* R Basics:

1. Capitalization, format consistency, and spelling are very important!!!!!!!!!!

* Length-Weight:

1. Open data/WB\_lw.csv
2. Open western basin trawl length weight file for the desired year
3. Copy the appropriate columns into the bottom of data/WB\_lw.csv
4. Use Proper() function to capitalize the species names
5. Make sure species names are completely spelt out (no shorthand)
6. Fill in the appropriate year and season columns for the new data
7. Save and close file

* Catch:

1. Open data/WB\_catch.csv
2. Open western basin trawl catch faile for the desired year
3. Copy the appropriate columns into the bottom of data/WB\_catch.csv
4. Use Proper() function to capitalize the species names
5. Make sure species names are completely spelt out (no shorthand)
6. Make sure size classes follow the same format (All Capital Letters)
   1. Use find and replace with match case selected
7. Fill in the appropriate year and season columns for the new data
8. Save and close file

* Standardized Catch Effort (CPH and NPH):

1. Open data\_prep/WB\_CatchperHA\_raw.csv
2. Open western basin CPH file for the desired year
3. Copy the appropriate columns into the bottom of data/WB\_CatchperHA.csv
4. Use Proper() function to capitalize the species names
5. Make sure species names are completely spelt out (no shorthand)
6. Change the life stages so that they are spelt out (a1 = Age\_1, etc)
   1. Use find and replace with match case selected
7. Fill in the appropriate year and season columns for the new data
8. Save and close file

R Data Manipulation

1. Open data\_prep/shiny\_catch\_lifestages.R
2. Run code
3. A new file will be automatically be saved as data/WB\_CatchperHA\_All\_LS.csv

* Expanded Length Frequency (Bootstrap):

1. Make sure to have LW data input completed
2. Open data\_prep/shiny\_lw\_bootstrap.R
3. Change year and season variables (lines 11 & 12)
4. Run code
5. If an error occurs, try traceback() to find out more info
6. A new file will automatically be saved as data/WB\_expLengths.csv

Water Quality:

1. Make sure to have the exported, raw YSI file
2. Open data\_prep/shiny\_water\_quality.R
3. Change the inputs for lines 15, 16, 19, & 22 to current year, season, and files
4. Run code
5. A new file will be automatically be saved as data\_prep/WB\_”season”\_”year”\_WQ\_SUMMARY.xlsx
6. Copy the appropriate columns into the bottom of data/WB\_WaterQuality.csv
7. Fill in the appropriate year and season columns for the new data
8. Save and close file