***Results—***

Overall:

Our **net growth data appear to have a log relationship with [TA],** common in growth data (cite); in order to test with a linear model, we log transformed the response variable (net growth) before running the model. When including salinity, TA as fixed predictors alongside bin number as a random effect (grouping) we found that when comparing a wide range of [TA] and salinity, there is an effect of [TA] on net growth, but the effect of TA does not differ between high and low salinity exposure.

* SHOW LINEAR MODEL AND linear plot HERE

Looking into **the independent role of total alkalinity**…on average, when oysters only experience variability in [TA] but little salinity change (single stressor), to what extent does lowering and elevating [TA] (at ambient salinity) influence net oyster growth (~ X umol kg-1)

* Show anova comparison of the TA treatments and net growth at amb sal here (Fig 2)

Now considering alkalinity change from a frequent source that also changes salinity (multiple stressor); for example, DI (hurricane/rainwater), diluted [TA], maintained [TA]; **to what extent does [TA] influence net growth during acclimation to low S conditions**

* Figure 3: comparison of average, 5 week growth from low S conditions with three FW source treatments

We can also see that over the duration of the experiment, there **is no significant influence of salinity** across the range of [TA].

* Figure out a way to graph that…

What does incremental growth say about how oysters are responding to environmental conditions?

* Figure 4 and 5: comparison of incremental growth rates comparing the first two weeks of growth and last two weeks of growth

Are there differences between growth seen in first two weeks versus that overall?

* Show a figure with incremental growth over first two weeks, and net growth overall (which includes the incremental) …may be a better way to show fig 4 and 5

What can we say when we put it all together?

1. Oyster growth was positively influence by [TA], in ambient and low salinity conditions
   1. When changes in [TA] occurred in ambient S conditions X happened
      1. Which was largely driven by high incremental growth in the first two weeks, with incremental growth declining between week 2-5 in the ambient and high TA conditions…(Fig 5)
   2. Oyster growth is maintained when alkalinity is severely reduced below ambient conditions (60% reduction) in ambient salinity(Fig 2)
      1. Which was largely driven by an increase in incremental growth **after** 2 weeks of exposure to low TA conditions (Fig 5)
   3. We also saw X effect of changes to [TA] coinciding with abrupt acclimation to low S conditions.
      1. Oysters exposed to freshwater inputs that have elevated [TA], have higher growth than those exposed to rainfall/low TA rivers (Fig3)
         1. Which was largely driven by increased incremental growth in the first two weeks, with incremental growth declining between week 2-5…(Fig 5)
2. We do not observe an additional influence of salinity on top of the positive relationship with [TA], which may occur because oysters were fed often and not energetically limited.
   1. Often times we see a non-additive effect when stressors are combined. We would look at the first two week growth rate in the single vs multi stressor experiment to test this relationship. In fact, we see X in reduced [TA] with no change in S versus X when S was reduced with [TA].