

Horizontal Density Effects on Modeled Stage in DSM2

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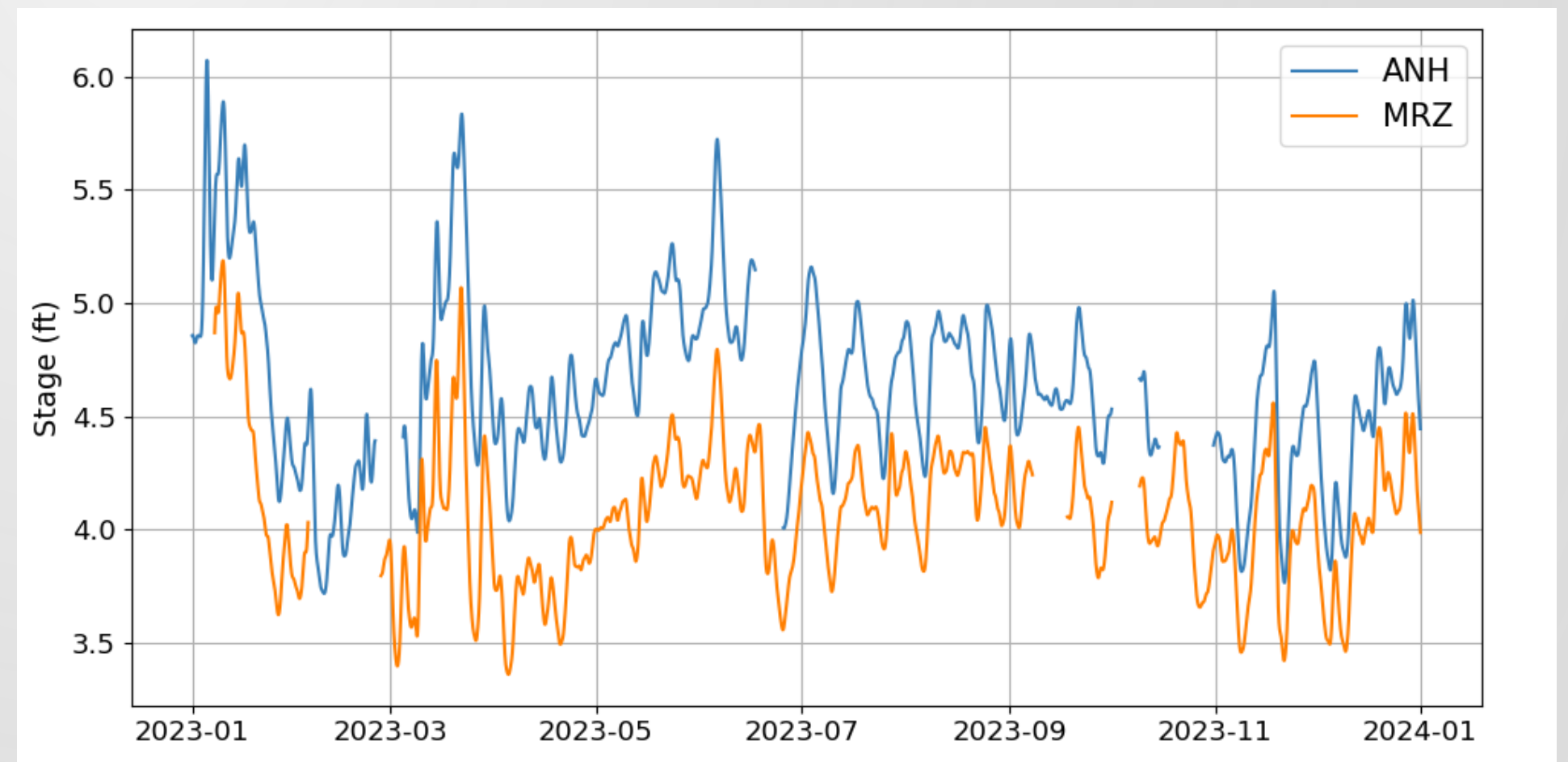
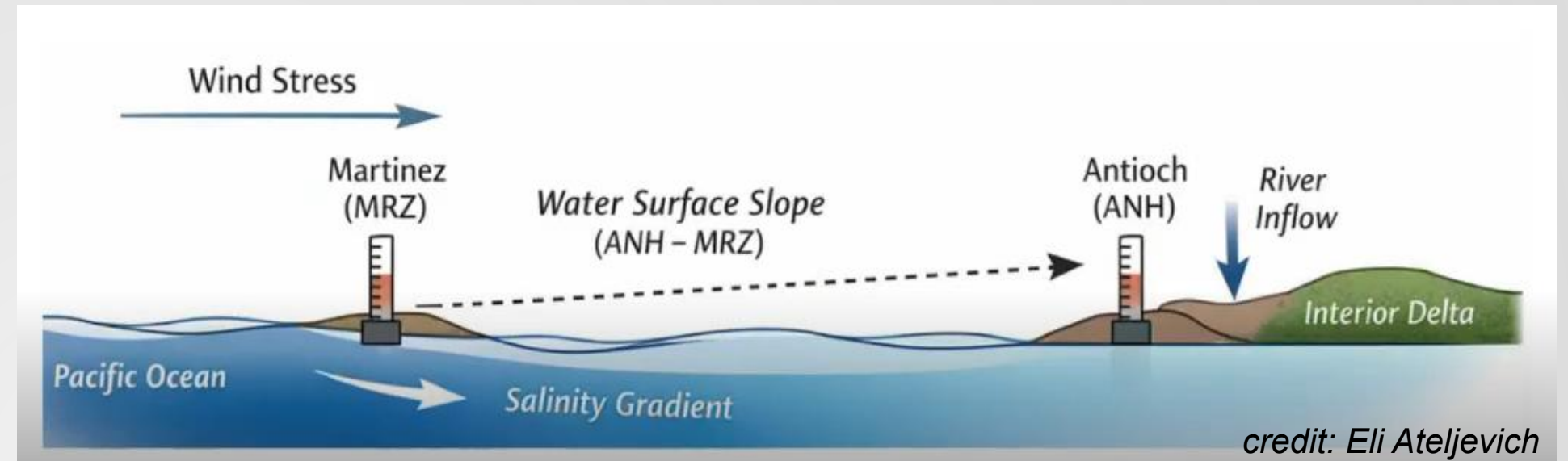


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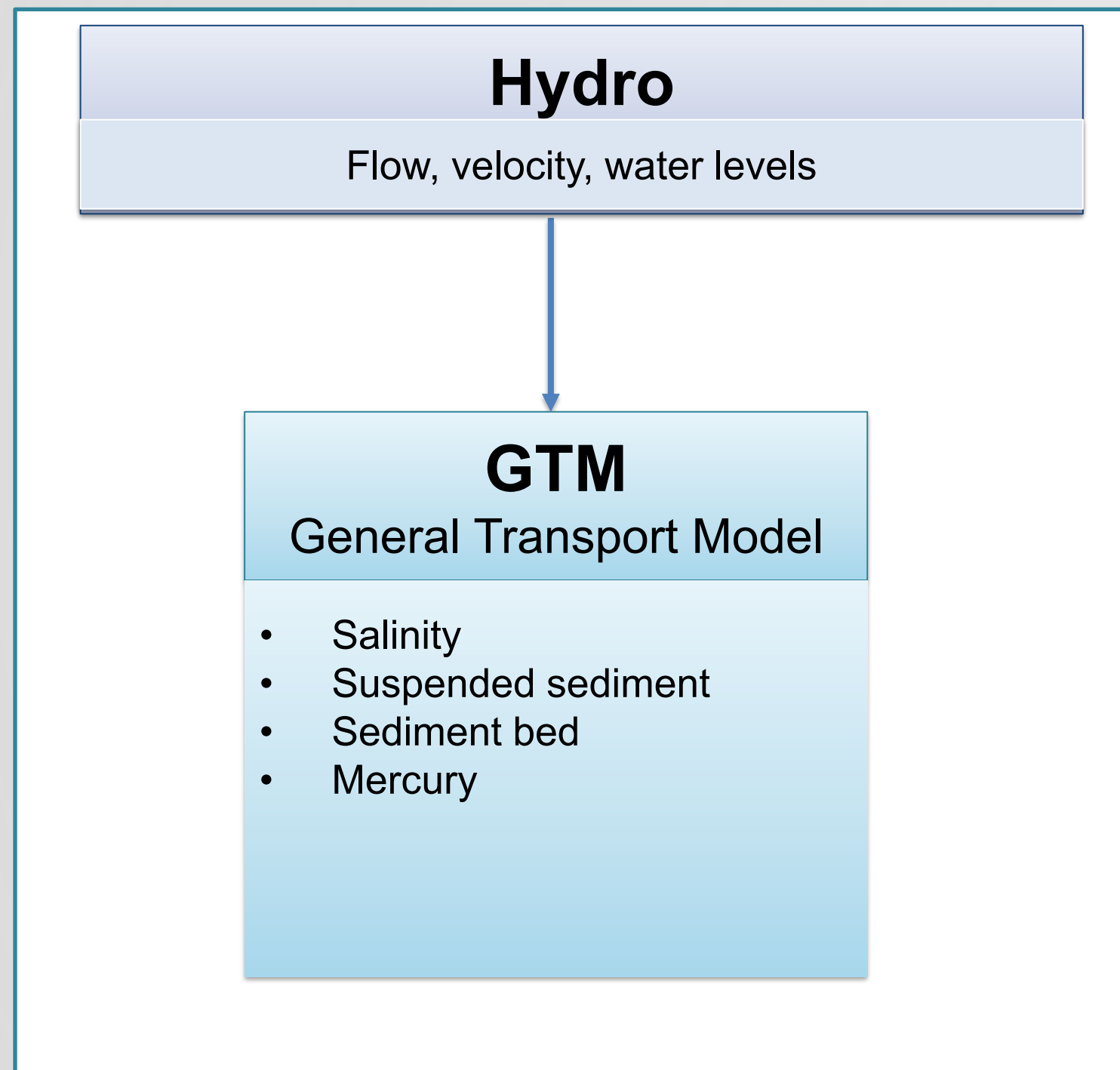
Horizontal density effects in Delta

- Horizontal density differences—typically caused by salinity, causing sloping water surface elevation (WSE)
 - Wind also cause sloped WSE in Delta (Spring/Summer)
- Horizontal density effects in Delta: **measured** WSE at Martinez (MRZ) VS. Antioch (ANH)

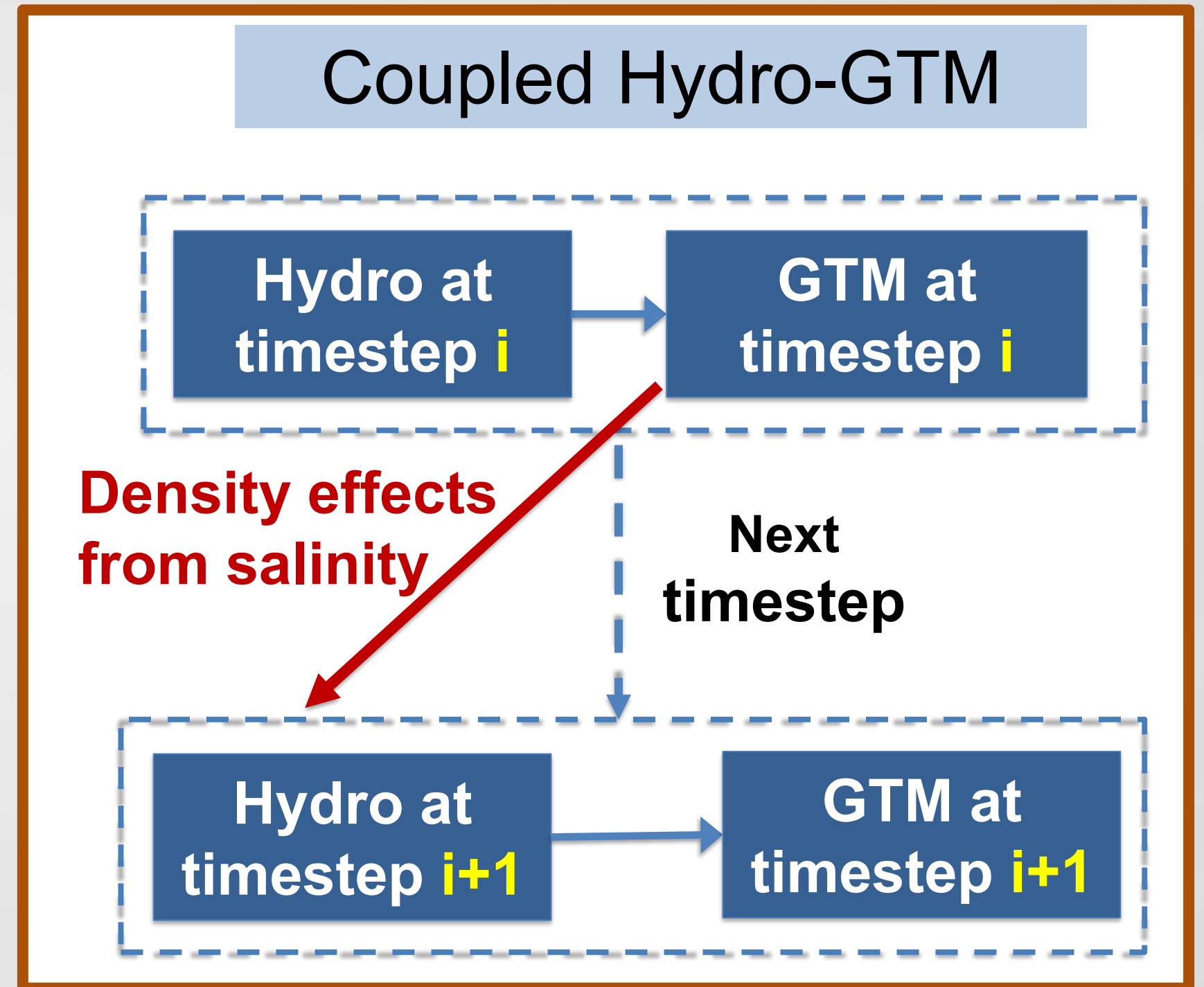


Density effects in DSM2

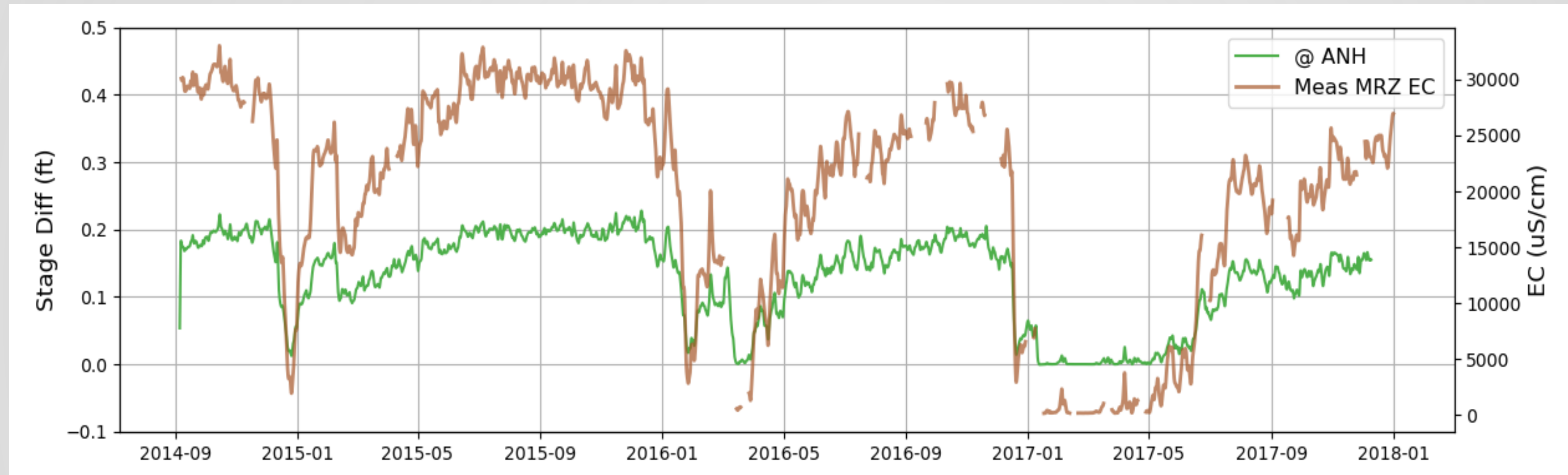
Before ...



Now ...

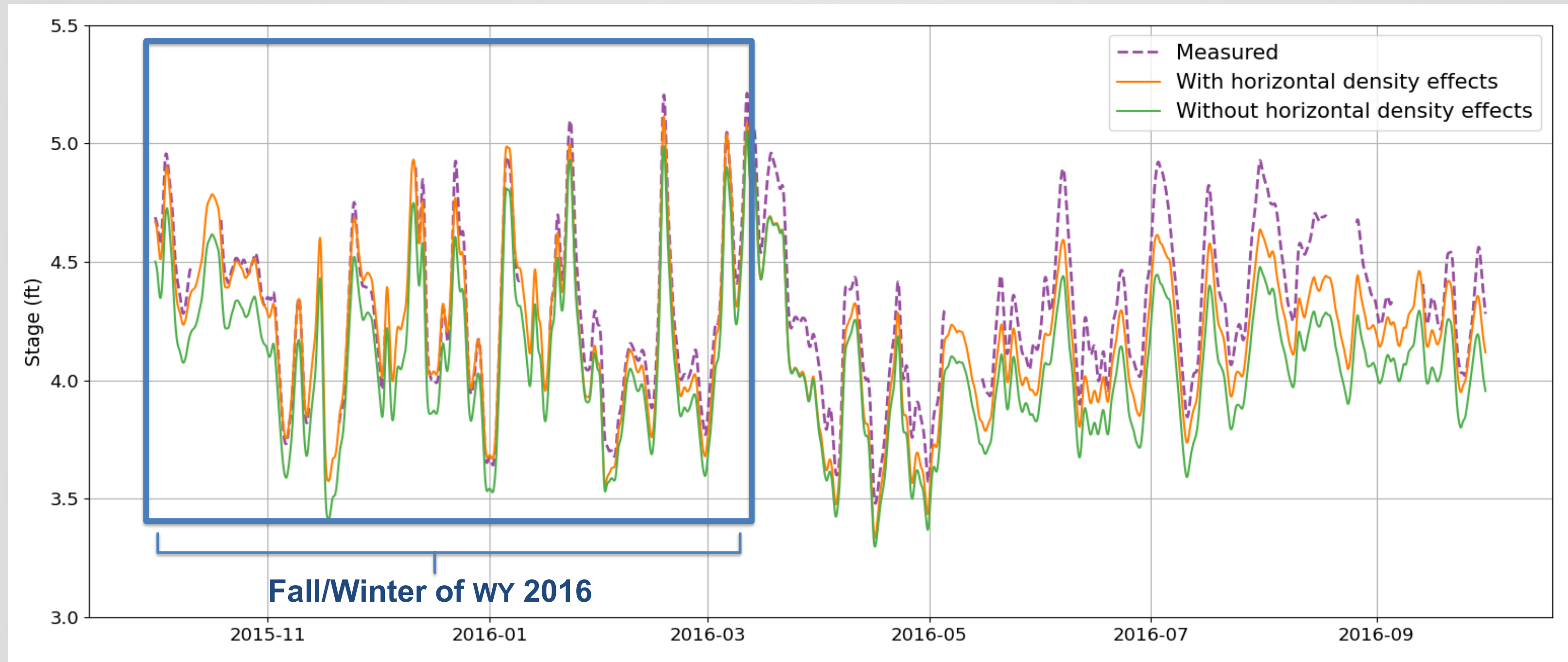


Horizontal density effects on stage



- Maximum of ~0.2 ft stage differences
- Seasonal and annual patterns follow salinity trend

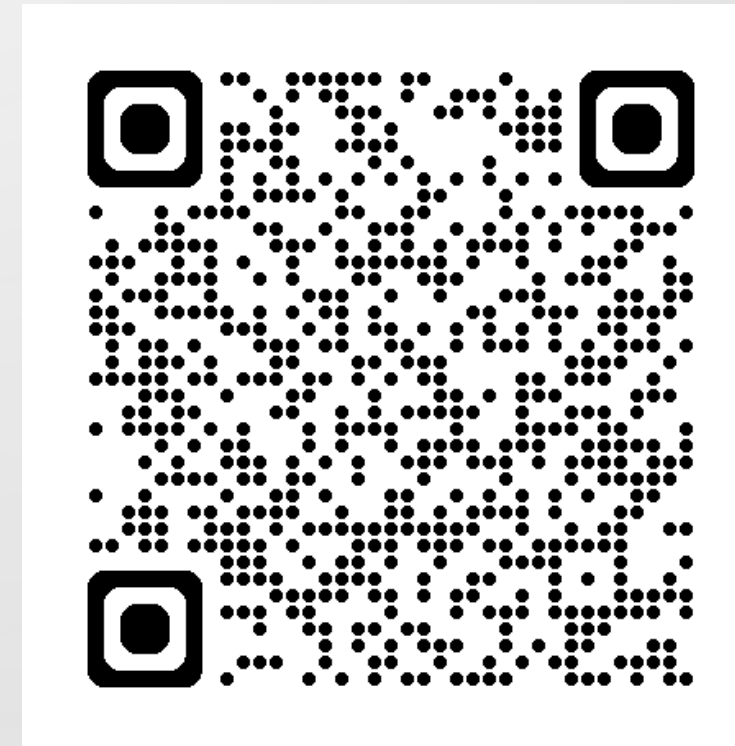
Stage comparison at Antioch



- **Improved** modeled stage with horizontal density effects
- Small wind speed in **fall and winter**, modeled stage match measured well

Summary

1. Implemented horizontal density effects in DSM2 hydrodynamics computation
2. Increase modeled stage by maximum of 0.2ft (*preliminary results*)
3. Better representation of hydrodynamics in the Delta



Thank you!

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