



Potential Impacts of Wind on AADF Calculated Shortfalls

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Impact of Stage Changes on Average Daily Flow

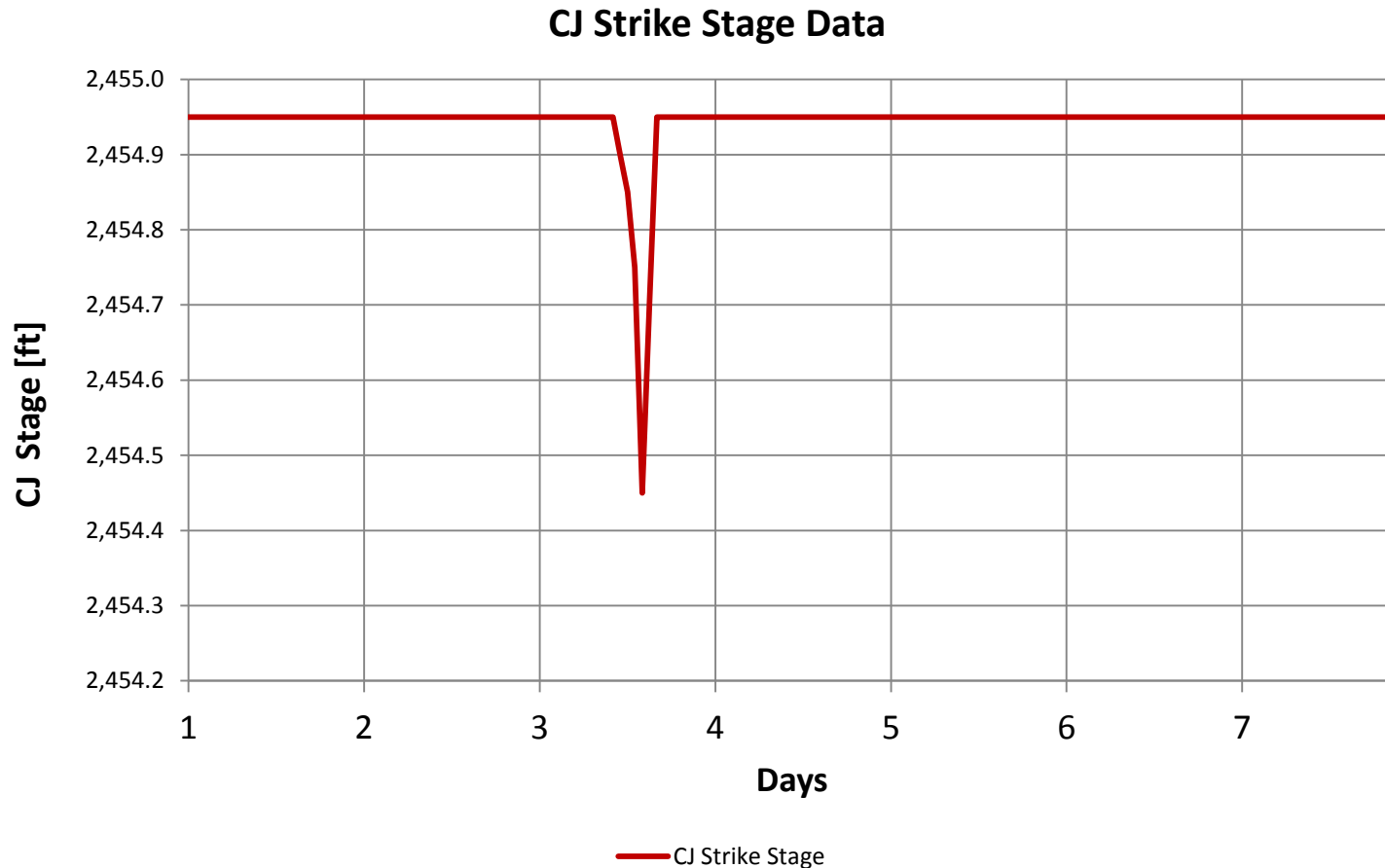
Historically wind effects have been as large a 0.2 to 0.5 ft on CJ Strike

We have assumed CJ Strike has a surface area of 7,500 acres

Δ Stage/d [ft/d]	Surface Area [acres]	Conversion factor [ac-ft/day]	Conversion factor [ac-ft/day to cfs]	Δ Flow [cfs]
0.1	7500	750	1.9835	378
0.2	7500	1500	1.9835	756
0.3	7500	2250	1.9835	1134
0.4	7500	3000	1.9835	1512
0.5	7500	3750	1.9835	1891

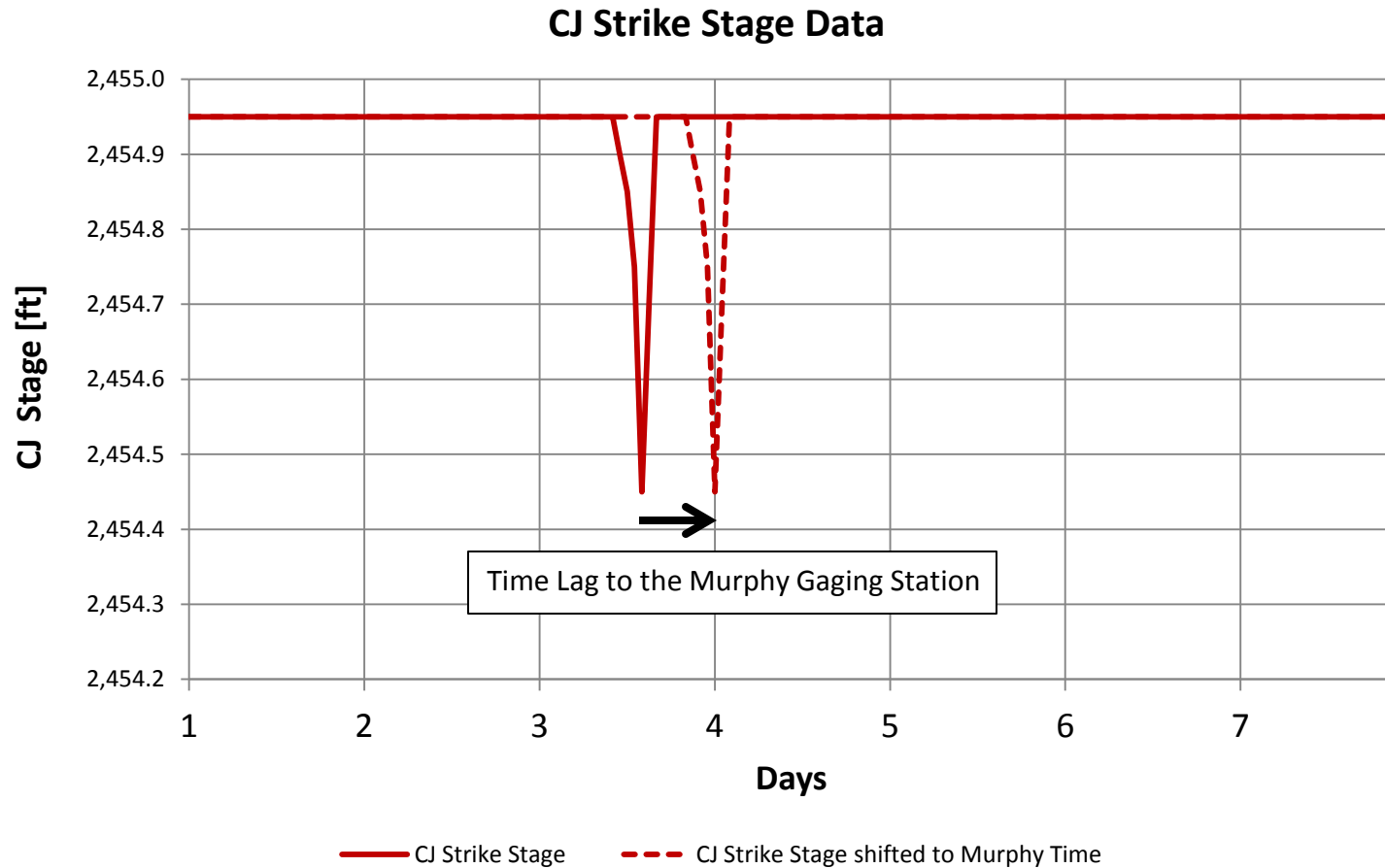
With 3-day average the 1-day effect is reduced to 126-630 cfs

Change in stage due to wind occurs at mid-day at CJ



No impact 24-hr change in stage is zero.

Lagged change in stage occurs at midnight at Murphy

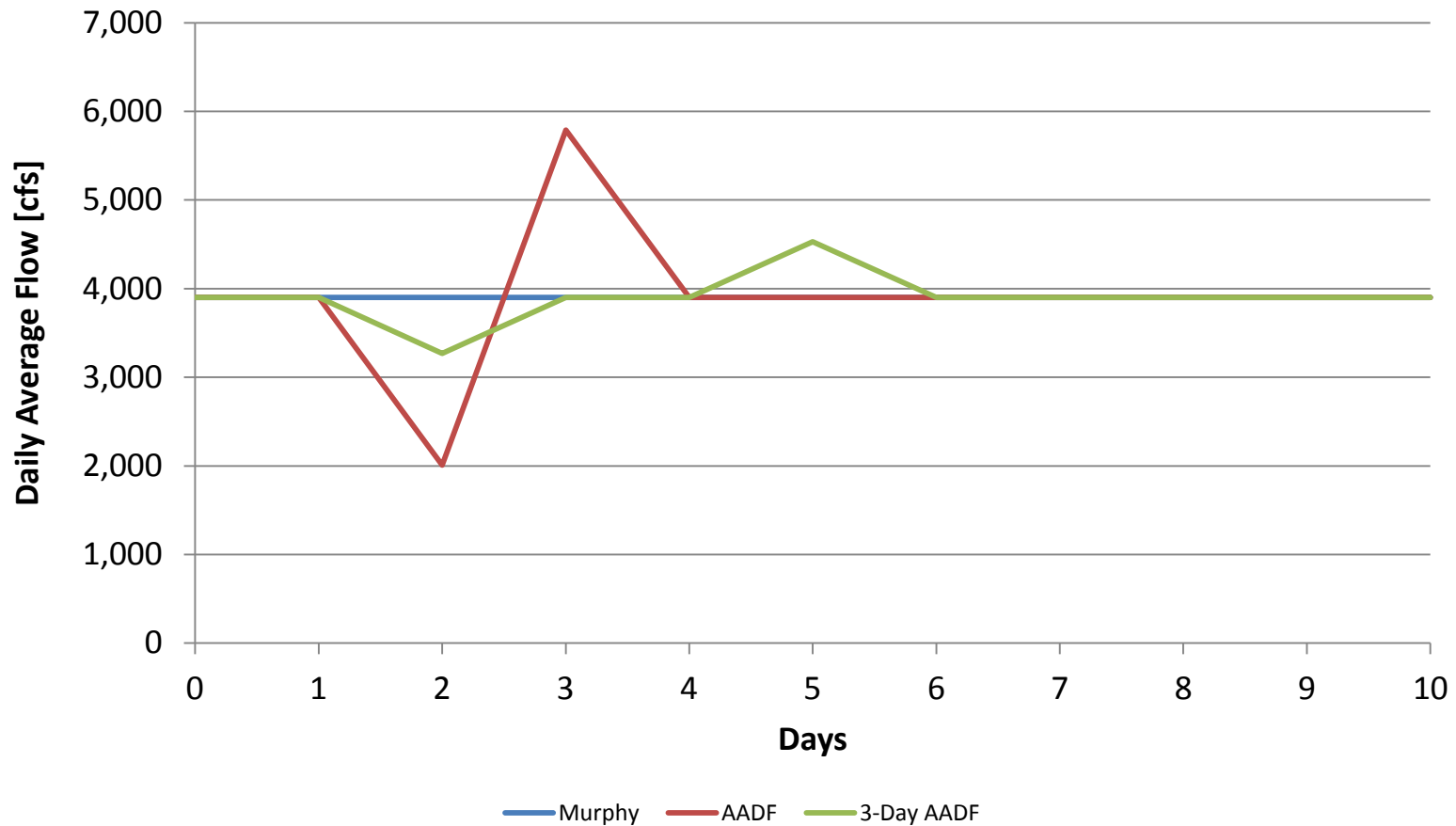


Lagged change in stage occurs at midnight

Day	Δ Flow [cfs]	Murphy [cfs]	AADF [cfs]	3-Day AADF [cfs]	Deficit [ac-ft]
-1	0	3900	3900	--	--
0	0	3900	3900	--	--
1	0	3900	3900	3900	0
2	-1891	3900	2009	3270	1250
3	1891	3900	5791	3900	0
4	0	3900	3900	3900	0
5	0	3900	3900	4530	0
6	0	3900	3900	3900	0
7	0	3900	3900	3900	0
8	0	3900	3900	3900	0
9	0	3900	3900	3900	0
10	0	3900	3900	3900	0

Lagged change in stage occurs at midnight

Wind Effects



Conclusions

Wind at CJ can impact minimum streamflow shortfall calculations!

When lagged wind effect occurs at midnight at the Murphy Gage

The potential impacts of wind on calculated shortfalls is
250 – 1250 ac-ft/day

How should we account for such impacts?