Updated Modeling Results
Operating Criteria for Yellowtail Dam

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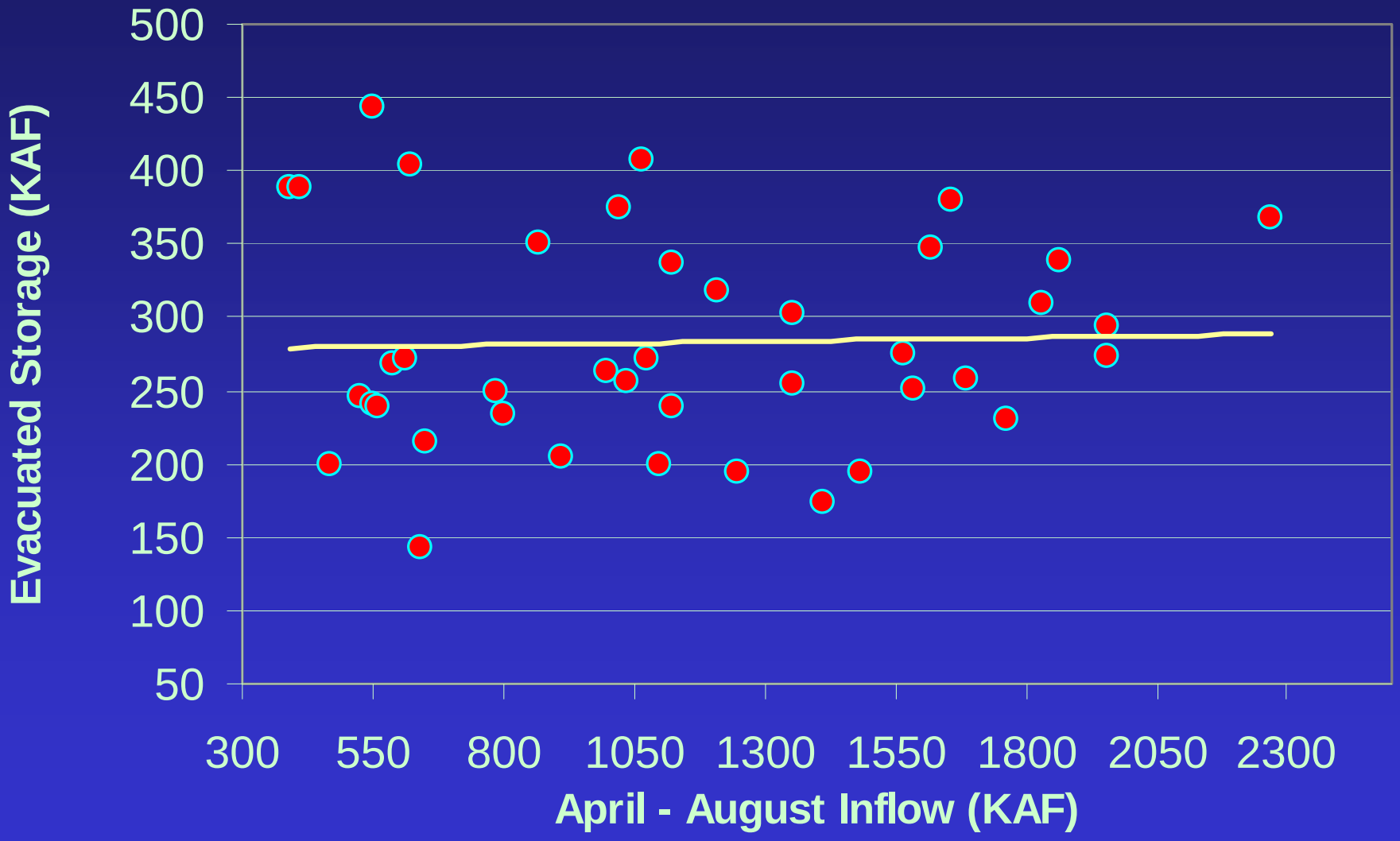
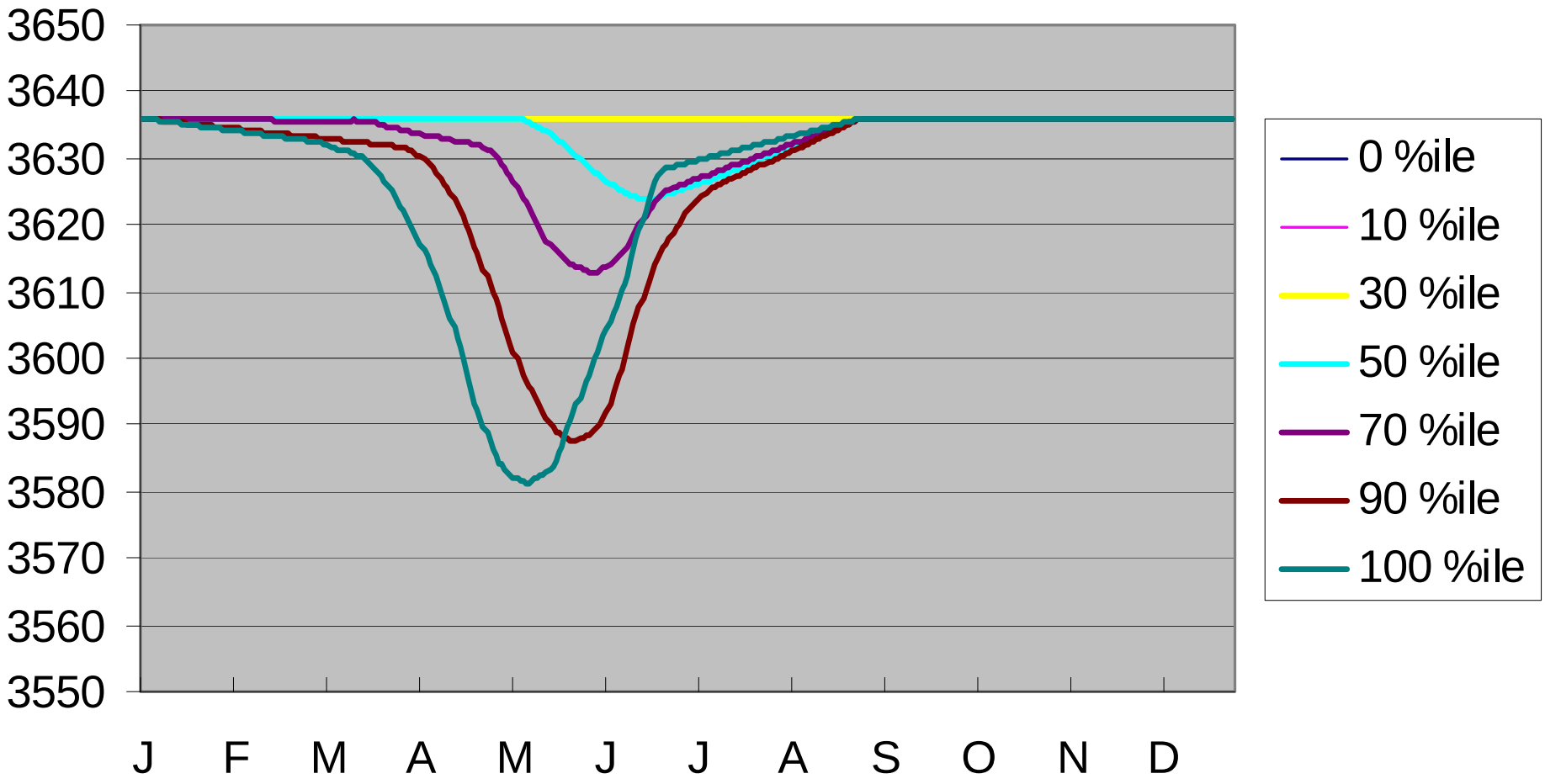
Assumptions for this analysis

- Attempt to refill to full pool, elevation 3640, annually during July
- Avoid elevations in the Flood Pool above 3640
- Provide stable Bighorn River flows for primary fish species while providing reservoir elevations in the preferred range for recreation.
- Draft targets for each month, March through June, were based on April through July inflow volume
- River flows were stabilized based on years with similar water supplies and observed river flows.

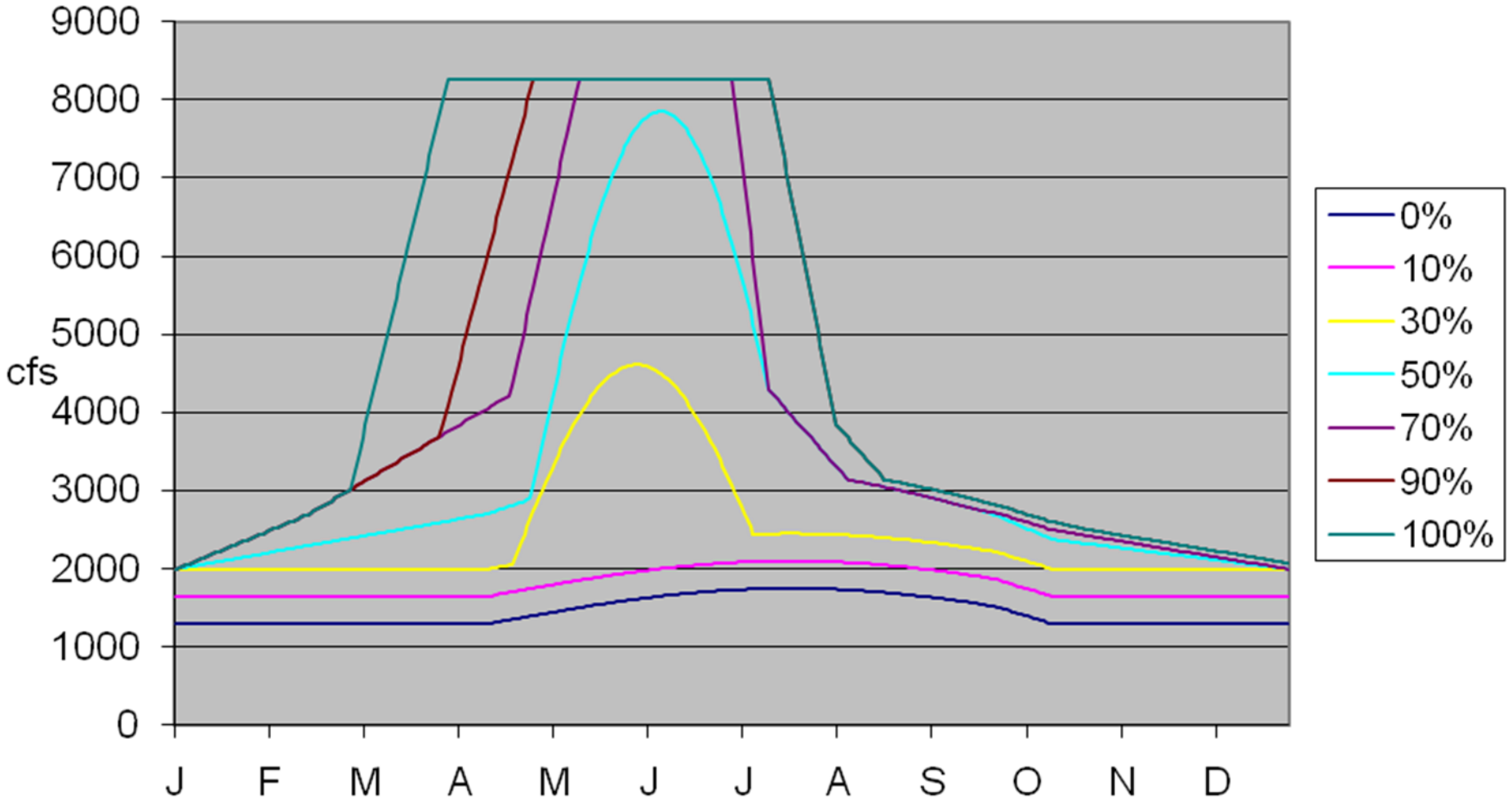
Inflow Water Supply compared to Bighorn Reservoir drawdown

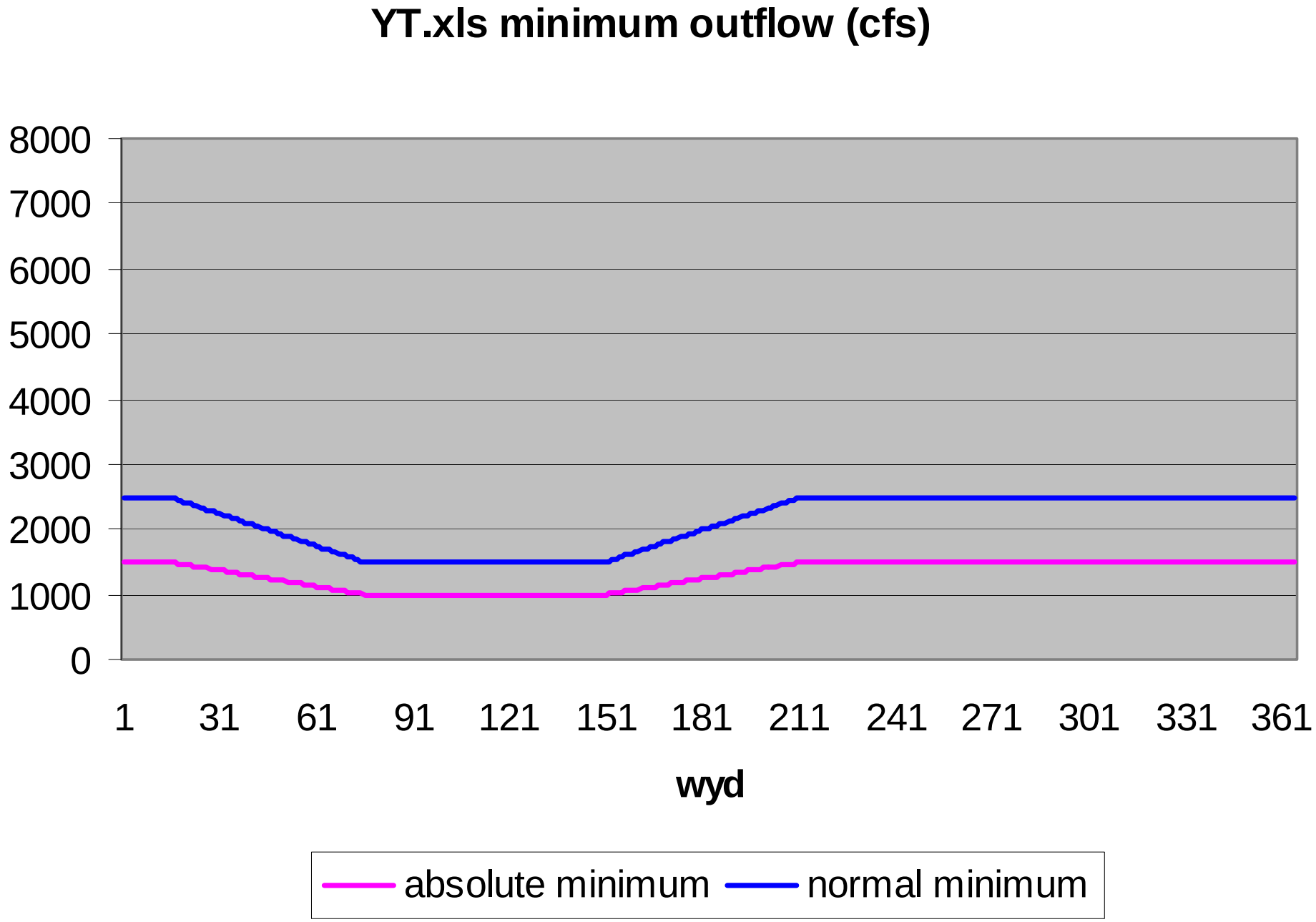


Elevation Rule Curves

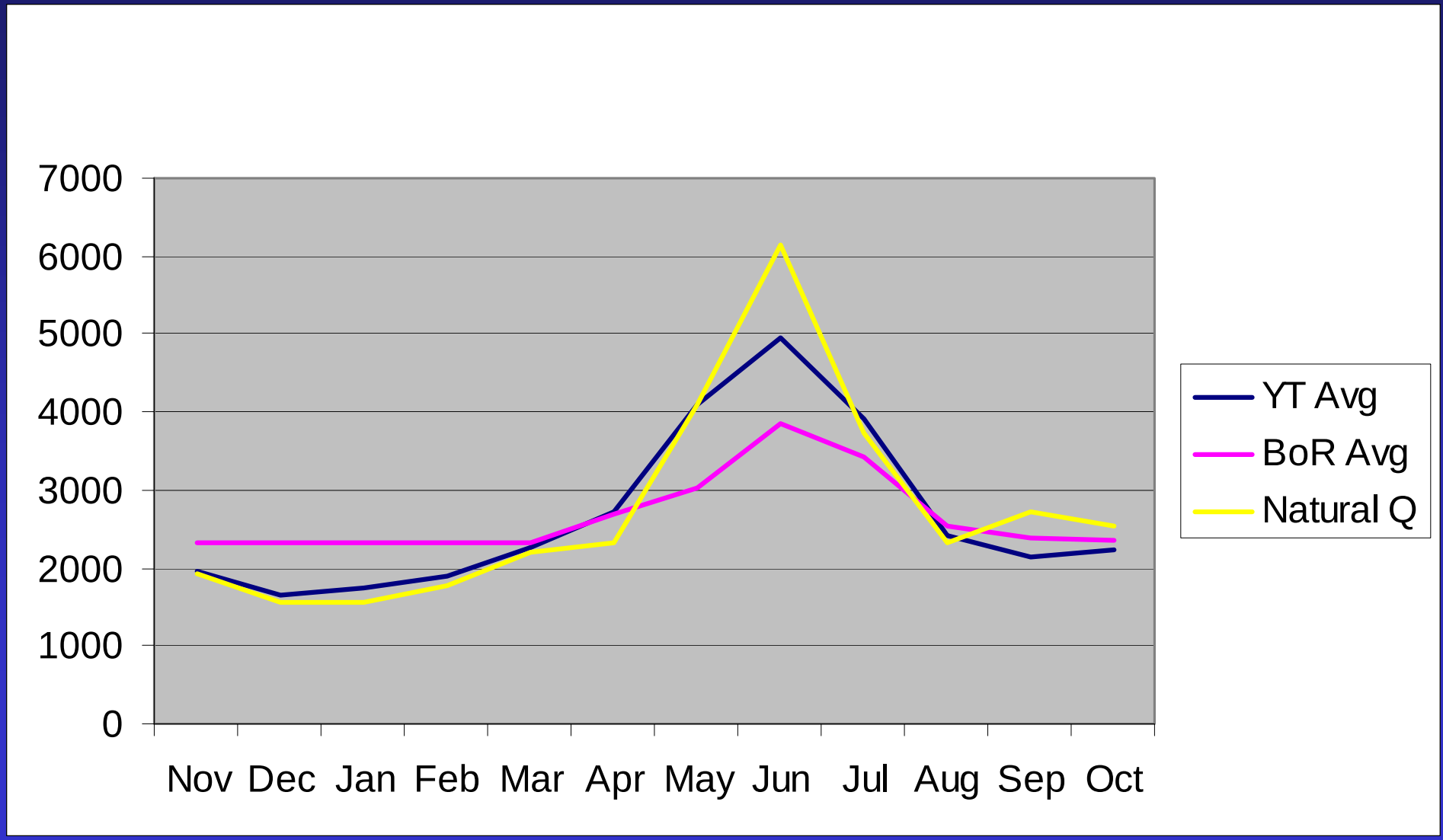


Outflow Rule Curves




YT.xls minimum outflow (cfs)
8000
7000
6000
5000
4000
3000
2000
1000
0
1
31
61
91
121
151
181
211
241
271
301
331
361
wyd
absolute minimum
normal minimum

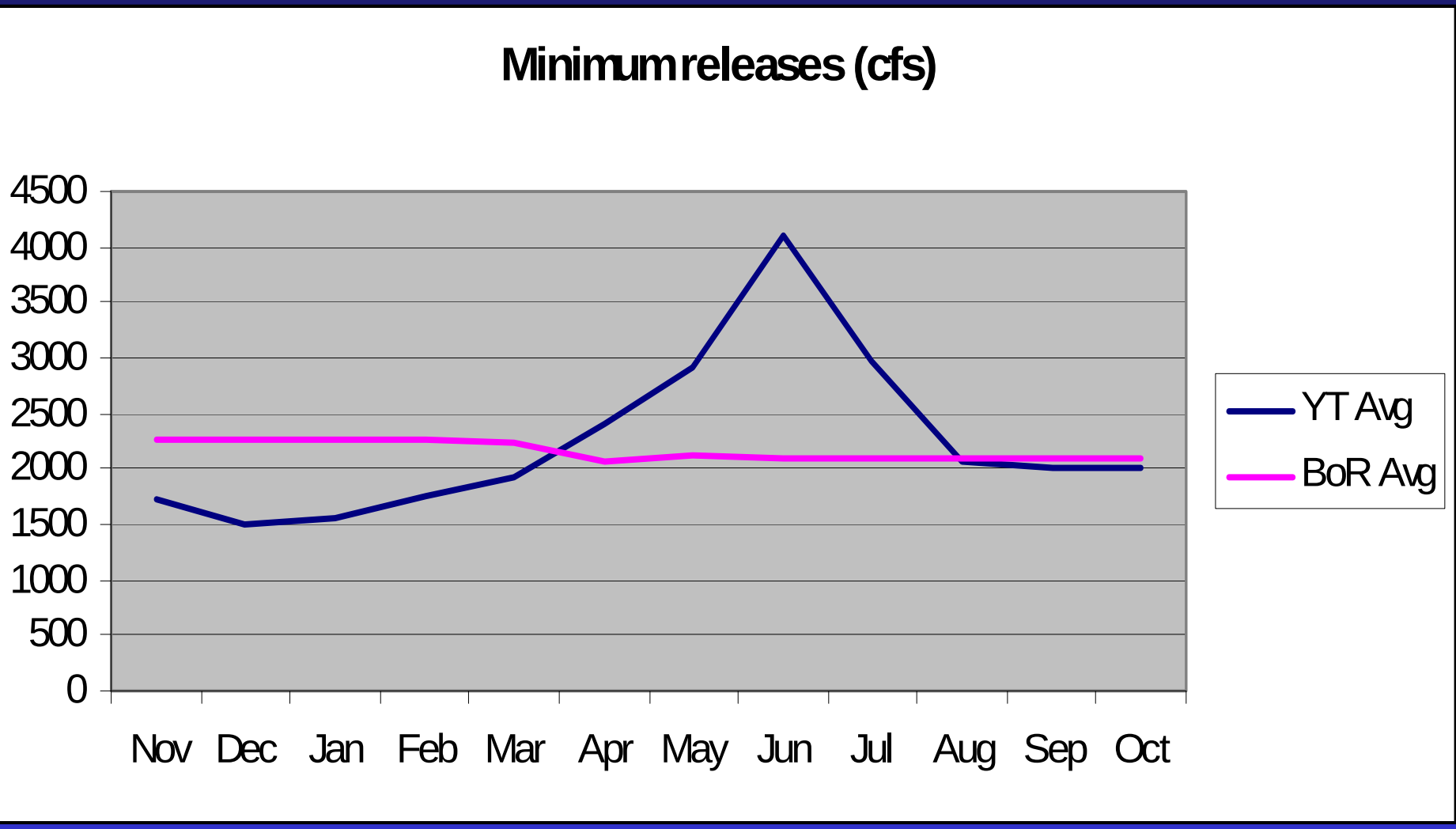
Bighorn River flows averaged for test period 1988-08



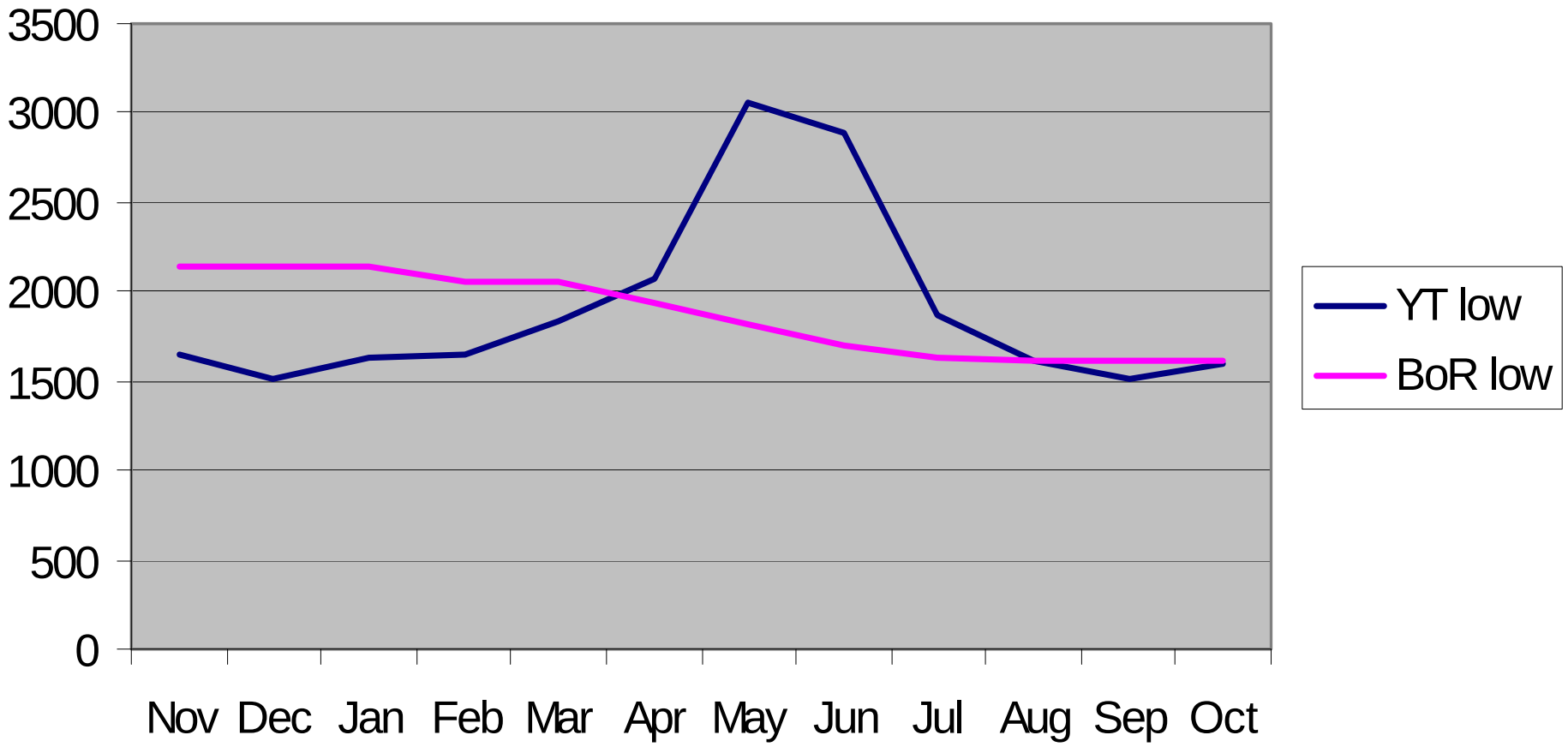
Four of the driest years were selected to represent low water years, based on their positions within the long-term, 42-year record: 1994, 2003, 2006, and 2007 (average of only13.4% of the observed range of inflows).

The four average years were 1990, 1993, 2005, and 2008 (average was 50.0% of the observed range).

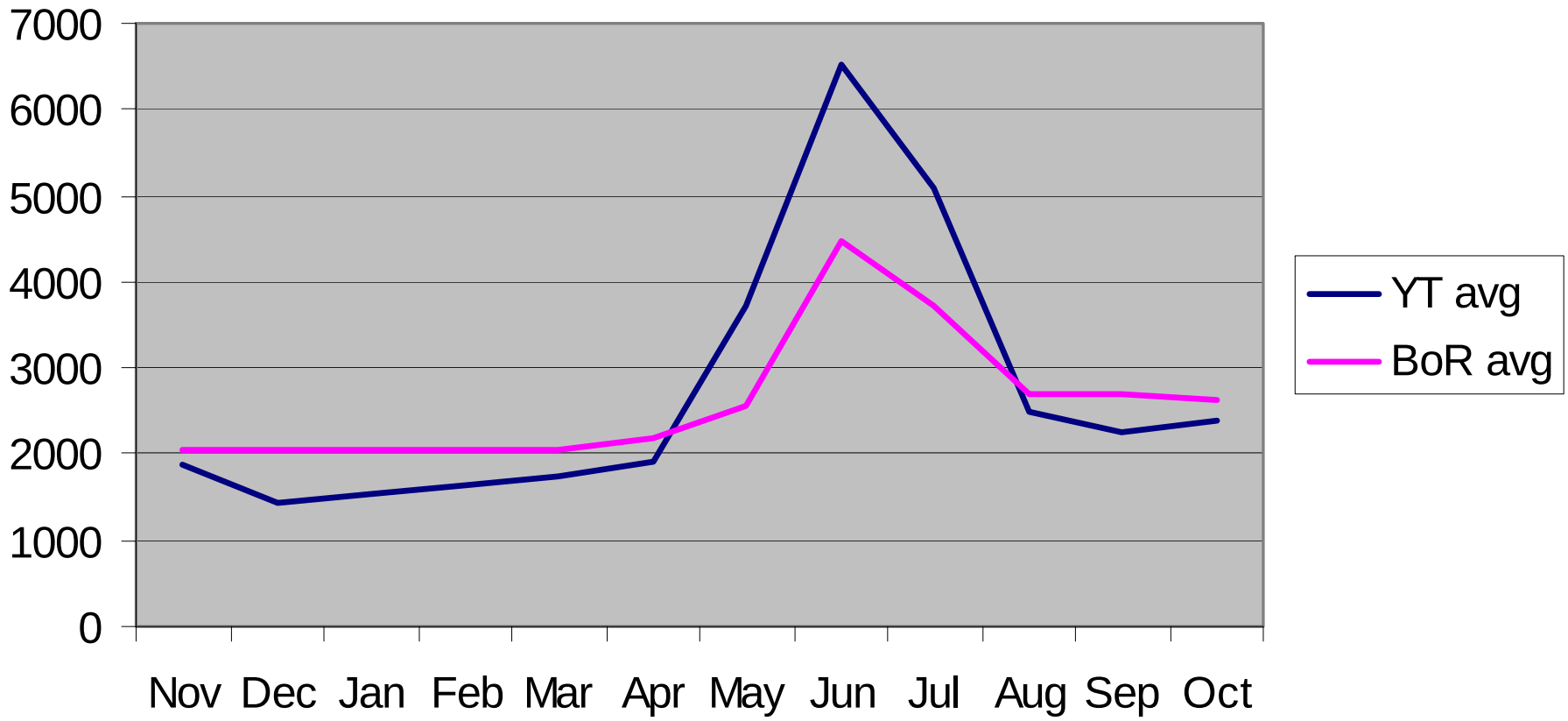
Only 3 years were in the range to be considered high water years: 1991, 1995, and 1999. (these years averaged 84.1% of the maximum range).


Minimum releases (cfs)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
YT Avg
BoR Avg

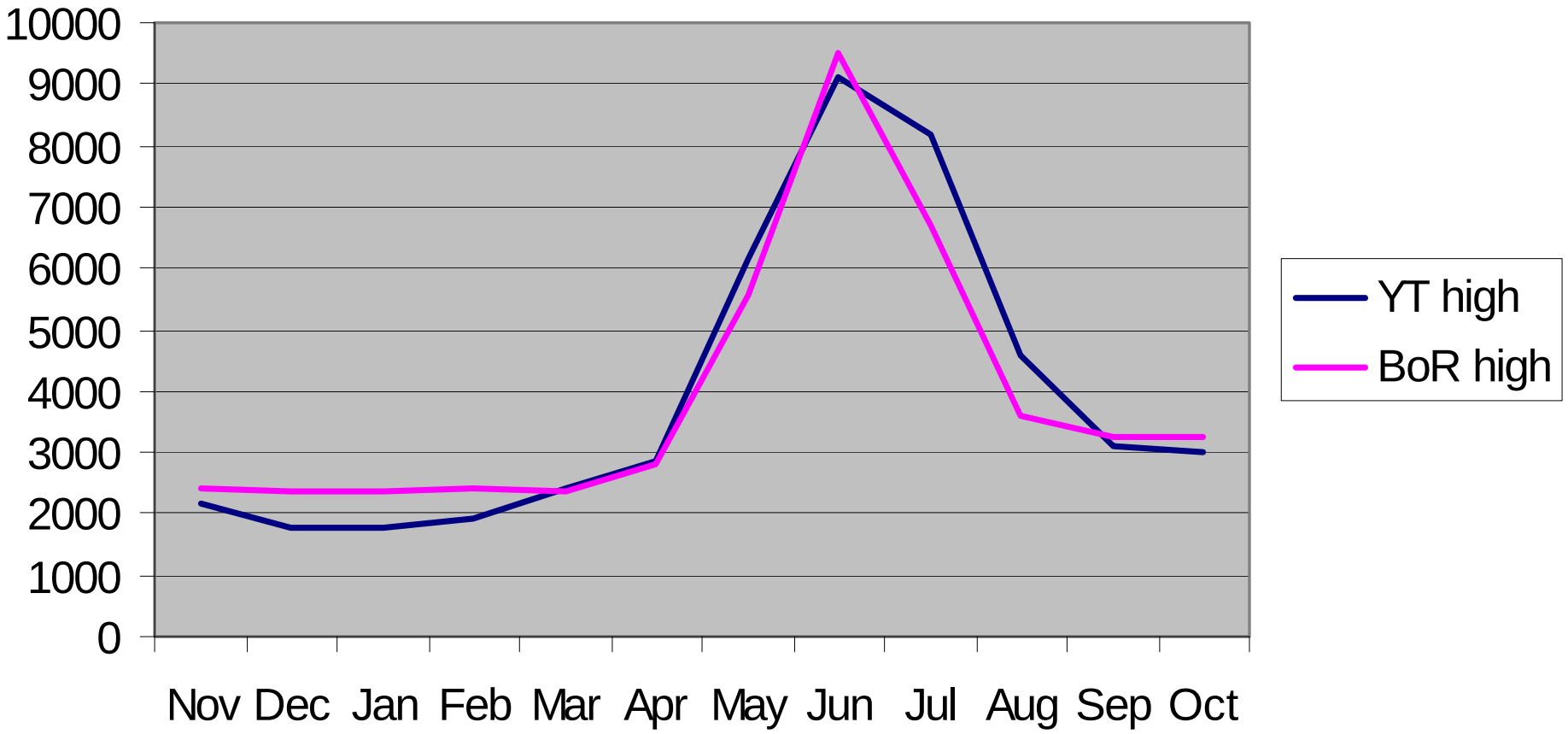
Bighorn flow in Low years (cfs)



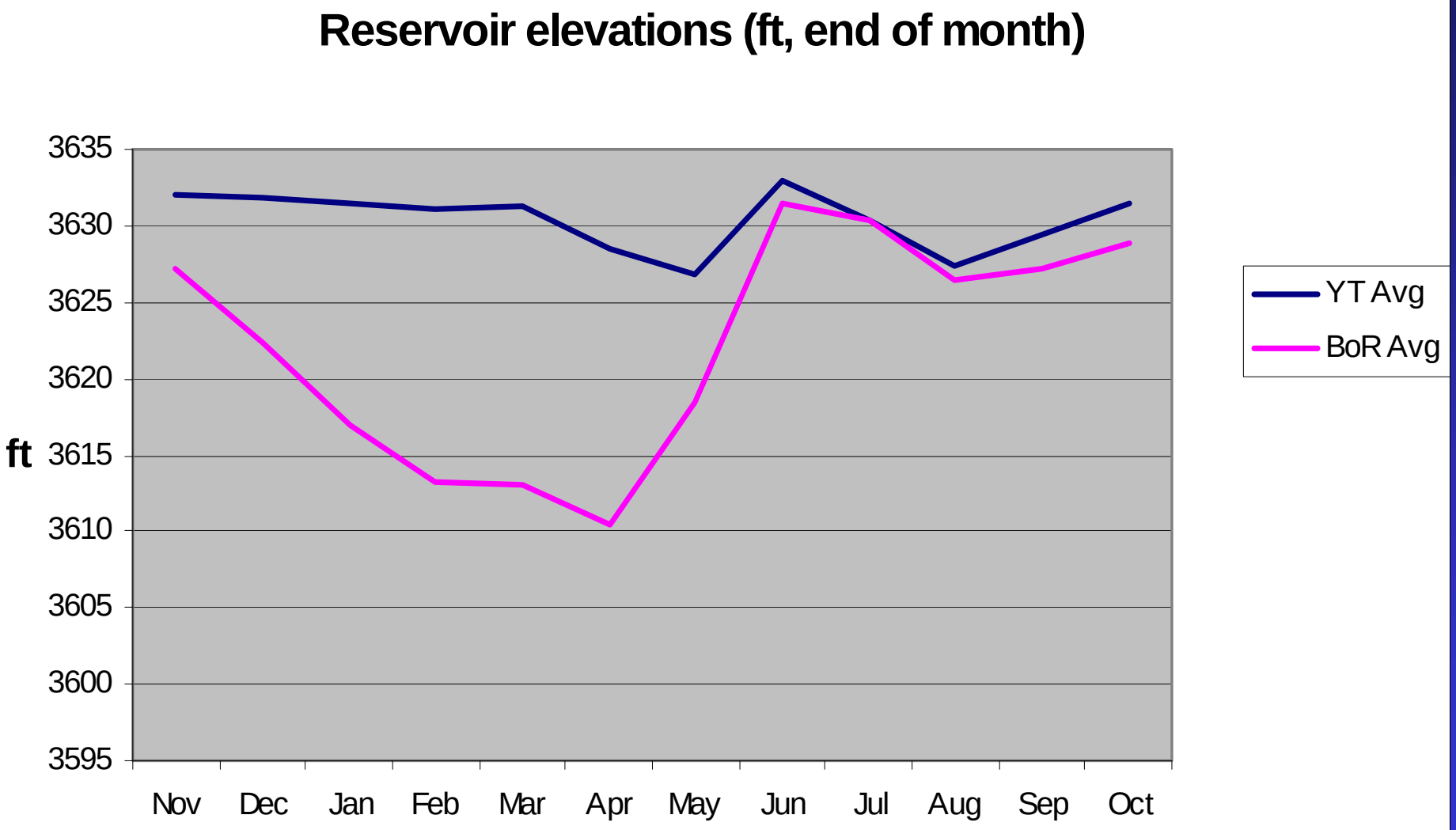
Bighorn flow in Average years (cfs)



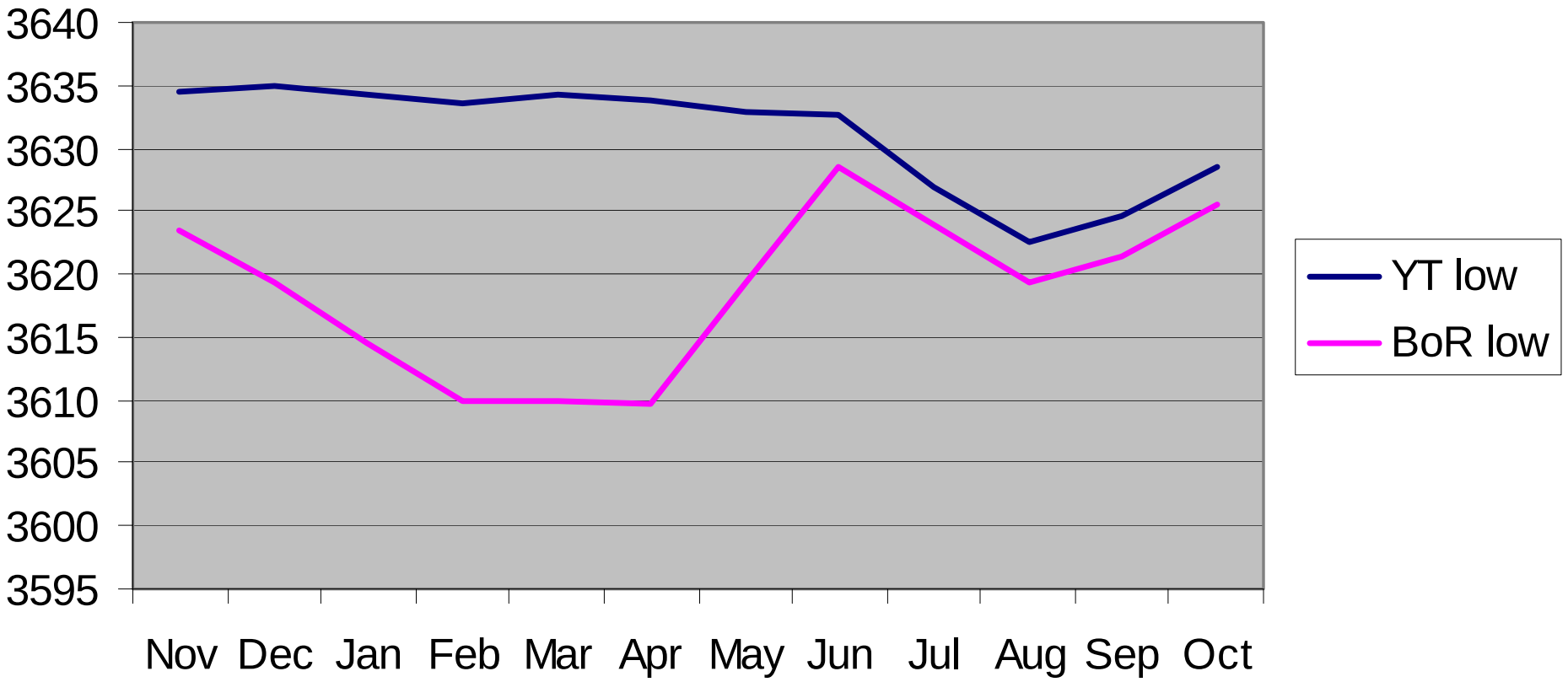
Bighorn flow in High years (cfs)



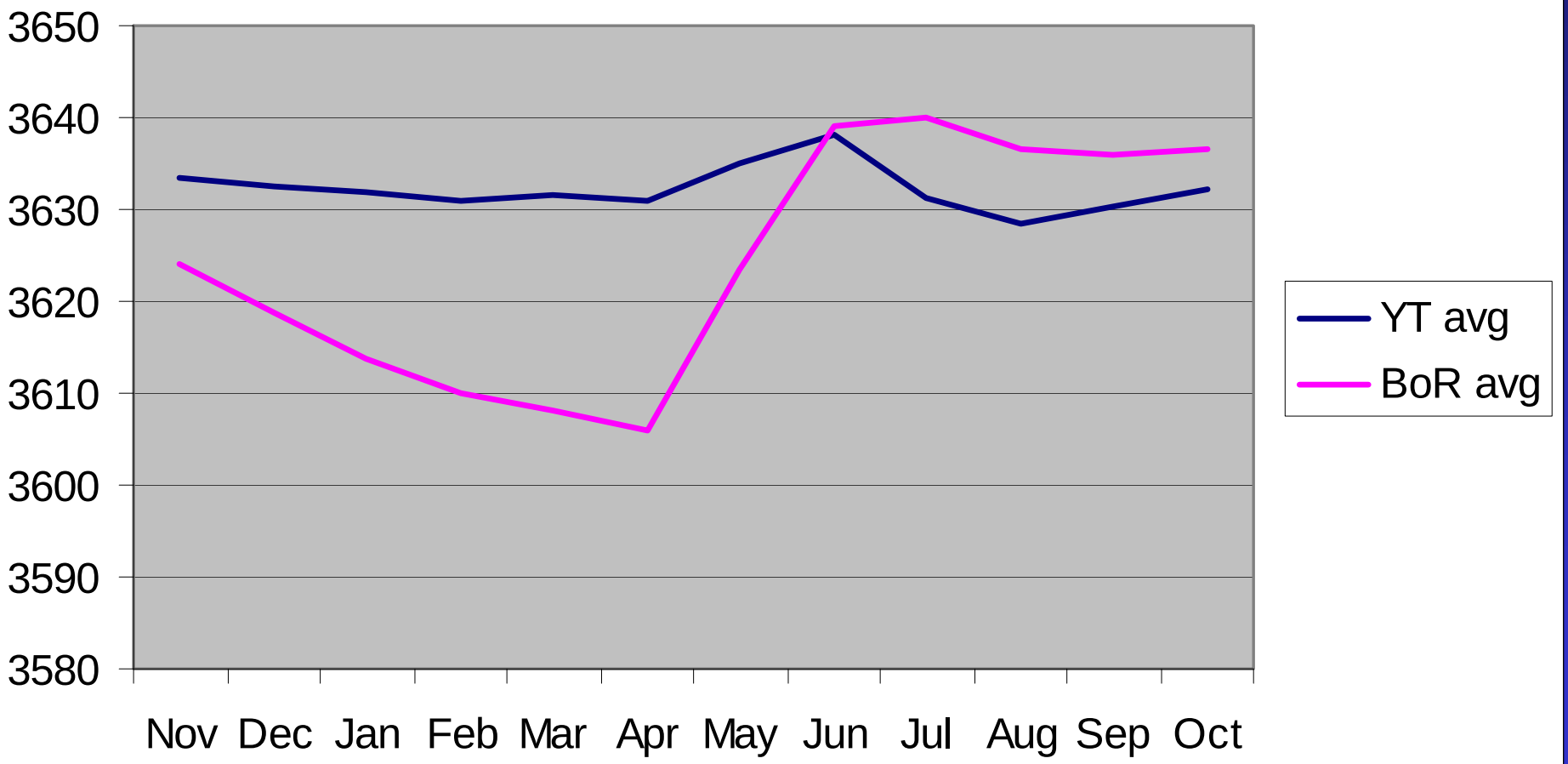
Reservoir elevations averaged for test period 1988-08



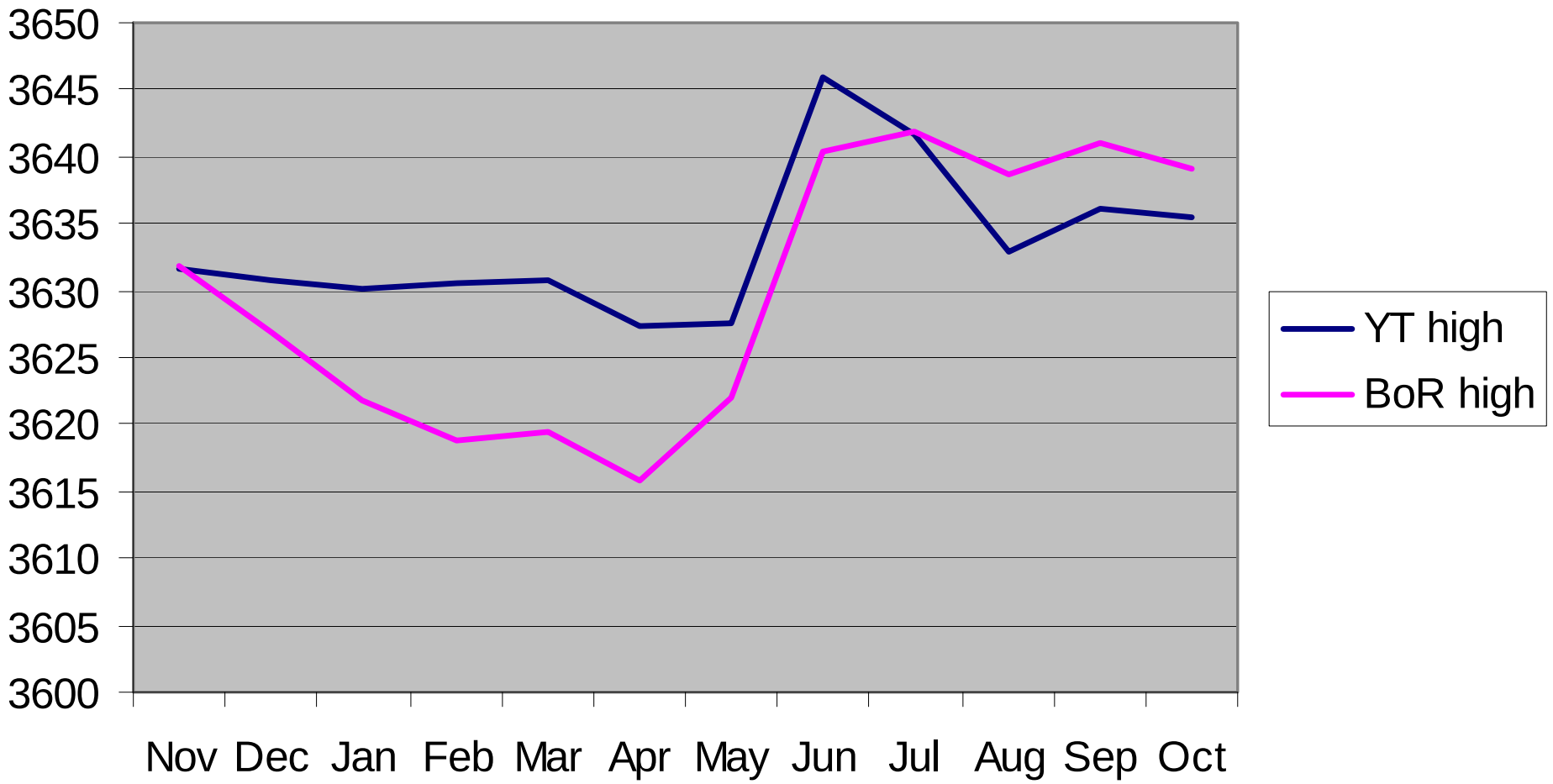
Reservoir elevations in Low years
(ft, end of month)



Reservoir elevations in Average years (ft, end of month)



Reservoir elevations in High years
(ft, end of month)



QUESTIONS?