Summer 2018 and 2019 (ongoing) chlorophyll-a values were calculated using a Trilogy Laboratory Fluorometer (version 1.7) in the fall of 2019. All samples were run using the direct concentration mode after being calibrated with five different calibration solutions ranging from X to Y. Direct concentrations were calculated based off fluorometer settings and are as follows:

I. Variables stored during calibration phase of fluorometer:

Cstand[1] = Concentration of standard 1

Fblank = Fluorescence of Blank value

Fstand[1],B = Fluorescence of standard 1 before acidification

Fstand[1],A = Fluorescence of standard 1 after acidification

Fm = Acidification Ratio = (Fstand[1],B – Fblank) / (Fstand[1],A – Fblank)

II. Variables required from the sample analysis phase:

Fsamp,B = Fluorescence of sample before acidification

Fsamp,A = Fluorescence of sample after acidification

Vsolvent = Volume of solvent used to extract sample

Vwater = Volume of water filtered

III. Interpolation equation used in end calculation of chlorophyll a and pheophytin

a concentrations:

Interp,B = Cstand[1] \* (Fsamp,B - Fblank) / (Fstand[1],B - Fblank)

Interp,A = Cstand[1] \* (Fsamp,A - Fblank) / (Fstand[1],B - Fblank)

IV. End calculation for corrected chlorophyll a and pheophytin a:

Chlorophyll a concentration = [Fm/(Fm-1)] \* (Interp,B - Interp,A) \* (Vsolvent/ Vwater)

Pheophytin a concentration = [Fm/(Fm-1)] \* [(Fm \* Interp,A) - Interp,B] \* (Vsolvent/ Vwater)