Intro

* Introduce isolated wetlands
* Their role in the carbon budget as well as their role in their watersheds

Knowledge Gaps

* The solution for resolving carbon budget discrepancies is conducting more detailed observational studies across many unique environments
* Many publications have explored isolated wetland carbon contributions but few have coupled their finding with RC and internal sources of carbon

Introduce my study sites

* Thus far in my project I explored stream carbon temporal dynamics, and RC carbon dynamics and fluxes. To fully and holistically, I will exlo

Hypothesis

* I hypothesize each stream will be gaining in carbon, increasing concentration from lateral inputs as water flows downstream.
* Although I hypothesize adjacent isolated wetlands will contribute to stream carbon, I expect the RC to nonetheless be the primary source.
* However, during periods of high discharge where overland and subsurface lateral transport are its greatest, I expect nearby wetlands to contribute comparatively great loads of carbon but still less than RC inputs

Objective

An accumulation of the all the chapter to inform a BEF carbon budget

Methods

Study sites

* As mentioned, BEF low-relief topography fosters a dense cluster is depressional wetlands and numerous blackwater streams.
* BEF’s wetlands foster a shallow table that cumulates above the confining unit, separating the surface from the Upper Florida Aquifer.
* Along with overland lateral flow, this shallow water table serves as transport “highway’ between depressional, isolated wetlands and their basin’s receiving stream.
* For this chapter, I will longitudinally sample streams 5, 6 and 9. These sites were selected since they all have river corridors (RC) wells allowing us to establish a holistic carbon budget for the streams.
* Sampling locations were dependent on access and UCA analysis. Locations with high () UCA value and were easily accessible were sampled
* INCLUDE GRAPH

Sampling and processing

* Each stream at every sapling location was sampled for TDC (total dissolved carbon), FDOM, and POC.
* Discuss why we are sampling POC- reference paper about more need for POC observation
* FDOM and TCD processing will followed protocols outlined in Chapter 1 and 2 Methods
* FDOM will be used to explore whether stream, RC, or wetland carbon differing signature and quality.
* Sentence on why to explore different species of carbon

Analysis:

* Each concentration will QC unit dependent on the UCA results
* Apply RC results at each location. Assume RC inputs are roughly longitudinally uniform.
* Assume the remainder is groundwater.
* From these estimates, formulate a flatwood stream carbon budget