**Script file path that has the counts and biomass data needed for making graphs:**

1. ctbm\_grptyp.Rdata
   1. 03\_Bmean\_Ct\_GrpTyp.R (Script that combines group and type into one category, “grp\_typ”, and also adds a column for mean count across the replicates)
   2. ct\_bmn\_fin.Rdata
      1. 03\_Biomass\_Means\_Final\_10\_25\_22.R (Script that calculates the total counts and biomass means of each organism per sampling event and experiment type (site, FC, IC or T24)
         1. volbio\_all\_no0.Rdata (Rdata file that has the biomass of 100 and 400, but removed the rows with 0 zero counts)
         2. OR volbio\_all.Rdata (Rdata file that has the biomass of 100 and 400, buthas rows with 0 zero counts)
            1. 03\_calcs\_volbio\_100400.R (R script that combines the 100x biomass with the 400x biomass)

volbio100.Rdata (Rdata file that has calculated the biomass)

AND volbio400.Rdata (same as above)

03\_calcs\_biomass.R (Contains the function to calculate the biomass of the organisms)

vol100.Rdata (Rdata file that has calculated the volume)

AND vol400.Rdata (same as above)

03\_calcs\_volume.R (Contains the function to calculate the volume of the organisms)

I had to start over with the list because Word wouldn’t make more indents, but the list continues below

1. 03\_calcs\_volume.R (Contains the function to calculate the volume of the organisms)
   1. raw100\_final.Rdata (Rdata file that has rearranged 100x\_RawCount\_R.csv to put it in a usable format)
   2. AND raw400\_final.Rdata (same as above)
      1. 02\_dataclean\_100\_400.R
         1. 100x\_RawCount\_R.csv. (Raw data file, also in xlsx)
         2. 400x\_RawCount\_R.csv (Raw data file, also in xlsx)

**KEY**

|  |  |  |
| --- | --- | --- |
| Column name | What it means | An example |
|  |  |  |
| samp\_ev | Sampling Event | SJR1, WLD2, etc |
| samp\_date | Date that the sample was taken | 2019-09-03 |
| exp | Type of experiment sample | FC (controls), IC (initials), T24 (experimenal), site (site water sample) |
| Group or group | Organism group (I’m not identifying them by species or genus, just broad “groups”) | chlorohyte, ciliate, diatom, etc. |
| type | more specific type of organism | actinastrum, as in chlorophyte actinastrum; or cone, as in ciliate cone |
| shp | Shape of the organism- I made these up and used them in the volume calculations so they correspond to the correct volume equations for the shape of the organism | cone1, prispar (prism parallelogram) |
| sa | short axis measurment in micrometers | 8 or other numbers |
| la | long axis measurement in micrometers | same as above |
| wi | width measurement in micrometers, or equivalent third dimensional measurment. Not all organisms have this | same as above |
| counts | how many individual organisms I counted in that sample | same as above |
| pres\_fact | preservative factor of the sample, it’s a calculation that factors in to the total volume of the water sample, the volume of the preservative that was added to the sample | .0922 or something like that |
| vol\_set\_ml | volume of sample settled in milliliters- the volume I took out of the main sample bottle and settled the microplankton on the bottom of the utermohl chamber | 27.0 or something like that |
| n\_bugs | number of bugs, or copepods that were put in the incubation bottle so they could eat the plankton in it. | 24, always 24 |
| time\_d | time in days that the incubation bottles were incubated |  |
| volume  also tot\_vol\_um3 | the total volume of all the organisms in the count for that row, in units of cubic micrometers | varies |
| vol\_per\_org\_um3 | the volume of each organism, if there were multiple counts of them in that row, in units of cubic micormeters |  |
| biomass\_pgC  also tot\_biomass\_pgc | biomass in units of picograms of carbon | varies |
| bio\_per\_vol\_pgc\_ml | biomass per volume in picograms of carbon per milliliter | varies |
| bio\_per\_vol\_ugl | biomass per volume in micrograms per liter | varies |
| counts\_per\_ml | number of organisms per milliliter in that sample | varies |
| bmn\_pgml | mean biomass in picograms of carbon per milliliter | varies |
| tot\_ct | total counts of that organism, across the experimentals samples |  |