

- Procedure to Investigate Assumption - LFU

Normal Distribution by Week	Month
N1	May
N2	
N3	June
N4	
N5	
N6	
N7	
N8	July
N9	
N10	
N11	August
N12	
N13	
N14	
N15	
N16	September
N17	
N18	
N19	
N20	October
N21	
N22	
N23	
N24	
N25	November
N26	
N27	
N28	
N29	

Normal Distribution by Week	Month
N30	December
N31	
N32	
N33	
N34	January
N35	
N36	
N37	February
N38	
N39	
N40	
N41	
N42	March
N43	
N44	
N45	
N46	April
N47	
N48	
N49	May
N50	
N51	
N52	

LFU in MARS has to be input monthly

Using load models created with data from period 2003-2012 (same as in 2015 RRS), we sampled from the normal distributions assigned to each month to determine 12 monthly peaks.

We repeat the step above 10,000 times

For each month, we have 10,000 monthly peaks; we then calculate the mean and the standard deviation (for each month).

We assign 1 to the monthly mean value and then per-unitize the standard deviation.

- Procedure to Investigate Assumption - LFU

Month	Per Unit Stdev	LL1	LL2	LL3	LL4	LL5	LL6	LL7
Jan	SD1	1+3*SD1	1+2*SD1	1+1*SD1	1	1-1*SD1	1-2*SD1	1-3*SD1
Feb	SD2	1+3*SD2	1+2*SD2	1+1*SD2	1	1-1*SD2	1-2*SD2	1-3*SD2
Mar	SD3	1+3*SD3	1+2*SD3	1+1*SD3	1	1-1*SD3	1-2*SD3	1-3*SD3
Apr	SD4	1+3*SD4	1+2*SD4	1+1*SD4	1	1-1*SD4	1-2*SD4	1-3*SD4
May	SD5	1+3*SD5	1+2*SD5	1+1*SD5	1	1-1*SD5	1-2*SD5	1-3*SD5
Jun	SD6	1+3*SD6	1+2*SD6	1+1*SD6	1	1-1*SD6	1-2*SD6	1-3*SD6
Jul	SD7	1+3*SD7	1+2*SD7	1+1*SD7	1	1-1*SD7	1-2*SD7	1-3*SD7
Aug	SD8	1+3*SD8	1+2*SD8	1+1*SD8	1	1-1*SD8	1-2*SD8	1-3*SD8
Sep	SD9	1+3*SD9	1+2*SD9	1+1*SD9	1	1-1*SD9	1-2*SD9	1-3*SD9
Oct	SD10	1+3*SD10	1+2*SD10	1+1*SD10	1	1-1*SD10	1-2*SD10	1-3*SD10
Nov	SD11	1+3*SD11	1+2*SD11	1+1*SD11	1	1-1*SD11	1-2*SD11	1-3*SD11
Dec	SD12	1+3*SD12	1+2*SD12	1+1*SD12	1	1-1*SD12	1-2*SD12	1-3*SD12
	PROB	0.0062	0.0606	0.2417	0.383	0.2417	0.0606	0.0062

LL: load level

Probabilities from standard normal distribution