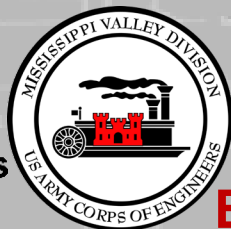


MISSISSIPPI RIVER MANAGERS MEETING 2020

Daniel M Fasching
Primary Mississippi River Regulator
US Army Corps of Engineers
St Paul District
180 5th Street East, Suite 700
St Paul, MN 55101-1678
651-290-5786



US Army Corps
of Engineers®



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**MISSISSIPPI
VALLEY DIVISION**

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NWS PROBABILISTIC OUTLOOK THROUGH APRIL 2020



Lock & Dam #	Gates in/out of the water	Exceedance Probability of pulling gates	Closes to Commercial Navigation Flows (cfs)	Exceedance Probability Closed to Navigation
USAF	52,000	70%	40,000	NA
LSAF	32,000	100%	40,000	94%
1	NA	NA	40,000	94%
2	61,000	93%	116,000	30%
3	36,000	100%	125,000	62%
4	89,000	100%	160,000	70%
5	116,000	97%	188,000	32%
5A	57,000	100%	183,000	45%
6	76,000	100%	200,000	30%
7	89,000	100%	235,000	16%
8	96,000	100%	225,000	20%
9	64,000	100%	220,000	20%
10	73,000	100%	238,000	38%

Source : NWS - North Central River Forecast Center, conditions as of 1/20/2020



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HISTORIC VOLUMES



In 2019 Lock and Dam 10 passed the most volume of water on record by far

The average annual volume is 38 million AC-FT

Year	Millions of AC-FT
2019	77.9
1993	59.0
1986	57.0
2017	56.4
2016	55.6
2018	55.4





GATES PULLED DAY COUNT (ESTIMATED)



Gates out of the water (Apr 1 - Nov 30)										
Year	LD2	LD3	LD4	LD5	LD5A	LD6	LD7	LD8	LD9	LD10
	61,000	36,000	89,000	116,000	57,000	76,000	89,000	96,000	64,000	73,000
2010	8	65	20	4	63	26	21	23	105	127
2011	22	135	38	21	127	73	37	39	138	141
2012	4	51	6	-	43	19	4	-	46	51
2013	-	79	22	-	98	54	25	33	109	108
2014	15	110	70	27	113	90	70	75	122	129
2015	-	19	-	-	15	-	-	-	24	42
2016	-	36	2	-	77	21	7	8	136	163
2017	-	71	11	3	74	36	22	12	111	126
2018	8	109	34	12	101	68	49	46	158	187
2019	51	174	104	53	176	143	111	111	204	211



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EMERGENCY SITUATIONS



- Interventions involving gate manipulations are justified only in an emergency situation
- According to MVD deviation categories an “emergency situation” is defined as follows:

“a circumstance where failure to act immediately could result in catastrophe, such as loss of life or significant property damage.”

- *An emergency situation took place at LD 7 on November 11th of 2019 and we got lucky*
- *Because locks 9 and 10 had gates pulled the resulting sag in elevations was able to attenuate before reaching MVR*

Industry should only count on such interventions if an emergency situation is declared by lock staff

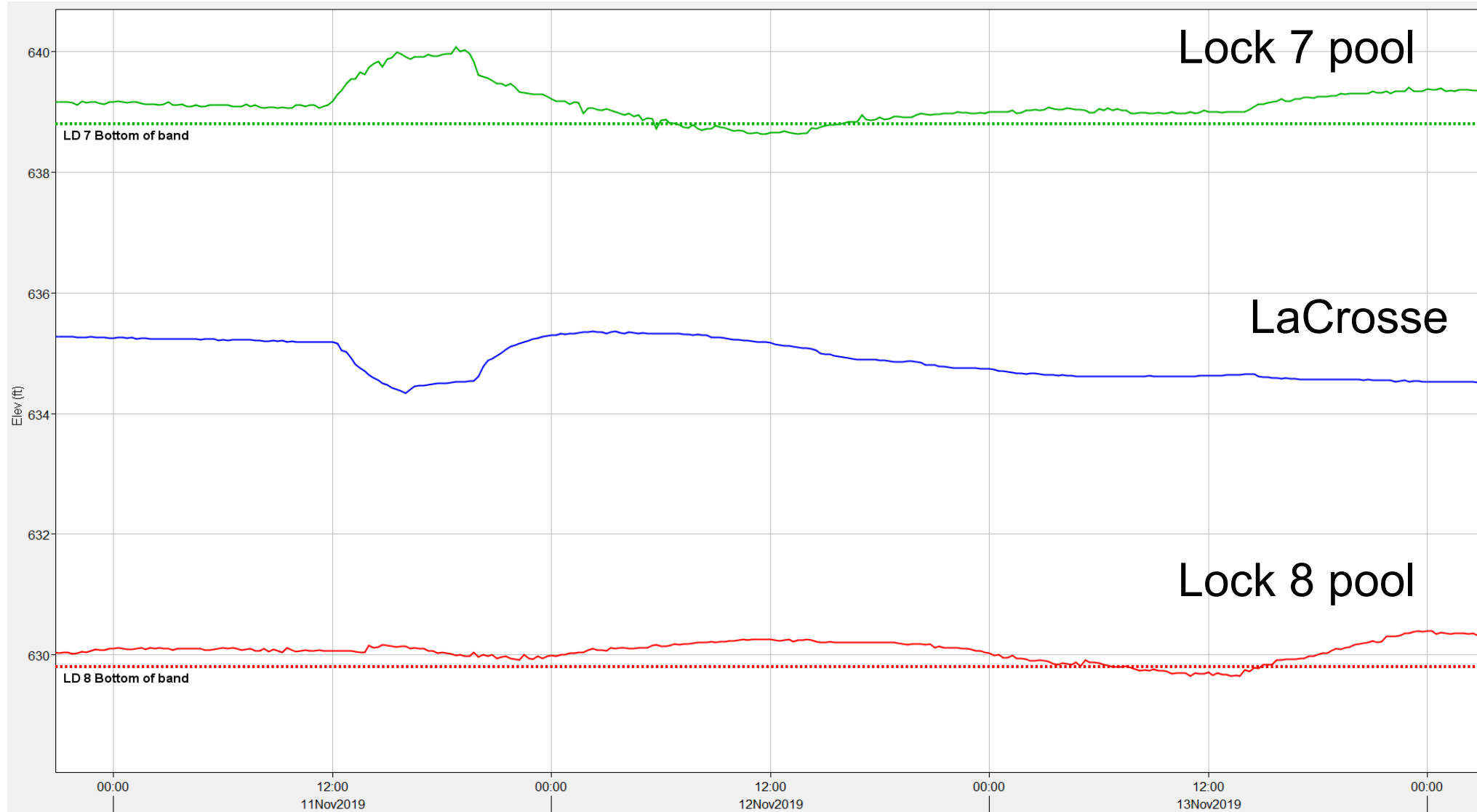




EMERGENCY INTERVENTIONS HAVE CONSEQUENCES



MSL 1912



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IMPORTANT LINKS



- Public Data Available Here: (live data only)

<http://water.usace.army.mil/a2w/f?p=100:1:0:>

- Historic data is available to public at

<http://www.mvp-wc.usace.army.mil/>



Photo taken at LD 3





QUESTIONS?



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Photo taken at LD 10