24.0	47.0	272.0		
Signal/Switch Failure - Foreign	64.2	0.0	0.2	0.0	11.2	26.8	16.0	22.2	3.4	53.2	0.6	4.4	3.2	205.4		
<i>Primary</i>	51.0	0.0	0.0	0.0	10.0	17.4	11.2	12.4	1.8	33.4	0.6	2.2	3.2	143.2		
<i>Secondary</i>	13.2	0.0	0.2	0.0	1.2	9.4	4.8	9.8	1.6	19.8	0.0	2.2	0.0	62.2		
Mechanical Failure - TOTAL	114.8	24.6	8.4	6.0	4.0	90.0	63.2	22.0	89.8	17.6	49.6	55.4	44.6	590.0		
Mechanical Failure - Metra/PSA	114.4	21.8	7.6	5.8	4.0	85.6	63.0	22.0	89.4	17.6	49.6	55.4	44.4	580.6		
Non-Locomotive Equipment Failure - Metra/PSA	28.8	21.8	7.6	5.8	1.2	11.0	12.6	3.6	12.2	6.6	11.2	10.2	16.0	148.6		
<i>Primary</i>	10.6	8.6	3.4	3.4	0.8	3.4	5.8	1.4	5.2	2.6	4.2	4.0	7.8	61.2		
<i>Secondary</i>	18.2	13.2	4.2	2.4	0.4	7.6	6.8	2.2	7.0	4.0	7.0	6.2	8.2	87.4		
Locomotive Failure - Metra/PSA	85.6	0.0	0.0	0.0	2.8	74.6	50.4	18.4	77.2	11.0	38.4	45.2	28.4	432.0		
<i>Primary</i>	25.2	0.0	0.0	0.0	2.2	18.8	18.4	5.4	23.8	5.2	13.8	12.8	11.0	136.6		
<i>Secondary</i>	60.4	0.0	0.0	0.0	0.6	55.8	32.0	13.0	53.4	5.8	24.6	32.4	17.4	295.4		
Mechanical Failure - Foreign	0.4	2.8	0.8	0.2	0.0	4.4	0.2	0.0	0.4	0.0	0.0	0.0	0.2	9.4		
Passenger Train Interference - TOTAL	9.8	7.4	2.0	3.8	4.0	42.4	8.2	10.2	10.0	8.6	1.0	3.0	8.2	118.6		
Passenger Train Interference - Metra/PSA	0.8	2.8	0.8	2.4	0.2	28.4	7.2	10.2	6.8	2.2	1.0	2.8	7.8	73.4		
Passenger Train Interference - Foreign	9.0	4.6	1.2	1.4	3.8	14.0	1.0	0.0	3.2	6.4	0.0	0.2	0.4	45.2		
Accident - TOTAL	79.8	15.8	5.4	7.6	0.8	38.6	41.8	14.2	27.2	7.2	23.6	50.0	23.8	335.8		
Accident - Metra/PSA	63.8	15.8	5.4	7.6	0.6	35.6	40.2	11.6	26.0	6.2	23.6	49.4	22.4	308.2		
Accident - Foreign	16.0	0.0	0.0	0.0	0.2	3.0	1.6	2.6	1.2	1.0	0.0	0.6	1.4	27.6		
Track Work - TOTAL	155.6	34.4	14.4	32.2	2.8	46.6	21.8	13.4	44.4	6.2	39.4	27.8	39.2	478.2		
Track Work - Metra/PSA	149.4	34.4	14.4	32.2	2.8	46.4	21.0	12.6	44.4	4.8	39.4	27.8	39.2	468.8		
Track Work - Foreign	6.2	0.0	0.0	0.0	0.0	0.2	0.8	0.8	0.0	1.4	0.0	0.0	0.0	9.4		
Human Error - TOTAL	99.0	33.6	10.8	17.4	11.0	53.2	31.8	15.2	41.2	22.6	31.6	34.0	27.4	428.8		
Human Error - Metra/PSA	71.0	31.0	10.6	16.6	2.6	33.4	21.2	7.6	41.2	5.2	23.6	22.0	15.2	301.2		
Human Error - Foreign	28.0	2.6	0.2	0.8	8.4	19.8	10.6	7.6	0.0	17.4	8.0	12.0	12.2	127.6		
Sick, Injured, Unruly Passenger - TOTAL	21.0	41.4	7.4	11.4	1.0	20.0	24.4	2.6	20.4	3.6	22.2	28.2	21.0	224.6		
Sick, Injured, Unruly Passenger - Metra/PSA	20.2	41.4	7.4	11.4	1.0	20.0	24.4	2.6	20.2	3.6	22.2	28.2	21.0	223.6		
Sick, Injured, Unruly Passenger - Foreign	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.0		
Weather - TOTAL	179.6	97.8	28.6	33.2	4.8	94.4	78.4	30.0	108.0	20.8	72.4	87.8	73.2	909.0		
Weather - Metra/PSA	178.6	97.8	28.6	33.2	4.4	92.2	77.8	30.0	108.0	19.8	72.4	87.4	72.8	903.0		
Weather - Foreign	1.0	0.0	0.0	0.0	0.4	2.2	0.6	0.0	0.0	1.0	0.0	0.4	0.4	6.0		
Passenger Loading - TOTAL	41.6	73.8	13.8	25.8	0.0	47.8	48.4	1.2	99.6	1.4	58.0	62.0	41.6	515.0		
Lift Deployment - TOTAL	15.8	0.8	0.0	0.4	0.0	19.6	18.4	1.4	23.0	1.0	7.4	10.8	17.8	116.4		
Obstruction/Debris - TOTAL	38.8	20.0	6.0	20.6	3.0	21.2	31.0	5.0	20.2	11.6	23.4	32.2	25.8	258.8		
Catenary Failure - TOTAL	0.0	36.4	7.8	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	61.6		
Other - TOTAL	31.0	14.6	3.6	10.2	0.4	10.6	10.4	4.8	16.0	7.4	12.6	12.2	27.6	161.4		
TOTAL TRAINS DELAYED	1,082.6	451.6	128.6	203.8	64.6	733.8	562.6	267.8	601.2	262.0	373.4	486.0	544.8	5,762.8		
Total Metra/PSA Delays	819.2	441.6	126.2	201.4	20.8	567.0	439.2	149.2	549.6	94.8	355.6	429.2	408.0	4,601.8		
Total Foreign Carrier Delays	263.4	10.0	2.4	2.4	43.8	166.8	123.4	118.6	51.6	167.2	17.8	56.8	136.8	1,161.0		

Data for latest month is final (08/12/16) version from TOPS.

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'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

TABLE 9.c: FREQUENCY OF TRAIN DELAYS BY CAUSE AND LINE
January - July 2017 Divergence From January - July Average Over Previous Five Years

CAUSE CATEGORY	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM
		ML	BI	SC		N	W				N	NW	W	
Freight Interference - TOTAL	-96.8	0.0	1.0	0.0	-1.8	-40.4	-59.6	-19.4	-0.2	-22.8	4.8	-6.2	14.0	-227.4
Freight Interference - Peak	-40.8	0.0	1.0	0.0	-4.2	-12.8	-11.6	-8.6	-4.4	-11.8	2.2	-6.0	27.0	-70.0
Primary	-23.2	0.0	0.0	0.0	-6.4	-9.4	-4.2	-4.8	-2.2	-8.2	1.2	-4.2	11.2	-50.2
Secondary	-17.6	0.0	1.0	0.0	2.2	-3.4	-7.4	-3.8	-2.2	-3.6	1.0	-1.8	15.8	-19.8
Freight Interference - Off-Peak	-56.0	0.0	0.0	0.0	2.4	-27.6	-48.0	-10.8	4.2	-11.0	2.6	-0.2	-13.0	-157.4
Primary	-46.2	0.0	0.0	0.0	2.4	-20.6	-31.2	-7.8	-0.6	-12.8	1.4	-1.0	-16.4	-132.8
Secondary	-9.8	0.0	0.0	0.0	0.0	-7.0	-16.8	-3.0	4.8	1.8	1.2	0.8	3.4	-24.6
Signal/Switch Failure - TOTAL	-88.0	8.0	11.6	21.0	-5.0	-64.0	-27.2	-27.4	-20.2	-29.2	-3.0	-21.2	-22.6	-267.2
Signal/Switch Failure - Metra/PSA	-40.8	8.0	11.8	21.0	-1.8	-64.2	-34.2	-28.2	-16.8	4.0	-2.4	-18.8	-27.4	-189.8
Primary	-34.0	5.4	12.2	13.2	-1.6	-15.4	-12.6	-13.0	-6.6	2.4	0.4	-5.8	-3.4	-58.8
Secondary	-6.8	2.6	-0.4	7.8	-0.2	-48.8	-21.6	-15.2	-10.2	1.6	-2.8	-13.0	-24.0	-131.0
Signal/Switch Failure - Foreign	-47.2	0.0	-0.2	0.0	-3.2	0.2	7.0	0.8	-3.4	-33.2	-0.6	-2.4	4.8	-77.4
Primary	-42.0	0.0	0.0	0.0	-5.0	-11.4	3.8	-1.4	-1.8	-20.4	-0.6	-0.2	3.8	-75.2
Secondary	-5.2	0.0	-0.2	0.0	1.8	11.6	3.2	2.2	-1.6	-12.8	0.0	-2.2	1.0	-2.2
Mechanical Failure - TOTAL	-31.8	-10.6	-6.4	-1.0	0.0	-25.0	-15.2	-9.0	35.2	-4.6	27.4	-16.4	-0.6	-58.0
Mechanical Failure - Metra/PSA	-33.4	-12.8	-5.6	-0.8	-1.0	-27.6	-15.0	-9.0	35.6	-4.6	27.4	-16.4	-0.4	-63.6
Non-Locomotive Equipment Failure - Metra/PSA	1.2	-12.8	-5.6	-0.8	-0.2	-7.0	-4.6	-0.6	-4.2	-1.6	-3.2	1.8	8.0	-29.6
Primary	1.4	-6.6	-2.4	-1.4	0.2	-0.4	-1.8	-0.4	-0.2	-0.6	-1.2	1.0	3.2	-9.2
Secondary	-0.2	-6.2	-3.2	0.6	-0.4	-6.6	-2.8	-0.2	-4.0	-1.0	-2.0	0.8	4.8	-20.4
Locomotive Failure - Metra/PSA	-34.6	0.0	0.0	0.0	-0.8	-20.6	-10.4	-8.4	39.8	-3.0	30.6	-18.2	-8.4	-34.0
Primary	-3.2	0.0	0.0	0.0	-0.2	3.2	-0.4	0.6	18.2	-2.2	3.2	-0.8	-4.0	14.4
Secondary	-31.4	0.0	0.0	0.0	-0.6	-23.8	-10.0	-9.0	21.6	-0.8	27.4	-17.4	-4.4	-48.4
Mechanical Failure - Foreign	1.6	2.2	-0.8	-0.2	1.0	2.6	-0.2	0.0	-0.4	0.0	0.0	0.0	-0.2	5.6
Passenger Train Interference - TOTAL	-2.8	-6.4	1.0	0.2	4.0	-28.4	-8.2	-5.2	-8.0	6.4	-1.0	-3.0	-5.2	-56.6
Passenger Train Interference - Metra/PSA	-0.8	-2.8	2.2	-1.4	-0.2	-17.4	-7.2	-5.2	-4.8	-2.2	-1.0	-2.8	-5.8	-49.4
Passenger Train Interference - Foreign	-2.0	-3.6	-1.2	1.6	4.2	-11.0	-1.0	0.0	-3.2	8.6	0.0	-0.2	0.6	-7.2
Accident - TOTAL	-0.8	12.2	5.6	13.4	-0.8	-35.6	-9.8	-7.2	-2.2	-4.2	5.4	63.0	-13.8	25.2
Accident - Metra/PSA	12.2	12.2	5.6	13.4	-0.6	-32.6	-11.2	-4.6	-6.0	-6.2	5.4	60.6	-21.4	26.8
Accident - Foreign	-13.0	0.0	0.0	0.0	-0.2	-3.0	1.4	-2.6	3.8	2.0	0.0	2.4	7.6	-1.6
Track Work - TOTAL	-84.6	31.6	13.6	-1.2	-1.8	5.4	-6.8	-11.4	8.6	5.8	-2.4	20.2	16.8	-6.2
Track Work - Metra/PSA	-78.4	31.6	13.6	-1.2	-1.8	5.6	-6.0	-10.6	8.6	7.2	-2.4	20.2	16.8	3.2
Track Work - Foreign	-6.2	0.0	0.0	0.0	0.0	-0.2	-0.8	-0.8	0.0	-1.4	0.0	0.0	0.0	-9.4
Human Error - TOTAL	24.0	-12.6	1.2	-11.4	3.0	34.8	31.2	0.8	0.8	-2.6	13.4	-2.0	25.6	106.2
Human Error - Metra/PSA	-17.0	-12.0	1.4	-10.6	-1.6	23.6	18.8	-4.6	-0.2	-1.2	18.4	4.0	20.8	39.8
Human Error - Foreign	41.0	-0.6	-0.2	-0.8	4.6	11.2	12.4	5.4	1.0	-1.4	-5.0	-6.0	4.8	66.4
Sick, Injured, Unruly Passenger - TOTAL	1.0	-6.4	-3.4	-2.4	-1.0	3.0	2.6	0.4	-3.4	-3.6	-7.2	-1.2	21.0	-0.6
Sick, Injured, Unruly Passenger - Metra/PSA	-4.2	-6.4	-3.4	-2.4	-1.0	3.0	2.6	0.4	-3.2	-3.6	-7.2	-1.2	21.0	-5.6
Sick, Injured, Unruly Passenger - Foreign	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	5.0
Weather - TOTAL	-127.6	-75.8	-20.6	-18.2	-0.8	-9.4	-35.4	-18.0	-78.0	-19.8	-44.4	-70.8	-66.2	-585.0
Weather - Metra/PSA	-126.6	-75.8	-20.6	-18.2	-0.4	-8.2	-34.8	-18.0	-78.0	-18.8	-44.4	-70.4	-65.8	-580.0
Weather - Foreign	-1.0	0.0	0.0	0.0	-0.4	-1.2	-0.6	0.0	0.0	-1.0	0.0	-0.4	-0.4	-5.0
Passenger Loading - TOTAL	-25.6	-49.8	-7.8	-17.8	0.0	-28.8	-32.4	-0.2	-74.6	-1.4	-21.0	11.0	6.4	-242.0
Lift Deployment - TOTAL	-2.8	3.2	0.0	0.6	0.0	17.4	-12.4	-0.4	-2.0	-1.0	2.6	5.2	2.2	12.6
Obstruction/Debris - TOTAL	32.2	0.0	7.0	-3.6	5.0	7.8	-8.0	13.0	15.8	6.4	-17.4	10.8	26.2	95.2
Catenary Failure - TOTAL	0.0	-31.4	-5.8	-11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	-48.6
Other - TOTAL	-6.0	-8.6	2.4	-7.2	0.6	-3.6	7.6	-0.8	3.0	0.6	0.4	15.8	-0.6	3.6
TOTAL TRAINS DELAYED	-409.6	-146.6	-0.6	-38.8	1.4	-166.8	-173.6	-84.8	-125.2	-70.0	-42.4	5.0	3.2	-1,248.8
Total Metra/PSA Delays	-291.2	-144.6	0.8	-39.4	-2.8	-125.0	-132.2	-68.2	-122.6	-20.8	-41.6	17.8	-28.0	-997.8
Total Foreign Carrier Delays	-118.4	-2.0	-1.4	0.6	4.2	-41.8	-41.4	-16.6	-2.6	-49.2	-0.8	-12.8	31.2	-251.0

Data for current month is final (08/21/17) version from TOPS.

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'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

**TABLE 10.a: FREQUENCY OF TRAIN DELAYS BY CAUSE & MONTH
2017**

CAUSE CATEGORY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan - Jul
Freight Interference - TOTAL	53	68	69	79	49	110	74						502 11.1%
Freight Interference - Peak	20	21	23	25	14	34	31						168 3.7%
Primary	11	16	17	11	12	22	20						109 2.4%
Secondary	9	5	6	14	2	12	11						59 1.3%
Freight Interference - Off-Peak	33	47	46	54	35	76	43						334 7.4%
Primary	26	38	36	34	27	57	30						248 5.5%
Secondary	7	9	10	20	8	19	13						86 1.9%
Signal/Switch Failure - TOTAL	118	44	80	79	91	87	69						568 12.6%
Signal/Switch Failure - Metra/PSA	98	31	74	28	72	74	63						440 9.7%
Primary	69	21	41	25	46	42	55						299 6.6%
Secondary	29	10	33	3	26	32	8						141 3.1%
Signal/Switch Failure - Foreign	20	13	6	51	19	13	6						128 2.8%
Primary	10	9	4	16	15	10	4						68 1.5%
Secondary	10	4	2	35	4	3	2						60 1.3%
Mechanical Failure - TOTAL	84	61	64	42	111	85	85						532 11.8%
Mechanical Failure - Metra/PSA	83	55	62	42	111	84	80						517 11.5%
Non-Locomotive Equipment Failure - Metra/PSA	12	8	15	10	23	35	16						119 2.6%
Primary	6	8	5	7	7	13	6						52 1.2%
Secondary	6	0	10	3	16	22	10						67 1.5%
Locomotive Failure - Metra/PSA	71	47	47	32	88	49	64						398 8.8%
Primary	18	21	20	17	29	25	21						151 3.3%
Secondary	53	26	27	15	59	24	43						247 5.5%
Mechanical Failure - Foreign	1	6	2	0	0	1	5						15 0.3%
Passenger Train Interference - TOTAL	16	2	2	5	19	9	9						62 1.4%
Passenger Train Interference - Metra/PSA	9	0	1	2	2	4	6						24 0.5%
Passenger Train Interference - Foreign	7	2	1	3	17	5	3						38 0.8%
Accident - TOTAL	74	32	26	101	18	65	45						361 8.0%
Accident - Metra/PSA	69	32	23	98	9	64	40						335 7.4%
Accident - Foreign	5	0	3	3	9	1	5						26 0.6%
Track Work - TOTAL	78	17	29	72	98	107	71						472 10.5%
Track Work - Metra/PSA	78	17	29	72	98	107	71						472 10.5%
Track Work - Foreign	0	0	0	0	0	0	0						0 0.0%
Human Error - TOTAL	68	140	54	69	56	75	73						535 11.9%
Human Error - Metra/PSA	58	50	37	49	41	58	48						341 7.6%
Human Error - Foreign	10	90	17	20	15	17	25						194 4.3%
Sick, Injured, Unruly Passenger - TOTAL	27	28	40	27	20	38	44						224 5.0%
Sick, Injured, Unruly Passenger - Metra/PSA	27	28	34	27	20	38	44						218 4.8%
Sick, Injured, Unruly Passenger - Foreign	0	0	6	0	0	0	0						6 0.1%
Weather - TOTAL	97	25	59	4	2	33	104						324 7.2%
Weather - Metra/PSA	96	25	59	4	2	33	104						323 7.2%
Weather - Foreign	1	0	0	0	0	0	0						1 0.0%
Passenger Loading - TOTAL	33	7	12	10	36	81	94						273 6.0%
Lift Deployment - TOTAL	17	8	8	13	23	31	29						129 2.9%
Obstruction/Debris - TOTAL	66	44	43	35	78	64	24						354 7.8%
Catenary Failure - TOTAL	6	1	4	1	0	0	1						13 0.3%
Other - TOTAL	15	15	24	20	22	37	32						165 3.7%
TOTAL TRAINS DELAYED	752	492	514	557	623	822	754						4,514 100.0%
Total Metra/PSA Delays	655	313	410	401	514	675	636						3,604 79.8%
Total Foreign Carrier Delays	97	179	104	156	109	147	118						910 20.2%

Data for current month is final (08/21/17) version from TOPS.

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'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

**TABLE 10.b: FREQUENCY OF TRAIN DELAYS BY CAUSE & MONTH
2016**

CAUSE CATEGORY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan - Jul	
Freight Interference - TOTAL	82	53	43	44	72	73	82	108	78	48	65	94	449	9.8%
Freight Interference - Peak	32	17	14	9	28	20	32	50	26	15	34	32	152	3.3%
Primary	26	10	11	7	15	10	21	31	20	13	18	20	100	2.2%
Secondary	6	7	3	2	13	10	11	19	6	2	16	12	52	1.1%
Freight Interference - Off-Peak	50	36	29	35	44	53	50	58	52	33	31	62	297	6.4%
Primary	32	29	23	29	32	44	34	48	43	29	28	52	223	4.8%
Secondary	18	7	6	6	12	9	16	10	9	4	3	10	74	1.6%
Signal/Switch Failure - TOTAL	154	155	123	98	145	143	108	63	105	67	110	120	926	20.1%
Signal/Switch Failure - Metra/PSA	67	122	99	60	84	84	51	55	89	38	76	76	567	12.3%
Primary	35	30	52	41	54	52	41	40	58	32	57	52	305	6.6%
Secondary	32	92	47	19	30	32	10	15	31	6	19	24	262	5.7%
Signal/Switch Failure - Foreign	87	33	24	38	61	59	57	8	16	29	34	44	359	7.8%
Primary	68	24	14	33	49	43	36	6	12	21	19	29	267	5.8%
Secondary	19	9	10	5	12	16	21	2	4	8	15	15	92	2.0%
Mechanical Failure - TOTAL	107	68	131	43	80	88	120	78	114	64	71	88	637	13.8%
Mechanical Failure - Metra/PSA	107	68	131	42	80	88	120	78	114	64	71	80	636	13.8%
Non-Locomotive Equipment Failure - Metra/PSA	25	19	10	6	13	17	19	30	8	12	3	29	109	2.4%
Primary	11	9	4	5	9	9	8	11	7	7	3	9	55	1.2%
Secondary	14	10	6	1	4	8	11	19	1	5	0	20	54	1.2%
Locomotive Failure - Metra/PSA	82	49	121	36	67	71	101	48	106	52	68	51	527	11.4%
Primary	28	18	24	14	18	27	36	20	28	17	23	25	165	3.6%
Secondary	54	31	97	22	49	44	65	28	78	35	45	26	362	7.9%
Mechanical Failure - Foreign	0	0	0	1	0	0	0	0	0	0	0	8	1	0.0%
Passenger Train Interference - TOTAL	22	12	3	4	19	14	12	11	5	10	4	38	86	1.9%
Passenger Train Interference - Metra/PSA	13	5	2	3	2	2	7	2	2	6	3	2	34	0.7%
Passenger Train Interference - Foreign	9	7	1	1	17	12	5	9	3	4	1	36	52	1.1%
Accident - TOTAL	59	15	62	48	86	29	18	55	34	10	79	49	317	6.9%
Accident - Metra/PSA	49	14	62	41	77	29	18	53	30	10	73	49	290	6.3%
Accident - Foreign	10	1	0	7	9	0	0	2	4	0	6	0	27	0.6%
Track Work - TOTAL	40	21	36	44	141	114	99	133	177	75	59	61	495	10.7%
Track Work - Metra/PSA	40	21	36	41	139	110	99	104	175	74	59	61	486	10.6%
Track Work - Foreign	0	0	0	3	2	4	0	29	2	1	0	0	9	0.2%
Human Error - TOTAL	38	33	21	53	23	112	47	93	50	45	49	71	327	7.1%
Human Error - Metra/PSA	30	25	15	42	15	94	34	81	43	32	32	57	255	5.5%
Human Error - Foreign	8	8	6	11	8	18	13	12	7	13	17	14	72	1.6%
Sick, Injured, Unruly Passenger - TOTAL	20	39	27	50	44	32	29	43	30	24	35	34	241	5.2%
Sick, Injured, Unruly Passenger - Metra/PSA	20	39	27	50	44	30	29	43	30	24	34	34	239	5.2%
Sick, Injured, Unruly Passenger - Foreign	0	0	0	0	0	2	0	0	0	0	1	0	2	0.0%
Weather - TOTAL	129	132	28	1	4	23	49	38	1	4	13	132	366	7.9%
Weather - Metra/PSA	129	132	28	1	4	23	49	38	1	4	13	131	366	7.9%
Weather - Foreign	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0%
Passenger Loading - TOTAL	13	7	29	8	51	83	109	42	32	28	68	71	300	6.5%
Lift Deployment - TOTAL	11	14	12	3	15	11	11	21	11	12	8	16	77	1.7%
Obstruction/Debris - TOTAL	18	30	40	54	22	31	44	51	28	39	47	42	239	5.2%
Catenary Failure - TOTAL	9	3	2	1	4	13	11	6	29	12	9	1	43	0.9%
Other - TOTAL	5	17	15	0	10	25	30	39	35	17	30	19	102	2.2%
TOTAL TRAINS DELAYED	707	599	572	451	716	791	769	781	729	455	647	836	4,605	100.0%
Total Metra/PSA Delays	511	497	498	346	547	623	612	613	619	360	523	639	3,634	78.9%
Total Foreign Carrier Delays	196	102	74	105	169	168	157	168	110	95	124	197	971	21.1%

Data for latest month is final (01/26/17) version from TOPS.

P:\ONTIME\report\DelaysByCause.xlsx AllMonths 08/21/2017

'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

TABLE 10.c: FREQUENCY OF TRAIN DELAYS BY CAUSE & MONTH
2017 Divergence From 2016

CAUSE CATEGORY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan - Jul	
Freight Interference - TOTAL	-29	15	26	35	-23	37	-8						53	1.4%
Freight Interference - Peak	-12	4	9	16	-14	14	-1						16	0.4%
Primary	-15	6	6	4	-3	12	-1						9	0.2%
Secondary	3	-2	3	12	-11	2	0						7	0.2%
Freight Interference - Off-Peak	-17	11	17	19	-9	23	-7						37	0.9%
Primary	-6	9	13	5	-5	13	-4						25	0.7%
Secondary	-11	2	4	14	-4	10	-3						12	0.3%
Signal/Switch Failure - TOTAL	-36	-111	-43	-19	-54	-56	-39						-358	-7.5%
Signal/Switch Failure - Metra/PSA	31	-91	-25	-32	-12	-10	12						-127	-2.6%
Primary	34	-9	-11	-16	-8	-10	14						-6	0.0%
Secondary	-3	-82	-14	-16	-4	0	-2						-121	-2.6%
Signal/Switch Failure - Foreign	-67	-20	-18	13	-42	-46	-51						-231	-5.0%
Primary	-58	-15	-10	-17	-34	-33	-32						-199	-4.3%
Secondary	-9	-5	-8	30	-8	-13	-19						-32	-0.7%
Mechanical Failure - TOTAL	-23	-7	-67	-1	31	-3	-35						-105	-2.0%
Mechanical Failure - Metra/PSA	-24	-13	-69	0	31	-4	-40						-119	-2.4%
Non-Locomotive Equipment Failure - Metra/PSA	-13	-11	5	4	10	18	-3						10	0.3%
Primary	-5	-1	1	2	-2	4	-2						-3	0.0%
Secondary	-8	-10	4	2	12	14	-1						13	0.3%
Locomotive Failure - Metra/PSA	-11	-2	-74	-4	21	-22	-37						-129	-2.6%
Primary	-10	3	-4	3	11	-2	-15						-14	-0.2%
Secondary	-1	-5	-70	-7	10	-20	-22						-115	-2.4%
Mechanical Failure - Foreign	1	6	2	-1	0	1	5						14	0.3%
Passenger Train Interference - TOTAL	-6	-10	-1	1	0	-5	-3						-24	-0.5%
Passenger Train Interference - Metra/PSA	-4	-5	-1	-1	0	2	-1						-10	-0.2%
Passenger Train Interference - Foreign	-2	-5	0	2	0	-7	-2						-14	-0.3%
Accident - TOTAL	15	17	-36	53	-68	36	27						44	1.1%
Accident - Metra/PSA	20	18	-39	57	-68	35	22						45	1.1%
Accident - Foreign	-5	-1	3	-4	0	1	5						-1	0.0%
Track Work - TOTAL	38	-4	-7	28	-43	-7	-28						-23	-0.3%
Track Work - Metra/PSA	38	-4	-7	31	-41	-3	-28						-14	-0.1%
Track Work - Foreign	0	0	0	-3	-2	-4	0						-9	-0.2%
Human Error - TOTAL	30	107	33	16	33	-37	26						208	4.8%
Human Error - Metra/PSA	28	25	22	7	26	-36	14						86	2.0%
Human Error - Foreign	2	82	11	9	7	-1	12						122	2.7%
Sick, Injured, Unruly Passenger - TOTAL	7	-11	13	-23	-24	6	15						-17	-0.3%
Sick, Injured, Unruly Passenger - Metra/PSA	7	-11	7	-23	-24	8	15						-21	-0.4%
Sick, Injured, Unruly Passenger - Foreign	0	0	6	0	0	-2	0						4	0.1%
Weather - TOTAL	-32	-107	31	3	-2	10	55						-42	-0.8%
Weather - Metra/PSA	-33	-107	31	3	-2	10	55						-43	-0.8%
Weather - Foreign	1	0	0	0	0	0	0						1	0.0%
Passenger Loading - TOTAL	20	0	-17	2	-15	-2	-15						-27	-0.5%
Lift Deployment - TOTAL	6	-6	-4	10	8	20	18						52	1.2%
Obstruction/Debris - TOTAL	48	14	3	-19	56	33	-20						115	2.7%
Catenary Failure - TOTAL	-3	-2	2	0	-4	-13	-10						-30	-0.6%
Other - TOTAL	10	-2	9	20	12	12	2						63	1.4%
TOTAL TRAINS DELAYED	45	-107	-58	106	-93	31	-15						-91	
Total Metra/PSA Delays	144	-184	-88	55	-33	52	24						-30	
Total Foreign Carrier Delays	-99	77	30	51	-60	-21	-39						-61	

Data for current month is final (08/21/17) version from TOPS.

P:\ONTIME\report[DelaysByCause.xlsx]AllMonths 08/21/2017

'Metra/PSA' refers to delays that may be directly or indirectly attributed to Metra or Metra Purchase of Service Agreement partners (BNSF and UP) in commuter rail operation.

'Foreign' refers to delays that may be directly or indirectly attributed to other carriers, including freight carriers, Amtrak, and NICTD, that affect Metra trains. 'Foreign' also includes delays attributable to BNSF and Union Pacific freight operations.

**TABLE 11: FREIGHT DELAYS
between August 2015 and July 2017**

	BNSF	Electric			HER	Milw		NCS	RI	SWS	Union Pacific			SYSTEM
		ML	BI	SC		N	W				N	NW	W	
Aug-15	13	0	0	0	8	7	5	11	4	17	0	0	24	89
Sep-15	20	0	0	0	1	9	6	11	14	6	0	2	15	84
Oct-15	16	0	0	0	0	5	4	3	3	11	0	3	15	60
Nov-15	15	0	0	0	7	0	4	7	5	10	3	6	8	65
Dec-15	9	0	0	0	2	4	4	5	4	5	0	1	15	49
Jan-16	14	0	0	0	1	4	23	5	24	3	0	3	5	82
Feb-16	11	0	0	0	3	5	6	1	16	2	0	2	7	53
Mar-16	4	0	0	0	2	6	8	6	2	7	0	0	8	43
Apr-16	13	0	0	0	3	8	4	3	1	8	0	1	3	44
May-16	17	0	0	0	0	9	12	7	0	8	0	1	18	72
Jun-16	19	0	0	0	1	4	6	9	4	10	0	0	20	73
Jul-16	25	0	0	0	2	5	24	6	2	9	0	1	8	82
Total	176	0	0	0	30	66	106	74	79	96	3	20	146	796
Aug-16	56	0	0	0	2	14	6	4	3	5	1	2	15	108
Sep-16	22	0	0	0	5	9	4	3	4	17	1	2	11	78
Oct-16	11	0	0	0	2	2	2	9	3	2	1	3	13	48
Nov-16	8	0	0	0	5	3	5	7	2	9	1	4	21	65
Dec-16	9	0	0	0	4	7	4	8	6	9	2	8	37	94
Jan-17	3	0	0	0	2	6	5	6	3	3	2	1	22	53
Feb-17	4	0	0	0	2	9	3	13	3	10	2	7	15	68
Mar-17	6	0	0	0	4	6	7	5	2	17	1	6	15	69
Apr-17	0	0	0	0	1	8	9	12	4	7	0	4	34	79
May-17	2	0	0	0	2	5	2	11	2	15	2	2	6	49
Jun-17	19	0	1	0	3	9	2	14	18	8	4	5	27	110
Jul-17	7	0	0	0	4	13	5	5	11	4	3	8	14	74
Total	147	0	1	0	36	91	54	97	61	106	20	52	230	895

Data for current month is final (08/21/17) version from TOPS.

TABLES 12.a & 12.b: FREQUENCY OF LIFT-DEPLOYMENT TRAIN DELAYS BY LINE & MONTH
2017

LINE	Jan Feb Mar			Apr May Jun			Jul Aug Sep			Oct Nov Dec			Lift Delays YTD	% of All Delays YTD
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
BNSF	1	1	0	0	4	5	2						13	1.93%
Electric ML	0	0	0	0	1	2	1						4	1.31%
Electric BI	0	0	0	0	0	0	0						0	0.00%
Electric SC	0	1	0	0	0	0	0						1	0.61%
HER	0	0	0	0	0	0	0						0	0.00%
Milw N	3	2	1	1	4	12	14						37	6.53%
Milw W	3	0	2	1	0	0	0						6	1.54%
NCS	0	0	0	0	0	0	1						1	0.55%
RI	2	1	0	2	4	8	4						21	4.41%
SWS	0	0	0	0	0	0	0						0	0.00%
UP N	2	1	1	0	4	0	2						10	3.02%
UP NW	2	1	0	6	3	2	2						16	3.26%
UP W	4	1	4	3	3	2	3						20	3.65%
Total Lift Delays	17	8	8	13	23	31	29						129	2.86%
ALL DELAYS														4,514

Data for current month is final (08/21/17) version from TOPS.

2016

LINE	Jan Feb Mar			Apr May Jun			Jul Aug Sep			Oct Nov Dec			Lift Delays All Year	% of All Delays All Year
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
BNSF	5	1	1	0	1	0	1	1	0	4	0	0	14	0.87%
Electric ML	1	0	0	0	0	0	0	0	0	1	0	0	2	0.33%
Electric BI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
Electric SC	0	0	0	0	0	0	0	0	1	0	0	0	1	0.39%
HER	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
Milw N	1	6	8	0	7	3	0	6	4	3	2	2	42	4.42%
Milw W	0	0	1	2	0	2	7	1	3	3	2	1	22	2.51%
NCS	0	1	0	0	0	0	0	1	0	0	0	0	2	0.65%
RI	2	2	0	0	1	2	1	3	1	0	2	8	22	2.60%
SWS	0	0	0	0	2	1	0	0	0	0	0	1	4	1.05%
UP N	0	0	0	0	0	0	0	4	0	0	0	1	5	1.12%
UP NW	1	0	2	0	2	2	1	3	1	1	1	1	15	2.16%
UP W	1	4	0	1	2	1	1	2	1	0	1	2	16	1.89%
Total Lift Delays	11	14	12	3	15	11	11	21	11	12	8	16	145	1.80%
ALL DELAYS														8,053

TABLE 13: FREQUENCY OF TRAIN DELAYS BY DURATION

July 2017

Minutes	BNSF	Electric			Her	Milwaukee		NCS	RI	SWS	UP			System
		ML	BI	SC		N	W				N	NW	W	
Peak *														
6-10	28	7	1	0	4	20	3	2	11	5	9	18	9	117
11-15	6	1	0	1	3	9	2	3	5	1	3	9	7	50
16-20	5	0	1	0	2	8	0	0	3	0	3	1	2	25
21+	4	0	1	0	2	10	8	4	14	1	9	18	10	81
Annulled	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>10</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>24</u>
Sub-Total	43	8	3	1	11	57	16	10	34	8	28	49	29	297
Off-Peak **														
6-10	25	18	2	9	1	51	16	8	25	6	21	26	23	231
11-15	9	8	1	0	0	19	4	1	12	3	4	18	11	90
16-20	1	0	0	1	0	13	3	2	10	0	2	8	4	44
21+	2	2	0	0	1	20	12	2	4	1	10	15	4	73
Annulled	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>7</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>2</u>	<u>1</u>	<u>19</u>
Sub-Total	38	28	4	10	2	110	36	13	51	10	43	69	43	457
July 2017 Total														
6-10	53	25	3	9	5	71	19	10	36	11	30	44	32	348
11-15	15	9	1	1	3	28	6	4	17	4	7	27	18	140
16-20	6	0	1	1	2	21	3	2	13	0	5	9	6	69
21+	6	2	1	0	3	30	20	6	18	2	19	33	14	154
Annulled	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>17</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>10</u>	<u>5</u>	<u>2</u>	<u>43</u>
TOTAL	81	36	7	11	13	167	52	23	85	18	71	118	72	754
2017 Year-to-Date														
6-10	325	175	84	86	18	263	133	83	236	89	141	178	284	2,095
11-15	108	46	15	18	13	116	93	35	89	31	61	98	111	834
16-20	51	23	12	13	11	62	32	19	45	11	29	47	57	412
21+	132	61	16	36	24	89	100	38	94	55	79	140	90	954
Annulled	<u>57</u>	<u>0</u>	<u>1</u>	<u>12</u>	<u>0</u>	<u>37</u>	<u>31</u>	<u>8</u>	<u>12</u>	<u>6</u>	<u>21</u>	<u>28</u>	<u>6</u>	<u>219</u>
TOTAL	673	305	128	165	66	567	389	183	476	192	331	491	548	4,514
PERCENT COMPOSITION OF DELAYS BY RANGE OF DURATION														
Minutes	BNSF	Electric			Her	Milwaukee		NCS	RI	SWS	UP			System
		ML	BI	SC		N	W				N	NW	W	
July 2017 Total														
6-10	65.4%	69.4%	42.9%	81.8%	38.5%	42.5%	36.5%	43.5%	42.4%	61.1%	42.3%	37.3%	44.4%	46.2%
11-15	18.5%	25.0%	14.3%	9.1%	23.1%	16.8%	11.5%	17.4%	20.0%	22.2%	9.9%	22.9%	25.0%	18.6%
16-20	7.4%	0.0%	14.3%	9.1%	15.4%	12.6%	5.8%	8.7%	15.3%	0.0%	7.0%	7.6%	8.3%	9.2%
21+	7.4%	5.6%	14.3%	0.0%	23.1%	18.0%	38.5%	26.1%	21.2%	11.1%	26.8%	28.0%	19.4%	20.4%
Annulled	<u>1.2%</u>	<u>0.0%</u>	<u>14.3%</u>	<u>0.0%</u>	<u>0.0%</u>	<u>10.2%</u>	<u>7.7%</u>	<u>4.3%</u>	<u>1.2%</u>	<u>5.6%</u>	<u>14.1%</u>	<u>4.2%</u>	<u>2.8%</u>	<u>5.7%</u>
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2017 Year-to-Date Delays By Duration														
6-10	48.3%	57.4%	65.6%	52.1%	27.3%	46.4%	34.2%	45.4%	49.6%	46.4%	42.6%	36.3%	51.8%	46.4%
11-15	16.0%	15.1%	11.7%	10.9%	19.7%	20.5%	23.9%	19.1%	18.7%	16.1%	18.4%	20.0%	20.3%	18.5%
16-20	7.6%	7.5%	9.4%	7.9%	16.7%	10.9%	8.2%	10.4%	9.5%	5.7%	8.8%	9.6%	10.4%	9.1%
21+	19.6%	20.0%	12.5%	21.8%	36.4%	15.7%	25.7%	20.8%	19.7%	28.6%	23.9%	28.5%	16.4%	21.1%
Annulled	<u>8.5%</u>	<u>0.0%</u>	<u>0.8%</u>	<u>7.3%</u>	<u>0.0%</u>	<u>6.5%</u>	<u>8.0%</u>	<u>4.4%</u>	<u>2.5%</u>	<u>3.1%</u>	<u>6.3%</u>	<u>5.7%</u>	<u>1.1%</u>	<u>4.9%</u>
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Includes peak direction trains operating during weekday peak periods. **Includes all other weekday and weekend trains.

Data for most recent month is final (08/21/17) version from TOPS.

TABLE 14: AVERAGE LENGTH OF DELAY BY SERVICE PERIOD, IN MINUTES

	BNSF	Electric			Her	Milwaukee		NCS	RI	SWS	UP			System
		ML	BI	SC		N	W				N	NW	W	
July 2017														
Peak *	12.4	8.4	15.3	11.0	20.7	23.0	44.3	26.1	20.6	11.3	42.2	35.2	21.8	24.8
Off-Peak **	10.3	9.7	9.7	9.1	16.0	13.7	19.6	21.5	12.3	11.4	20.7	20.1	13.8	15.1
All	11.4	9.4	12.5	9.3	20.0	16.6	26.3	23.4	15.6	11.4	29.2	26.3	17.0	18.8
2017 Year-to-Date														
Peak *	21.9	17.8	13.0	16.5	23.6	18.3	22.3	17.2	18.3	17.5	19.9	35.7	14.7	20.8
Off-Peak **	16.0	13.6	11.6	15.7	17.6	14.6	17.8	17.3	14.3	19.8	19.0	25.4	15.3	16.8
All	19.4	15.1	12.0	15.8	22.1	15.9	19.6	17.2	16.0	19.1	19.4	29.7	15.1	18.5

Excludes annulled trains, which do not have delay times.

*Includes peak direction trains operating during weekday peak periods. **Includes all other weekday and weekend trains.

Data for most recent month is final (08/21/17) version from TOPS.