FLOODING \* CO2 STUDY – intro notes

**Megonigal et al 2005 – “Flooding constraints on tree (Taxodium distichum) and herb growth responses to elevated CO2”**. Study is pretty much the same as mine but probably better, since they measured a bunch of different leaf ages so they could calculate whole-plant photosynthesis. They also measured soil redox but didn’t mention it all in their discussion. I might be able to use my photos to confirm root mortality in flooded plants and regeneration in recovered plants.

**Rasse et al 2004 – “Seventeen years of elevated CO2 exposure in a Chesapeake Bay Wetland: sustained but contrasting responses of plant growth and CO2 uptake”** Fig 4a. CO2 stimulation of net CO2 exchange is mediated by annual precipitation, but no such effect was observed for shoot biomass.

**Perry et al 2013 – “Elevated CO2 does not offset greater water stress predicted under climate change for native and exotic riparian plants”** worked on interaction between CO2 and drawdown (drying). “We conducted a glasshouse experiment to test the effects of elevated [CO2] and water availability on seedling growth, physiology, and drought tolerance of five western North American woody riparian species”. “Elevated CO2 increased intrinsic water-use efficiency (Δ13Cleaf), but did not increase biomass more in drier treatments than wetter treatments.”

**Middleton & McKee – “Can elevated CO2 modify regeneration from seed banks of floating freshwater marshes subjected to rising sea-level?”** This study examined how interacting environments of CO2, water regime, and salinity affect seed germination and seedling biomass of floating freshwater marshes in the Mississippi River Delta, which are dominated by C3 grasses, sedges, and forbs. Our findings suggest that for freshwater marsh communities, seedling response to CO2 is species-specific and secondary to salinity and flooding effects.