



Swan Falls Agreement AADF Travel Time Analysis

Presented to the Swan Falls Technical Working Group

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Methods

- Date ranges were selected based on
 - Flow variation
 - Milner flow range 200 – 2800 cfs
- 4 reaches upstream of CJ Strike were analyzed
 - Milner to Buhl
 - Buhl to Bliss
 - Bliss to King Hill
 - King Hill to Loveridge
- Best fit travel time was determined statistically and visually

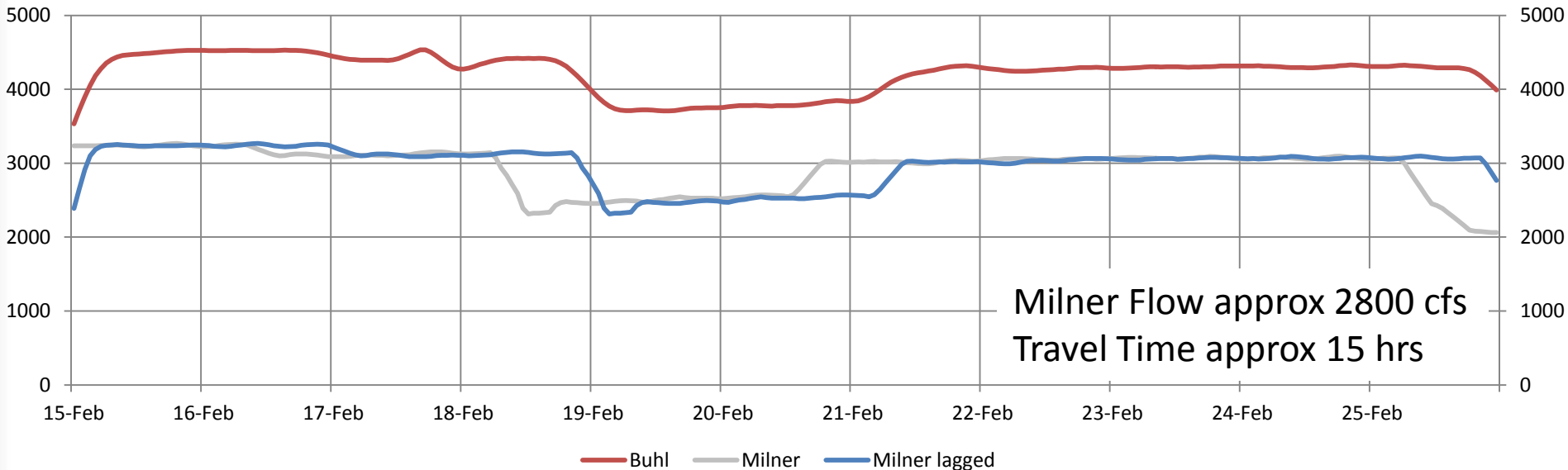
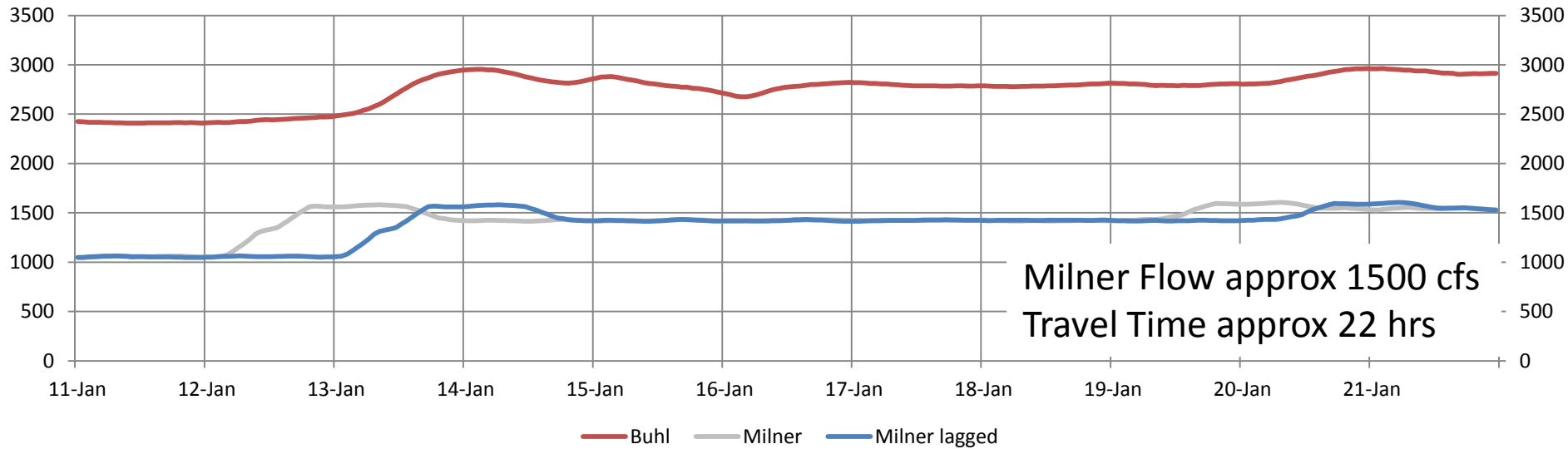
Milner to Buhl \approx 40 miles

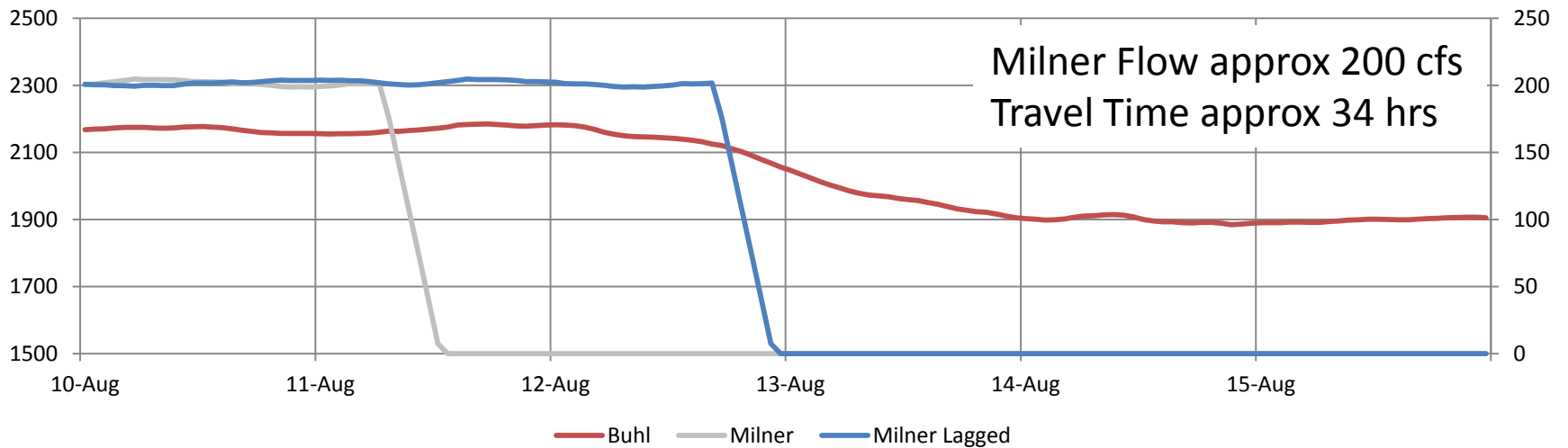
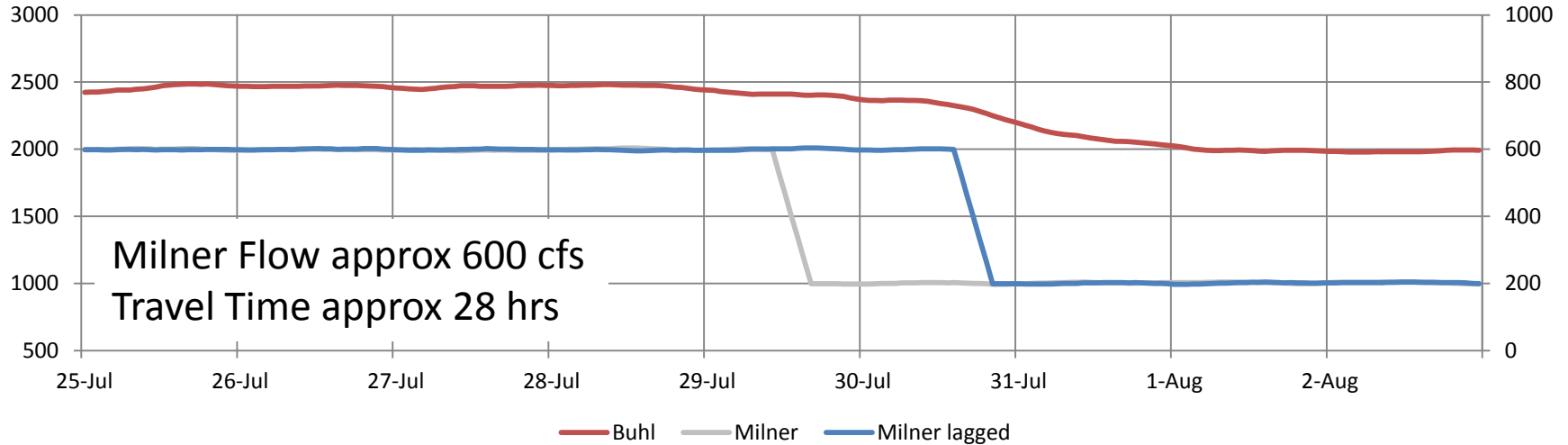
Buhl to Bliss \approx 36 miles

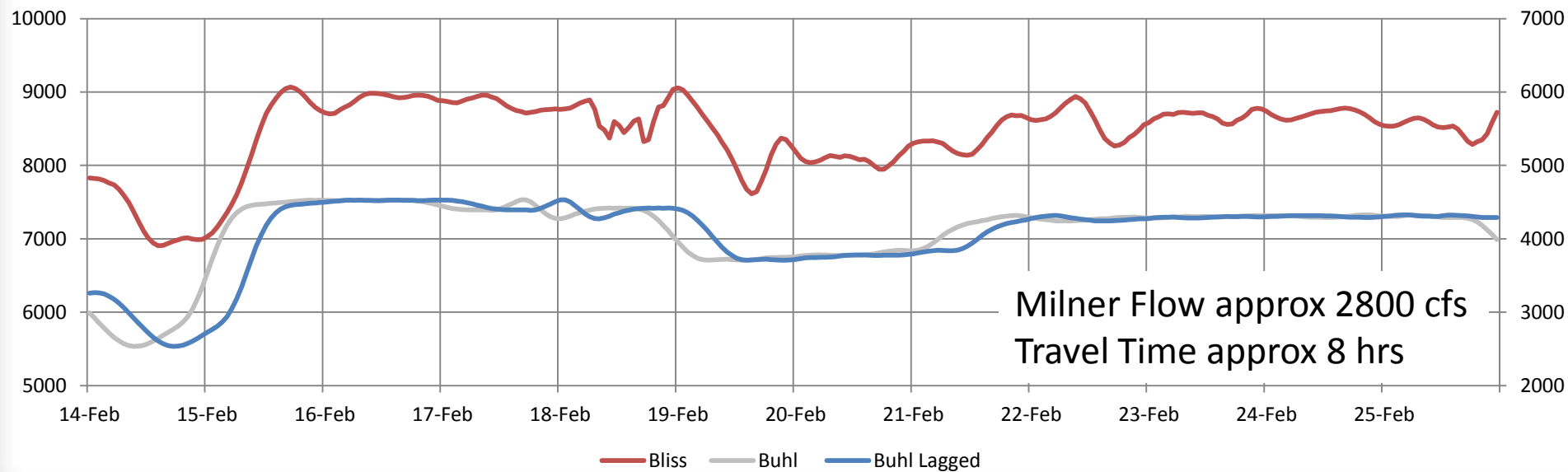
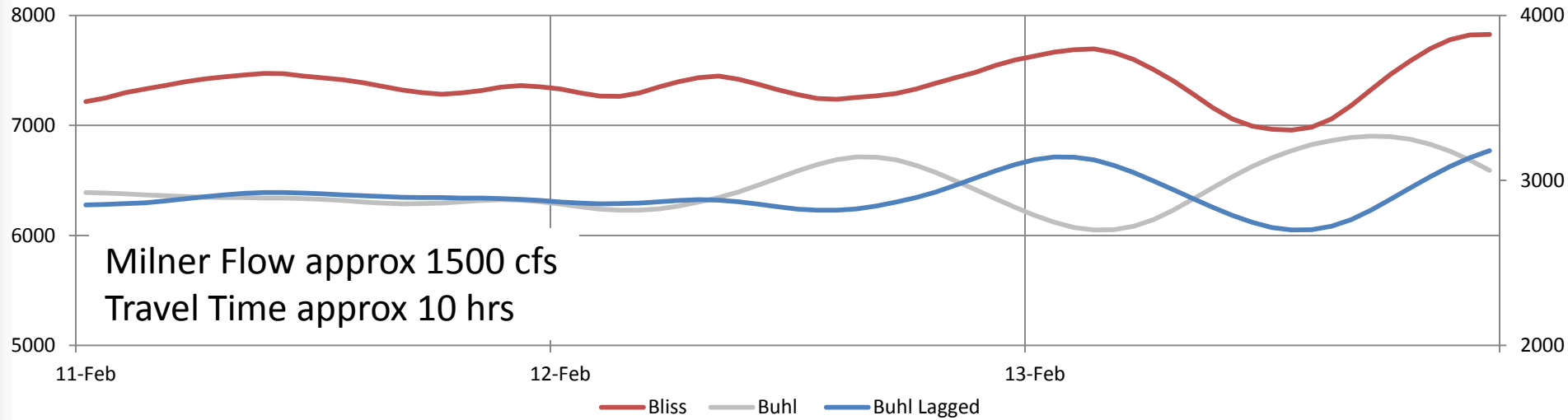
Bliss to King Hill \approx 12 miles

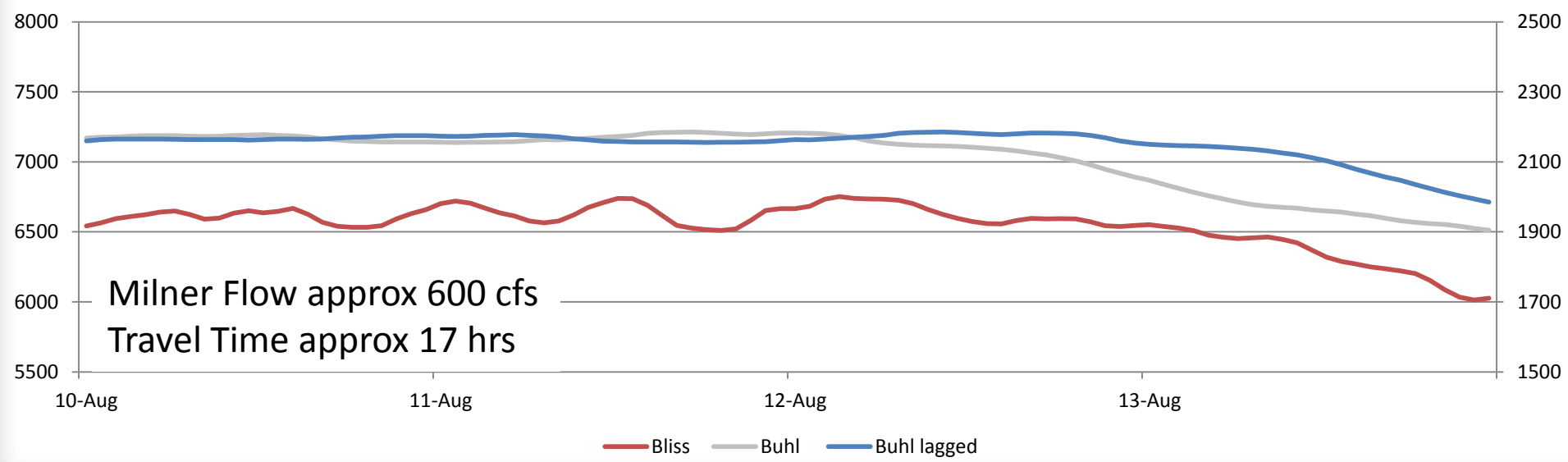
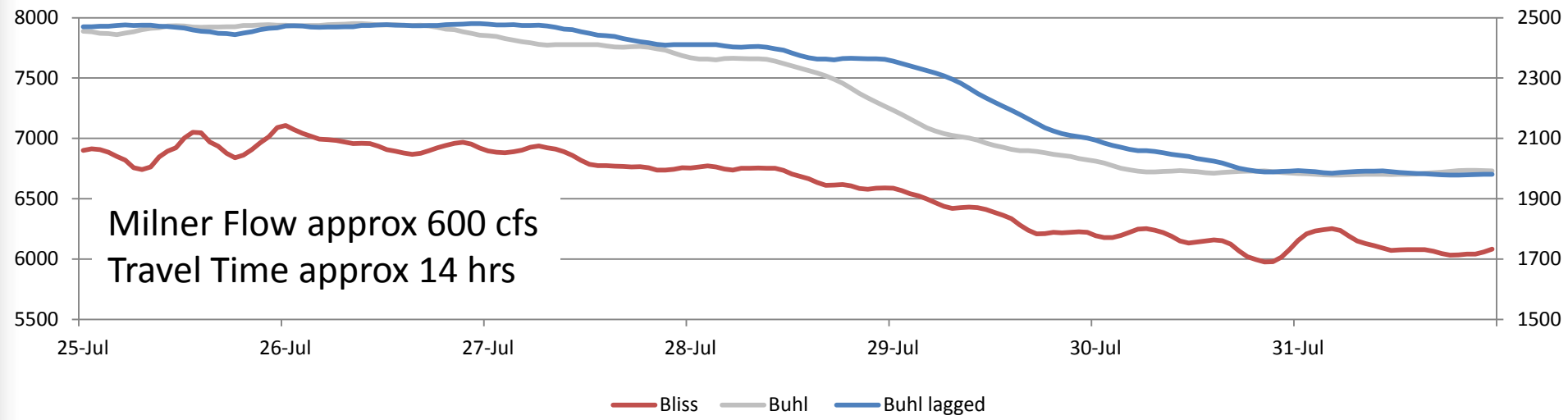
King Hill to Loveridge Bridge \approx 33 miles

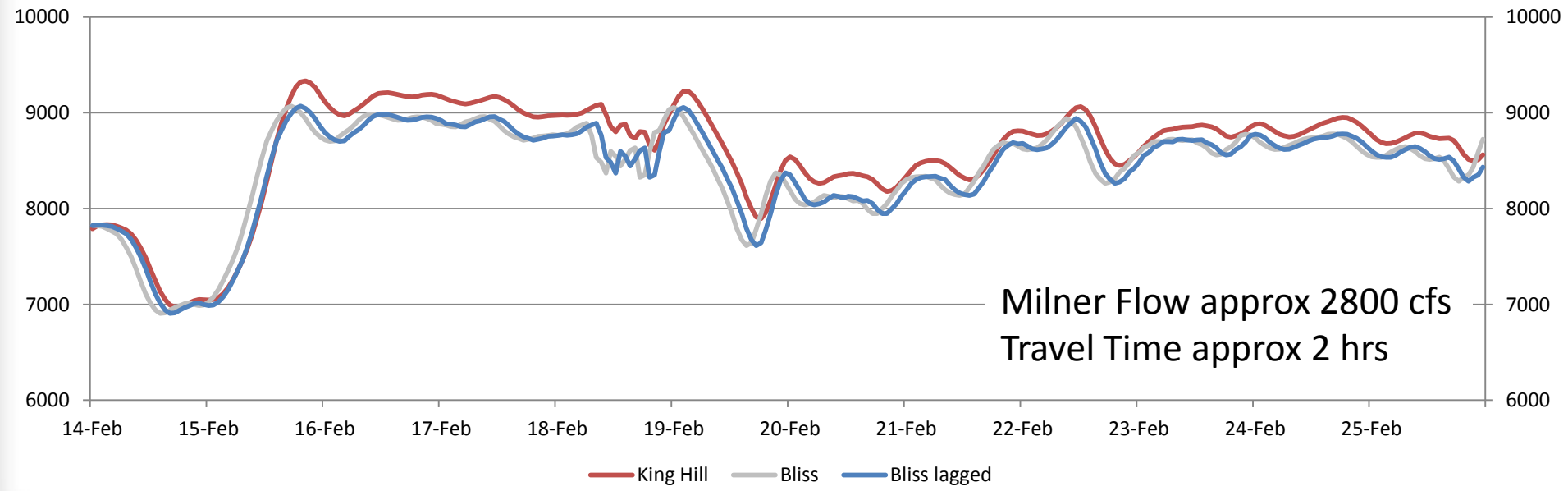
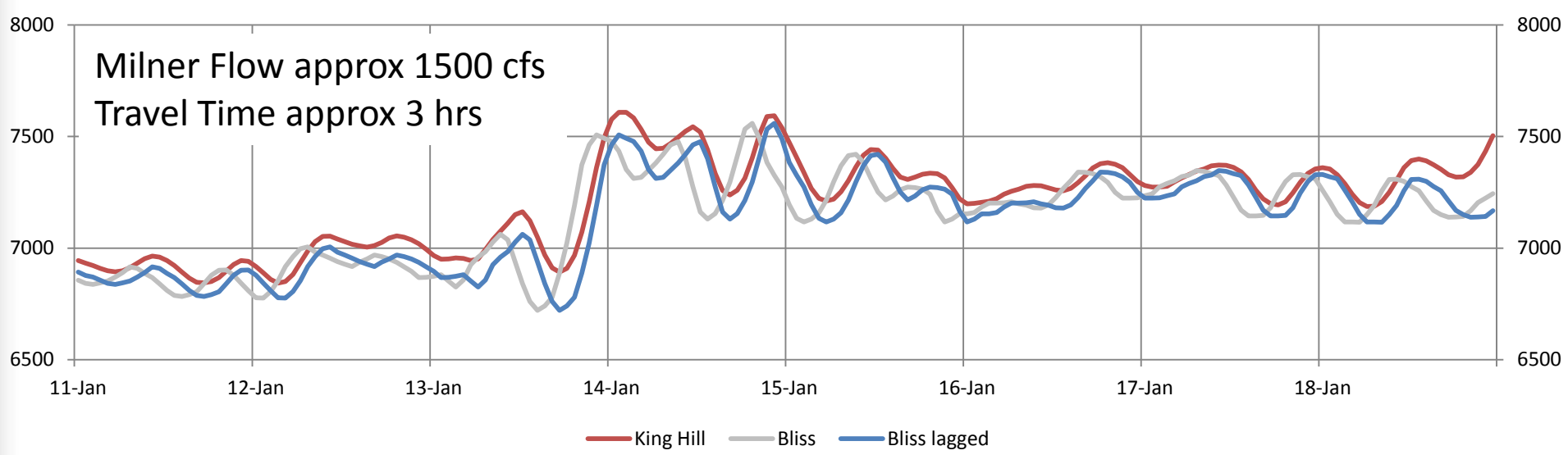


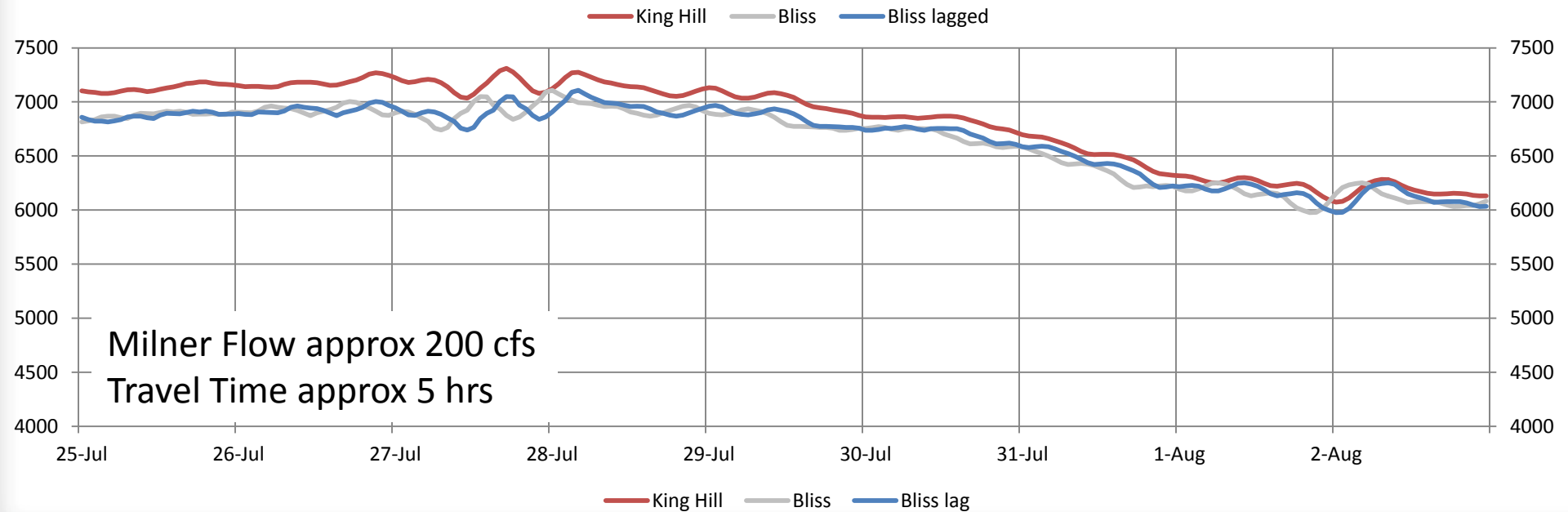
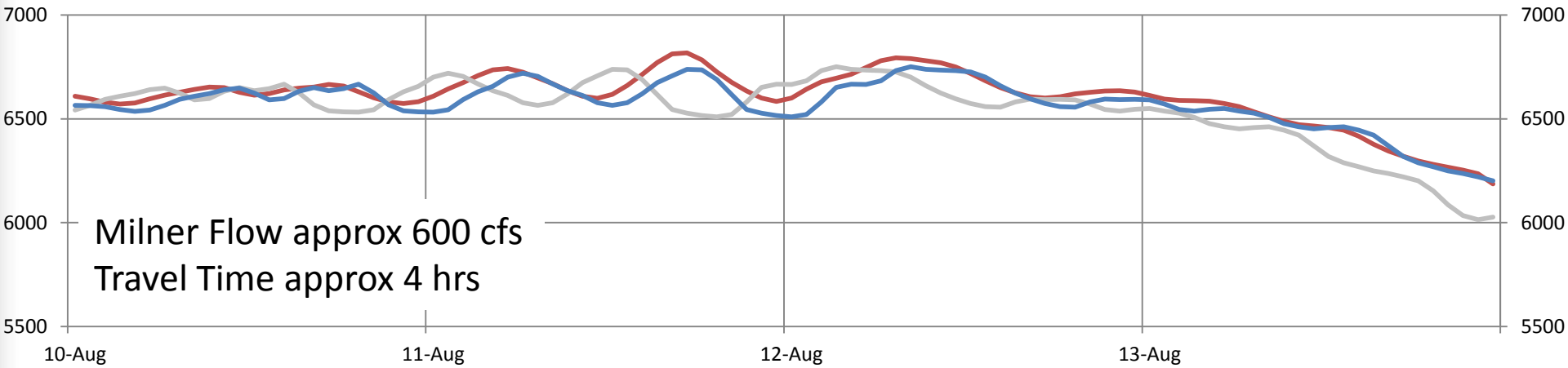


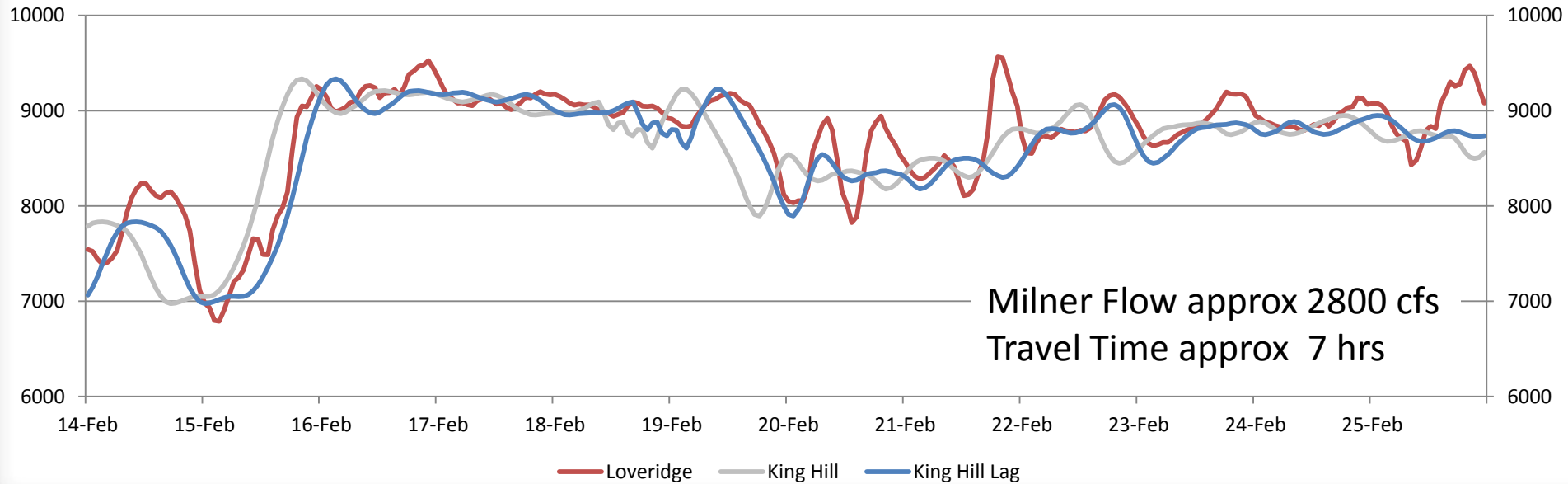
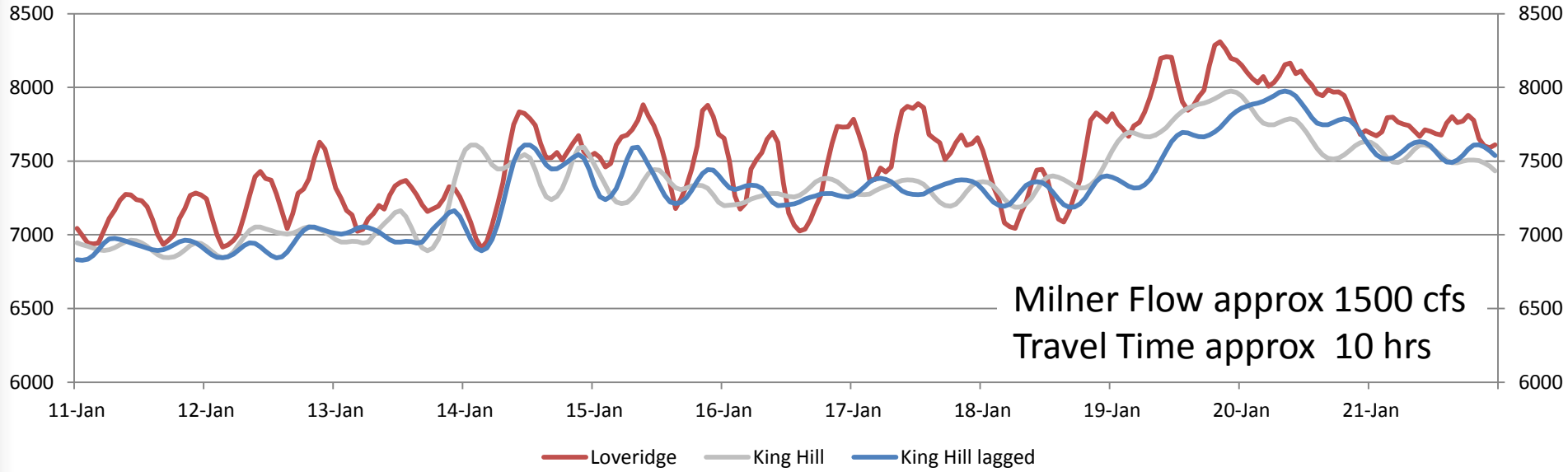


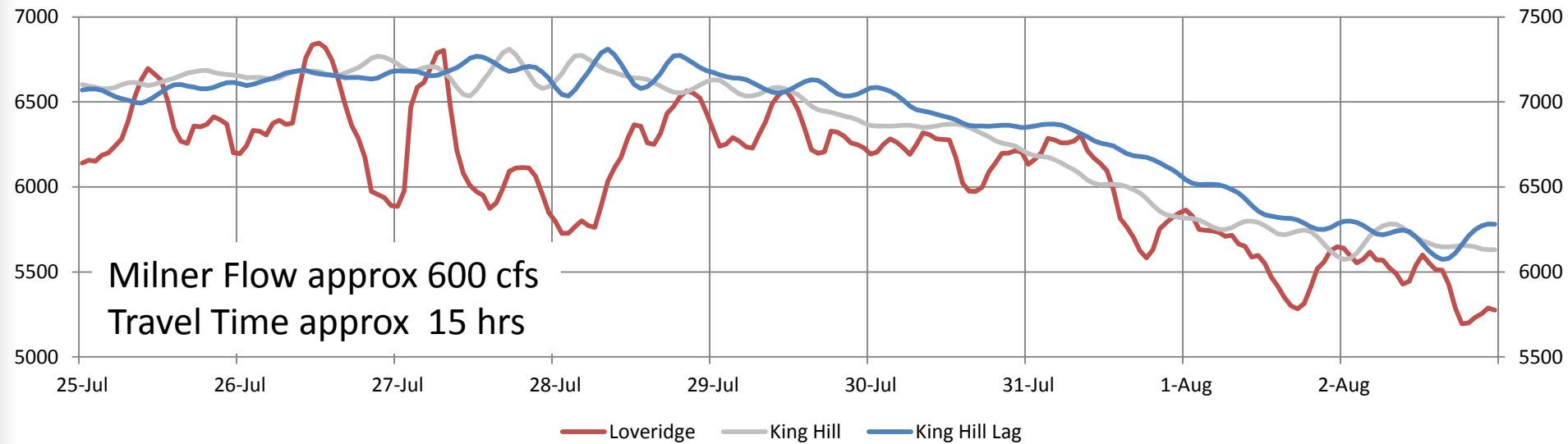






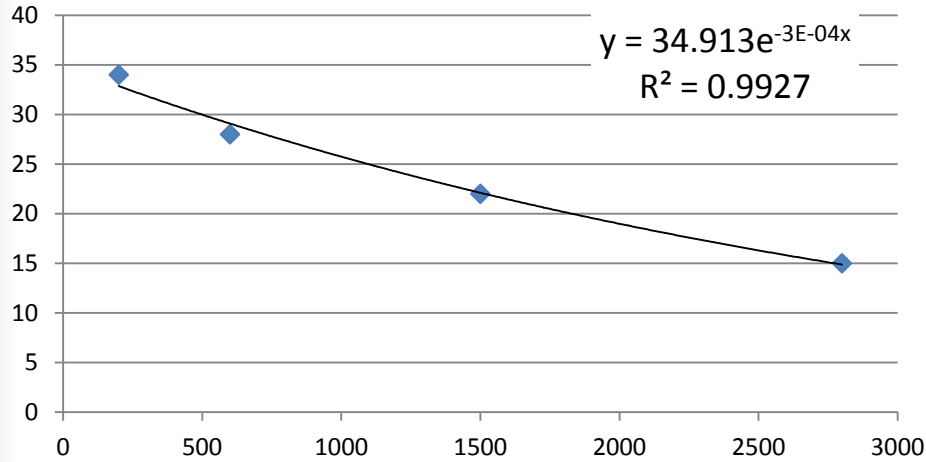




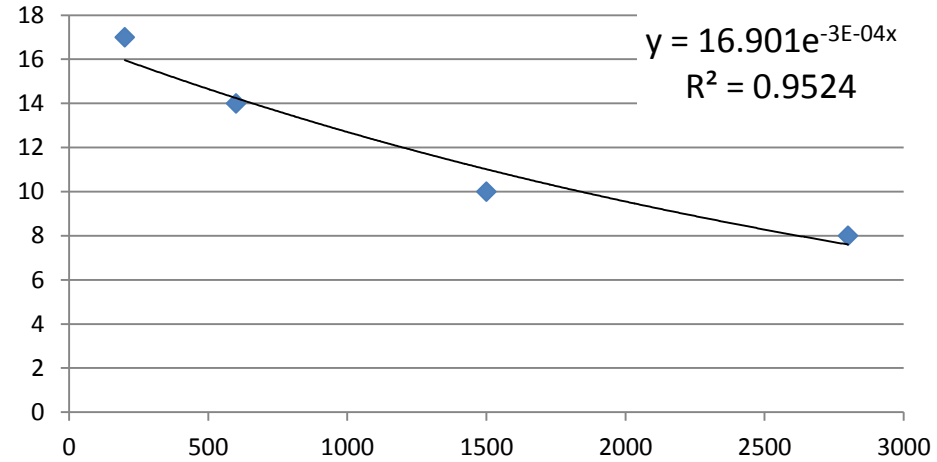


Reach	Date	Milner Flow	Distance (miles, est)	Estimated Lag	R ²
Milner-Buhl	1/11 - 1/21	1500	40	22	0.97
Milner-Buhl	2/15 - 2/25	2800	40	15	0.93
Milner-Buhl	7/25 - 8/2	600	40	28	0.92
Milner-Buhl	8/10-8/15	200	40	34	0.92
Buhl - Bliss	2/11 - 2/13	1500	36	10	0.88
Buhl - Bliss	2/14 - 2/25	2800	36	8	0.92
Buhl - Bliss	7/25 - 7/31	600	36	14	0.97
Buhl - Bliss	8/10 - 8/13	200	36	17	0.92
Bliss - King Hill	1/11 - 1/18	1500	12	3	0.95
Bliss - King Hill	2/14 - 2/25	2800	12	2	0.98
Bliss - King Hill	7/25 - 8/2	600	12	4	0.98
Bliss - King Hill	8/10 - 8/13	200	12	5	0.93
King Hill to Loveridge	1/11 - 1/17	1500	33	10	0.73
King Hill to Loveridge	2/14 - 2/25	2800	33	7	0.83
King Hill to Loveridge	7/25 - 8/2	600	33	15	0.64

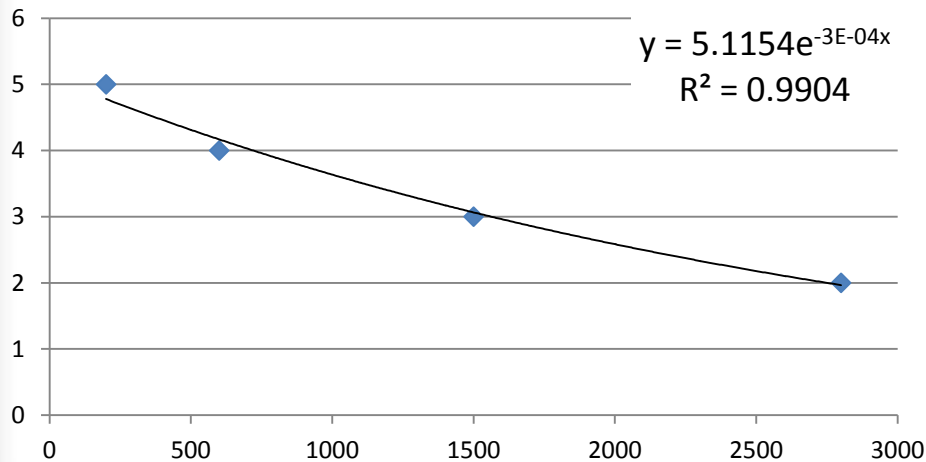
Milner to Buhl Travel Time



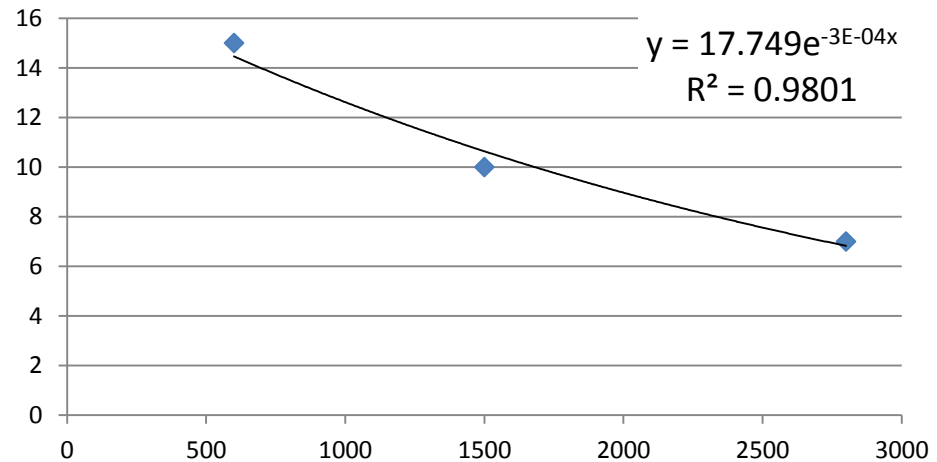
Buhl to Bliss Travel Time



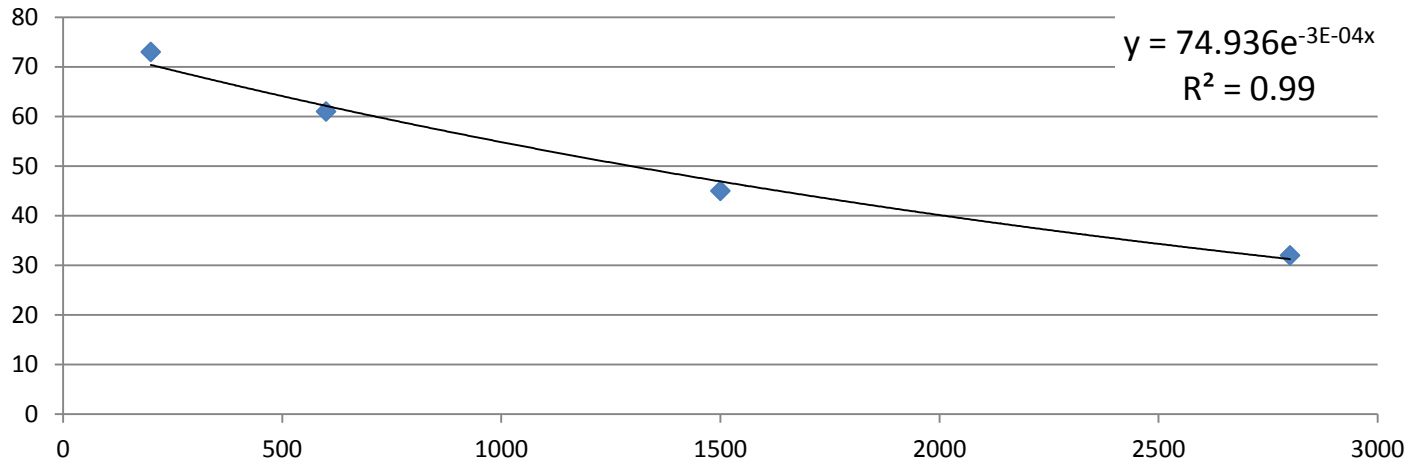
Bliss to King Hill Travel Time



King Hill to Loveridge Travel Time



Milner to Loveridge Composite



Travel Time Comparison		
Milner Flow (cfs)	Current Method (hrs)*	Updated Calculation (hrs)*
600	72	73
1500	48	57
*assumes 10 hrs from CJ Strike		