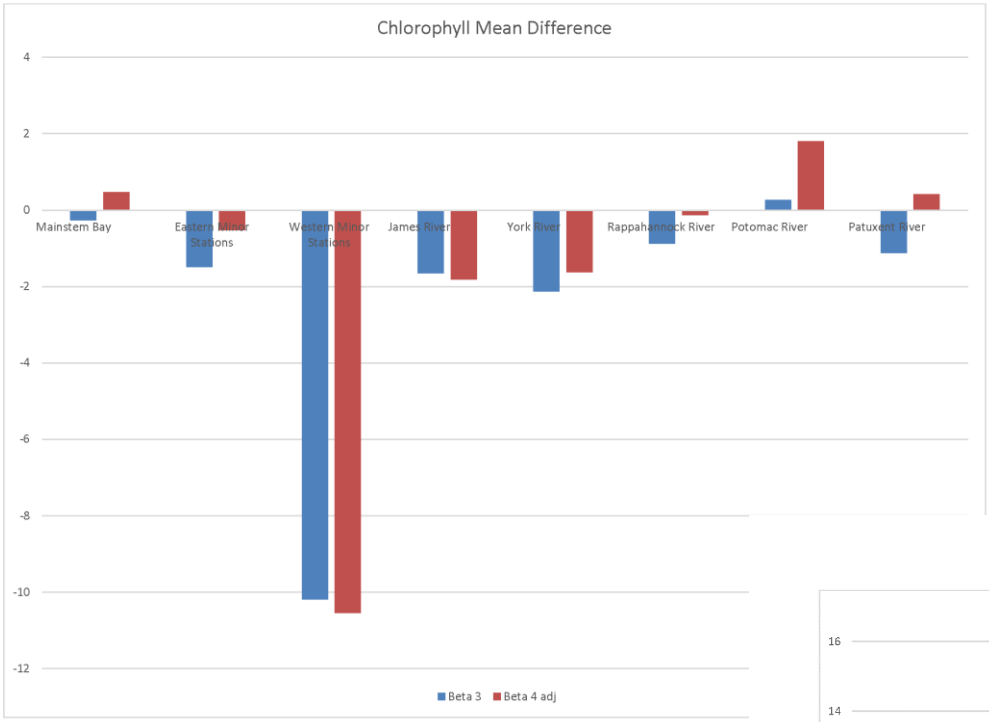
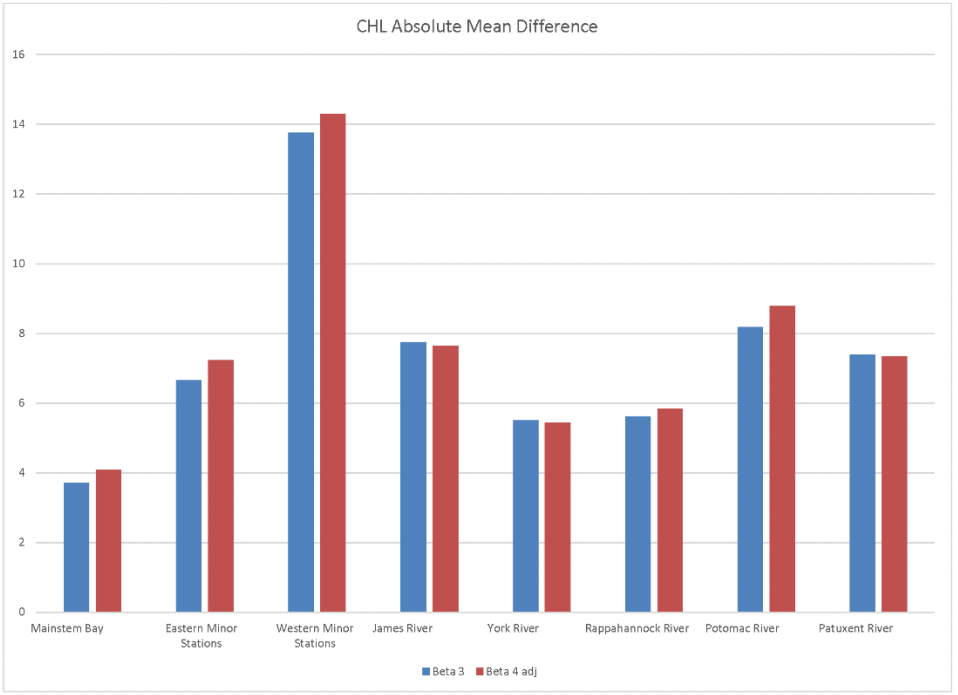
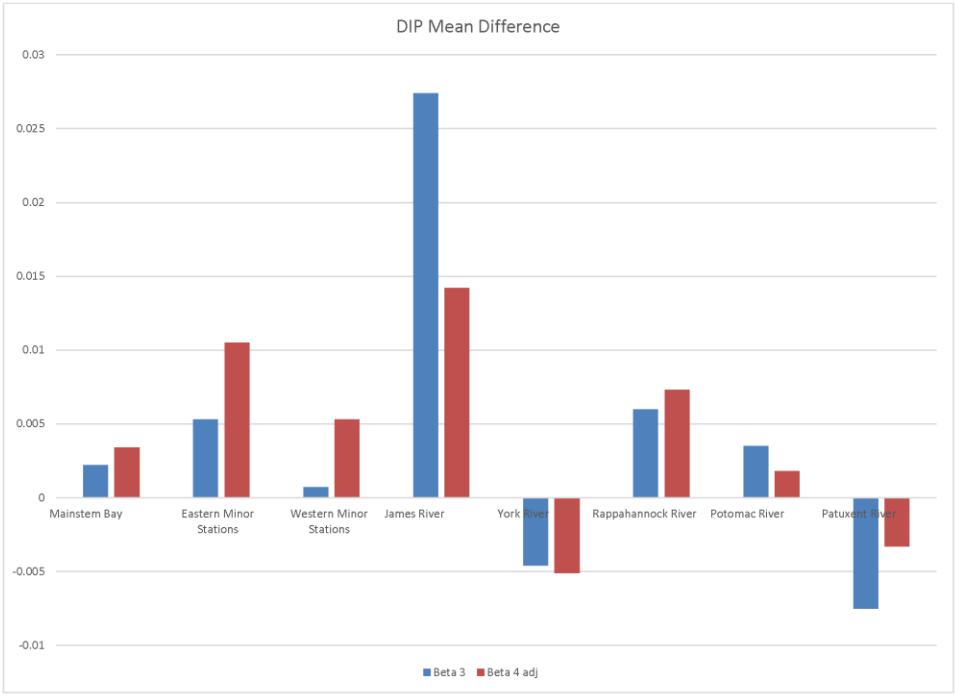
Where Are We?

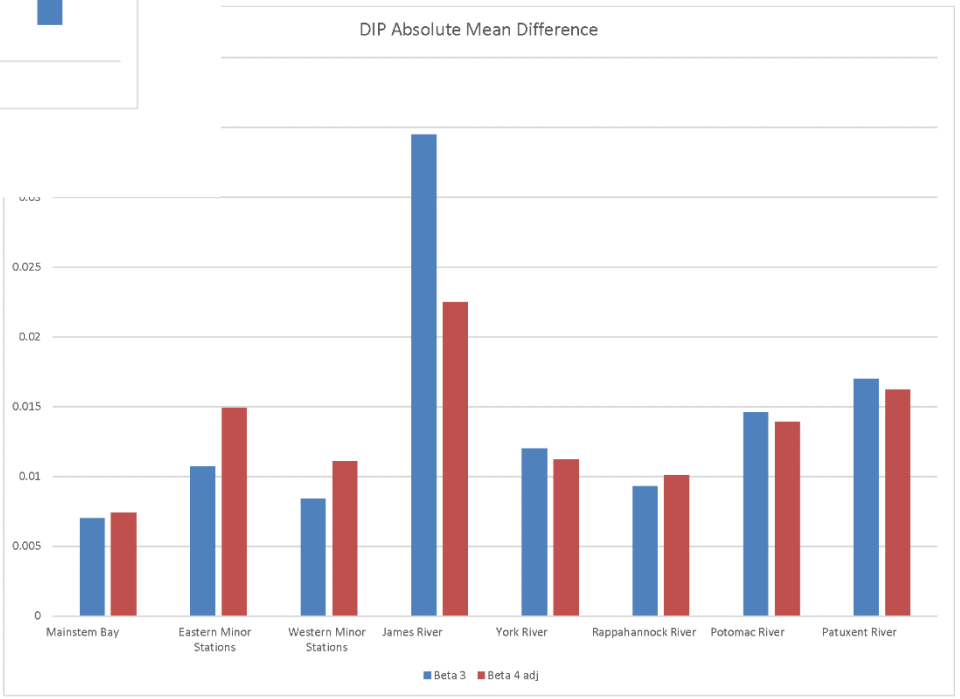
- We are running with Phase 6 Beta 4 (adjusted) WSM loads.
- We have passed to the Bay Program a 1991-2000 calibration based on these loads.
- We have passed to the Bay Program a 2002-2011 extension based on these loads.
- Let's see how Beta 4 compares to Beta 3 using our traditional Mean and Absolute Mean Difference statistics.



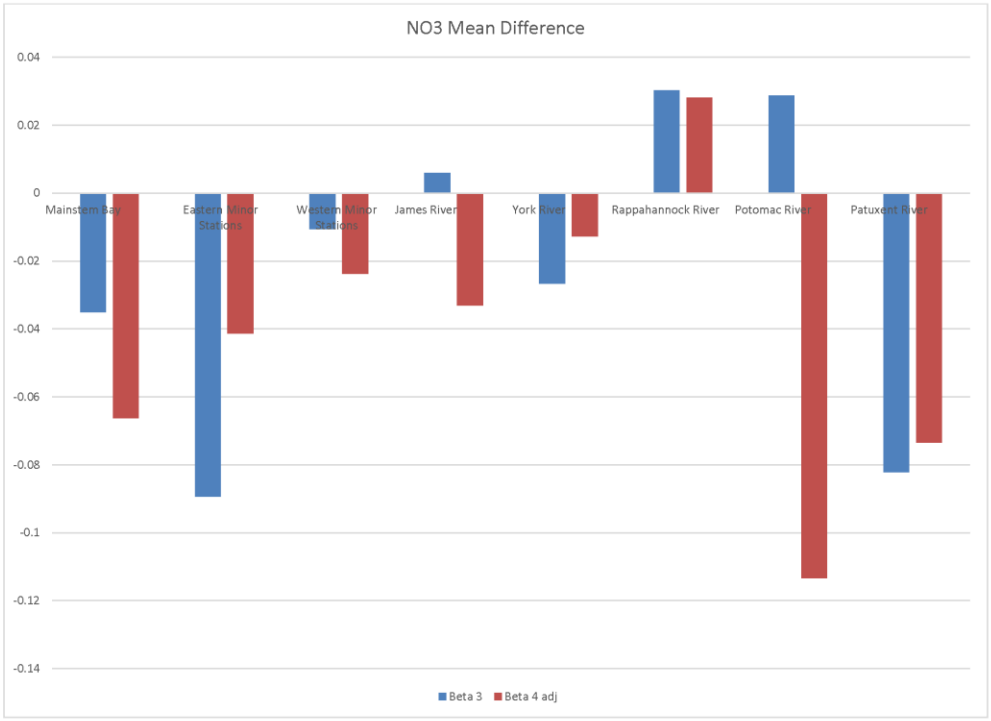


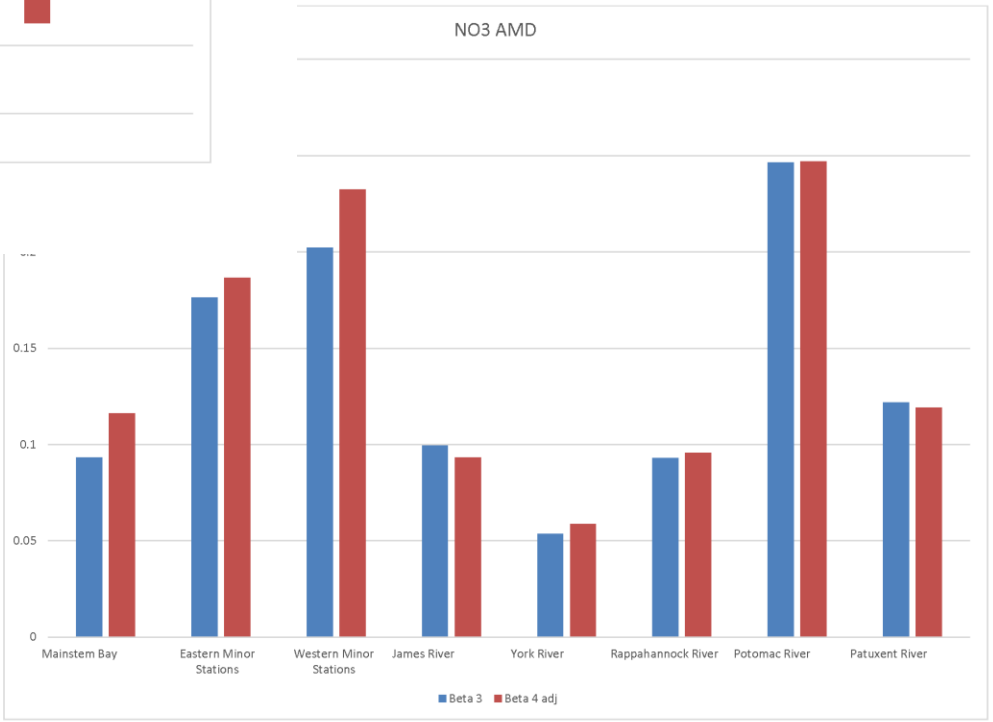
No major difference in chlorophyll.



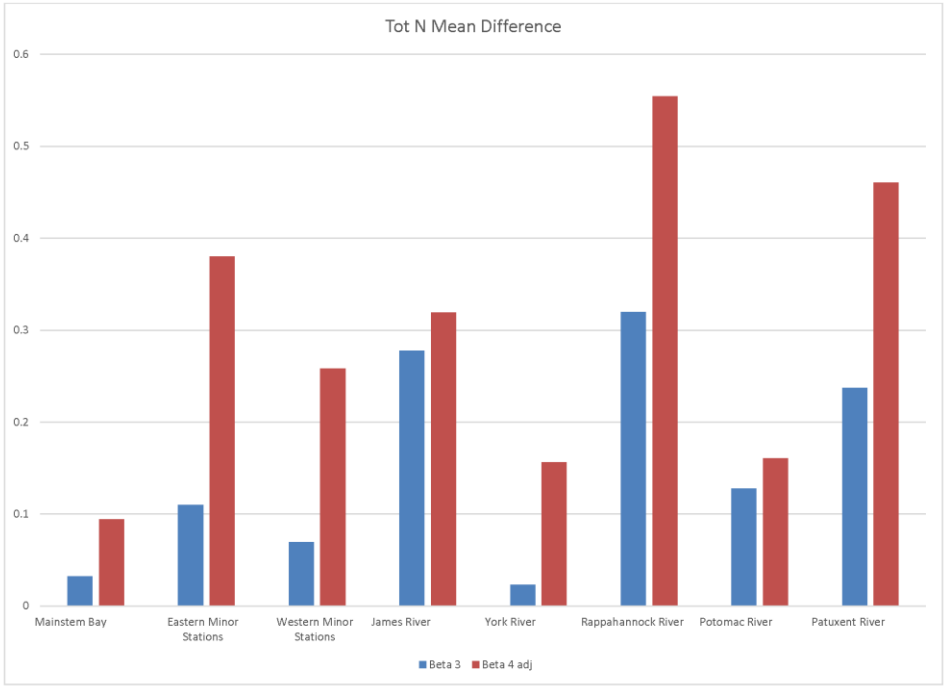


DIP is considerably lower in the James River and a significant improvement in agreement with monitoring data.

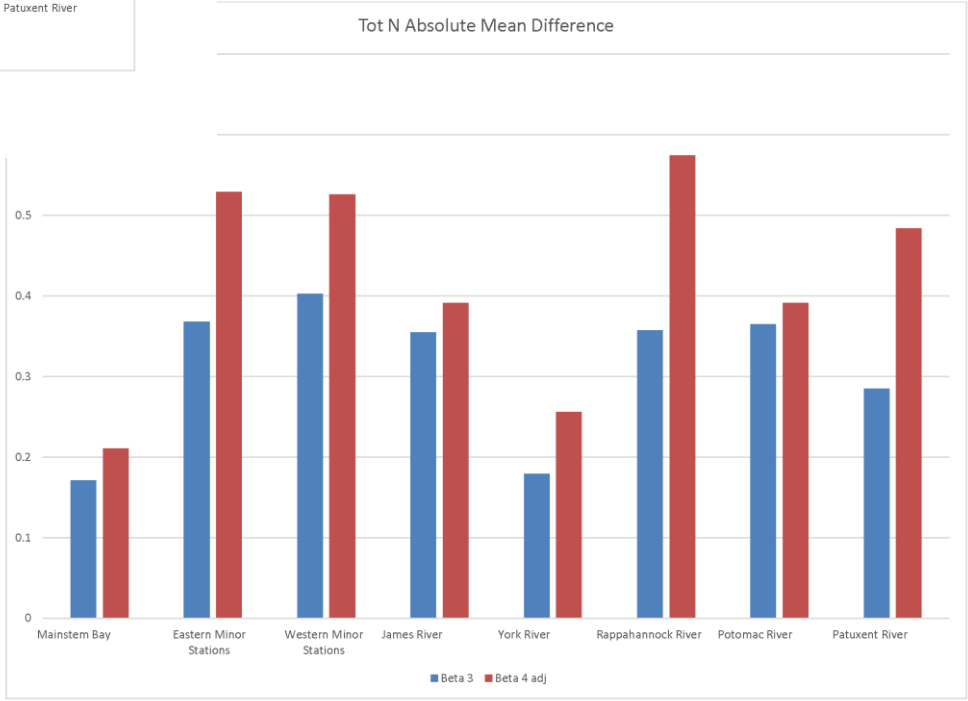




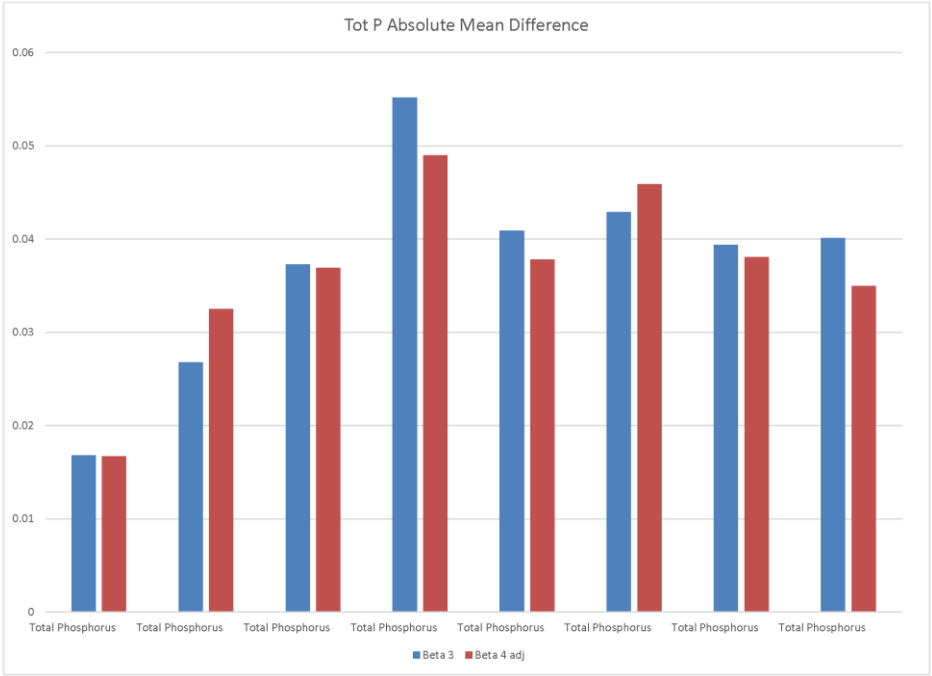
Substantial changes in nitrate. Lower in Susquehanna, James, Potomac. Higher along eastern shore. Not necessarily better.

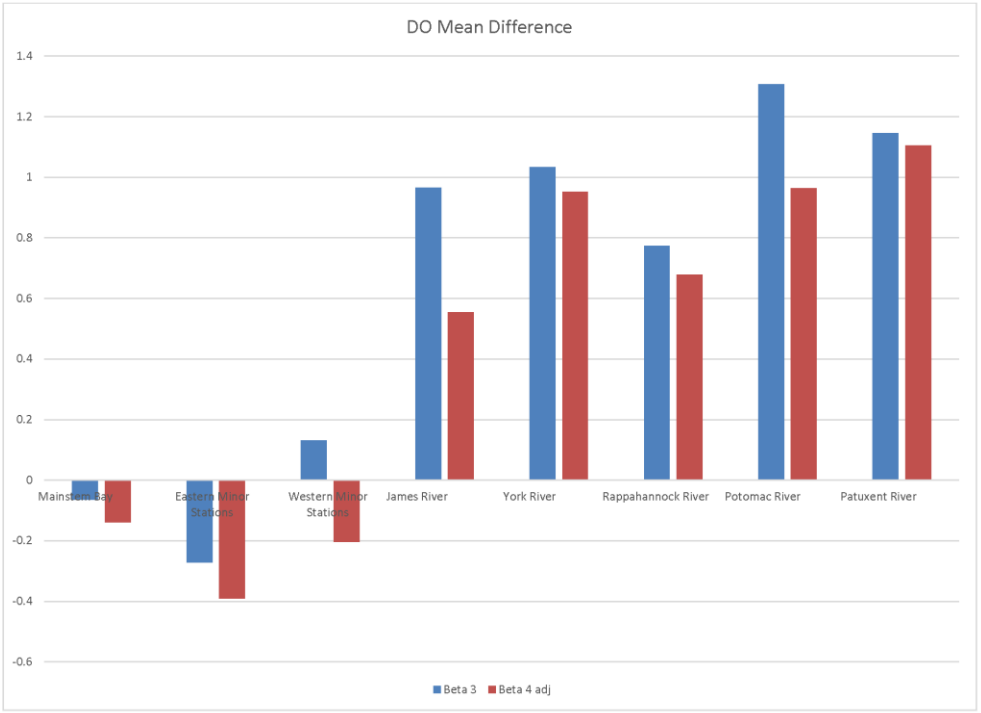


Total nitrogen is higher everywhere, not better.

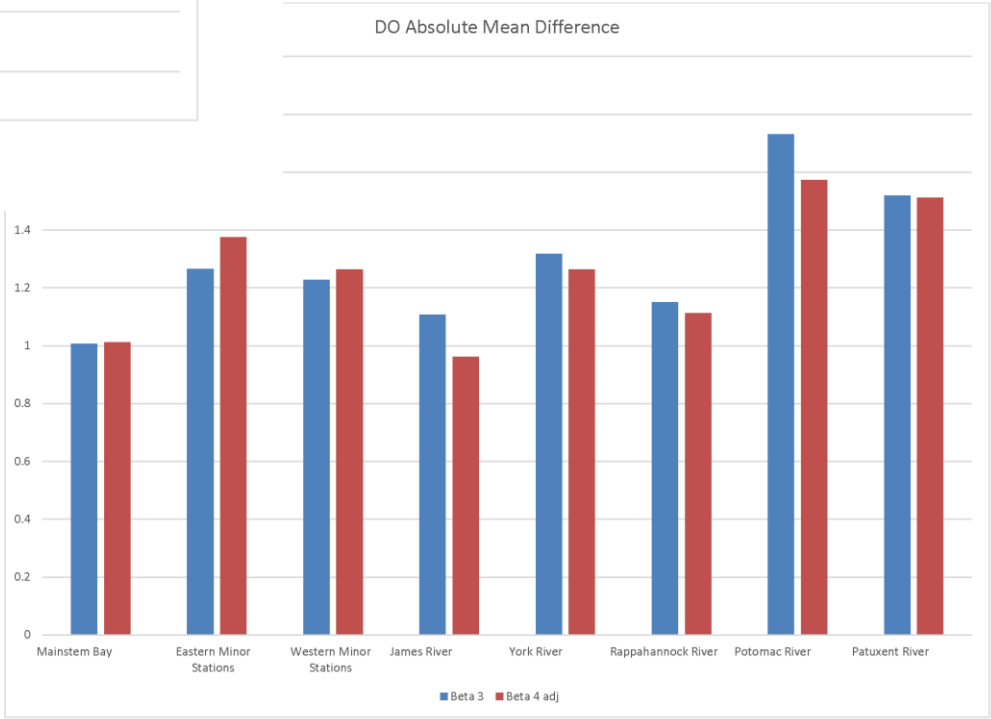


Total phosphorus is almost universally higher, not really better or worse.





Dissolved oxygen is lower, likely in response to added nitrogen and phosphorus. Not really better or worse.



Where Do We Go From Here?

- Cease further calibration of the WQM until we receive final Phase 6 WSM loads.
- Investigate apparent discrepancies between WQM and WSM.
- Bring oyster model up do date (current data and aquaculture).

Issues

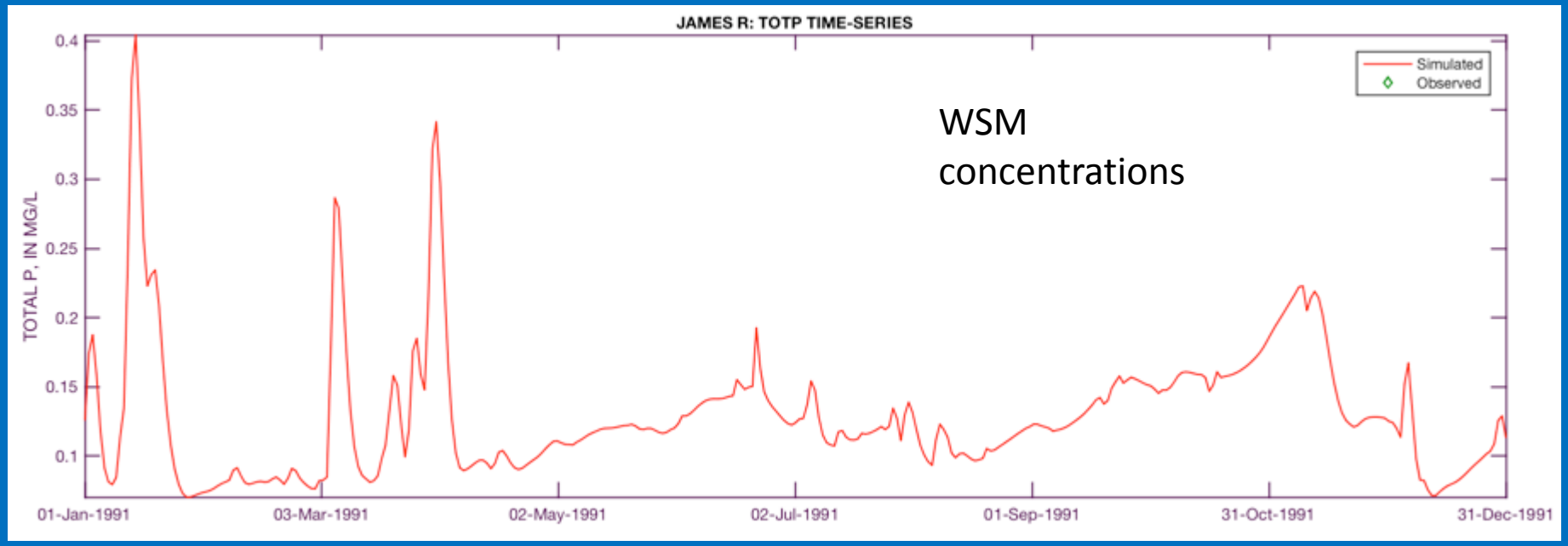
- Are there significant differences between the observations at the river inputs and at the most upstream tidal station?
- For example, is the Conowingo sampled at different times than the bay.
- Let’s compare river input observations to monitoring and to model.

Issues

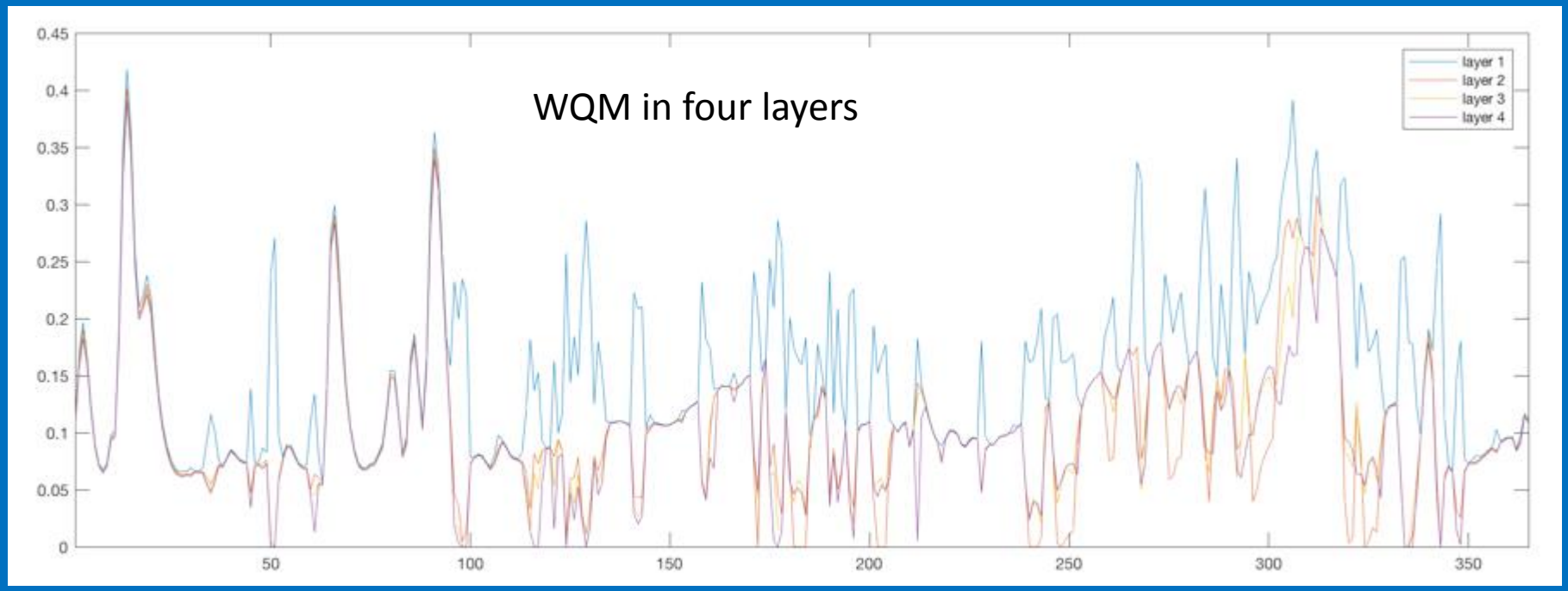
- How do the WQM calculations are upstream stations compare to WSM concentrations?
- For example, are the James River chlorophyll concentrations we are calculating consistent with the concentrations coming out of the WSM?

Issues

- We load only surface WQM cells. What impact does this have on our calculations and comparisons?
- Are there other numerical problems that are causing high-frequency oscillations?



WSM concentrations



WQM in four layers