where,

c_1 = aqueous concentration of pesticide in littoral zone, kg/m^3

c_2 = aqueous concentration of pesticide in benthic zone, kg/m^3

c_{sed} = concentration of suspended sediment in littoral zone, kg/m^3 = $\dfrac{m_{sed\_1}}{v_1}$

c_{DOC} = concentration of dissolved organic carbon (DOC) in littoral zone, kg/m^3 = $\dfrac{m_{DOC}}{v_1}$

c_{bio} = concentration of biota in littoral zone, kg/m^3 = $\dfrac{m_{bio\_1}}{v_1}$

m_{sed_1} = mass of suspended sediment in littoral zone, kg

m_{DOC_1} = mass of DOC in littoral zone, kg

m_{bio_1} = mass of suspended biota in littoral zone, kg

m_{sed_2} = mass of sediment in benthic zone, kg

m_{DOC_2} = mass of DOC in benthic zone, kg

m_{bio_2} = mass of biota in benthic zone, kg

s_{sed_1} = sorbed pesticide concentration on suspended sediment in littoral zone, kg/kg

s_{DOC_1} = sorbed pesticide concentration on suspended DOC in littoral zone, kg/kg

s_{bio_1} = sorbed pesticide concentration on suspended biota in littoral zone, kg/kg

s_{sed_2} = sorbed pesticide concentration on benthic sediment, kg/kg

s_{DOC_2} = sorbed pesticide concentration on benthic DOC, kg/kg

s_{bio_2} = sorbed pesticide concentration on benthic biota, kg/kg

v_1 = volume of water in littoral zone on the specific day, kg/m^3

v_2 = volume of water in benthic zone, kg/m^3

Q = volumetric flow rate of water out of littoral zone, m^3/s

α = 1st order littoral-to-benthic mass transfer coefficient, m^3/s^{-1}

μ_{photo} = 1st order photolyisis rate coefficient, s^{-1}

μ_{vol} = effective 1st order volatilization rate coefficient, s^{-1}

μ_{bio_a1} = 1st order aqueous-phase metabolic degradation rate coefficient in littoral zone, s^{-1}

μ_{bio_sed1} = 1st order sediment-sorbed metabolic degradation rate coefficient in littoral zone, s^{-1}

μ_{bio_biota1} = 1st order biota-sorbed metabolic degradation rate coefficient in littoral zone, s^{-1}

μ_{bio_DOC1} = 1st order DOC-sorbed metabolic degradation rate coefficient in littoral zone, s^{-1}

μ_{bio_a2} = 1st order aqueous-phase metabolic degradation rate coefficient in benthic zone, s^{-1}

μ_{bio_sed2} = 1st order sediment-sorbed metabolic degradation rate coefficient in benthic zone, s^{-1}

μ_{bio_biota2} = 1st order biota-sorbed metabolic degradation rate coefficient in benthic zone, s^{-1}

μ_{bio_DOC2} = 1st order DOC-sorbed metabolic degradation rate coefficient in benthic zone, s^{-1}

μ_{hydr_1} = 1st order hydrolysis rate coefficient in littoral zone, s^{-1}

μ_{hydr_2} = 1st order hydrolysis rate coefficient in benthic zone, s^{-1}