MACROINVERTEBRATE BIOMASS PROTOCOL

\*\*Mass/individual was calculated for the 2016 season. I don’t think it will be necessary to calculate this value again in following years since average body sizes probably won’t change significantly throughout the drift season. It would save time to use my values\*\*

* Samples were taken from drift samples (Site D) provided there was enough to reach a count of 20. If not, samples were collected in the field. It would be wise to collect 30 or more in order to randomly select 20
* Damaged samples were avoided (ensure that the insect is completely intact from the tip of the labrum to the tip of the last abdominal segment. It is okay if the terminal cerci/antennae break off as these are not used to determine length)
* Collect 20 samples from each family (randomly chosen), or as many as can be collected, and determine total body length from the tip of the labrum (“upper lip”) to the tip of the abdomen (excluding terminal cerci, antennae, and caudal prolegs).
* Families with natural curvature or those that curl when in EtOH were placed on their sides for photos and length was taken from the tip of the labrum to the tip of the last abdominal segment along the dorsum.
* It was sometimes necessary to carefully remove laterally projecting legs so the insect can rest flat on its side
* Insects within the same family may require either a dorsal aspect photo or a lateral aspect photo. Use your best judgement to determine which body position would give us the best total length measurement.
* Families that are dorsoventrally flattened (Heptageniidae, Ephemerellidae, Odonata, etc.) were placed dorsal side up for photos after carefully flattening them.
* For Decapoda (crayfish) a dorsal aspect photo was taken and ONLY carapace length was used for the mass equation (NOT including abdomen)
* For Helicopsychidae (Trichoptera: snail shell caddis), measure case width, NOT body length.
* ImageJ was used to determine total length (hand held camera used for larger samples, and Q-capture/dissecting scope camera used for smaller samples such as Chironomidae)
* I tried to avoid taking batch photos of >5 individuals

ADDITIONAL NOTES

* Regressions don’t exist for Leptohyphidae. For this family, I used the coefficients from the family Caenidae because they are very morphologically similar