This document provides information on the data included within each of the post-processed manuscript files.

* Figure1\_data.dat
  + - Latitude (decimal degrees), longitude (decimal degrees), and bottom elevation (m) for model grid
* Figure2\_data.dat
  + - Observed and modeled water level (m) data from 2016 and 2017 used to calibrate and verify the EFDC model. Time vector is formatted as a serial date number representing the whole and fractional number of days from January 0, 0000).
* Figure3\_data.zip
  + Figure3ab\_data.dat
    - Observed (WQM) and modeled bottom salinity (ppt), surface salinity (ppt), bottom temperature (°C) and surface temperature (°C) at P5 in 2016 used to calibrate the model. Time vector is formatted as a serial date number representing the whole and fractional number of days from January 0, 0000).
  + Figure3cd\_data.dat
    - Observed (WQM) and modeled bottom salinity (ppt) and bottom temperature (°C) at P5 in 2017 used to validate the model. Time vector is formatted as a serial date number representing the whole and fractional number of days from January 0, 0000).
  + Figure3ef\_data.dat
    - Observed and modeled bottom salinity (ppt), surface salinity (ppt), bottom temperature (°C) and surface temperature (°C) for 193 CTD casts collected between January 2016 and October 2017.
* Figure4\_data.zip
  + Figure4a\_data.dat
    - Observed and modeled Δσt (kg m-3) at P5 in 2016 used to calibrate the model. Time vector is formatted as a serial date number representing the whole and fractional number of days from January 0, 0000).
  + Figure4b\_data.dat
    - Time-averaged wavelet coherence and period (hours) for observed and modeled data in Figure4a\_data.dat
  + Figure4c\_data.dat
    - Observed and modeled Δσt (kg m-3) for 193 CTD casts collected between January 2016 and October 2017.
* Figure5\_data.dat
  + - Modeled Δσt (kg m-3) during the 2014 flood for base model and radiative forcing (IR), temperature (T), Discharge (D), sea-level rise (SLR), and wind (W) climate change scenarios. Escambia River discharge (m3 s-1) for Base and D scenario, water level (m) for Base and SLR scenario, and North-south (NS) and east-west wind vectors (m s-1) for Base and W scenario. Positive values indicate winds from the south and west.
* Figure6\_data.dat
  + - Along-estuary distance (km), depth (m), and salinity (ppt) for Base, D, SLR, and W models at three different times during 2014 flood (March 27, 2014 03:00; April 17, 2014 06:00; April 29, 2014 04:00). Data columns are labeled by subplot.
* Figure7\_8\_data.dat
  + - Mean daily Δσt (kg m-3) at P5 for Base, D, SLR, and W models during 2013 – 2017 as a function of mean daily Escambia River Discharge (m3 s-1) and maximum southerly wind speed (m s-1).
* Figure9\_data.zip
  + Figure9a\_d\_data.dat
    - Time series of Escambia River Discharge (m3 s-1), North-south (NS) wind vector (m s-1) and east-west wind vector (m s-1) for T+D+SLR+W scenario during May 2016. Positive values indicate winds from the south and west. Time vector is formatted as a serial date number representing the whole and fractional number of days from January 0, 0000).
  + Figure9e\_h\_data.dat
    - Δσt (kg m-3) and depth-averaged salinity (ppt) as a function of time and longitudinal distance (km) for Base and T+D+SLR+W scenario during May 2016. Time vector is formatted as a serial date number representing the whole and fractional number of days from January 0, 0000).
* Figure10\_data.dat
  + - Mean depth-averaged salinity (ppt), mean depth-averaged temperature (°C), and mean Δσt (kg m-3) for each grid cell with given longitude (decimal degrees) and latitude (decimal degrees) in Base and T+D+SLR+W models
* Figure11\_data.dat
  + - Time-averaged wavelet coherence between Base and T+D+SLR+W scenario as a function of period (hours) for bottom salinity, surface salinity, bottom temperature, surface temperature, and Δσt.