

C_{wp} is Concentration in Pore Water
 C_{wd} is Dissolved Concentration in Water
 C_{wt} is Total Concentration in Water
 C_s is Concentration in Sediment
 The prefix “est” means that concentration is estimated

Parameters Entered	Sediment Eaters?	Parameters Used
$C_{wp}, C_{wd}, C_{wt}, C_s$	Yes	C_{wp}, C_{wd}, C_s
$C_{wp}, C_{wd}, C_{wt}, C_s$	No	C_{wp}, C_{wd}
C_{wp}, C_{wd}, C_{wt}	Yes	$C_{wp}, C_{wd}, \text{est } C_s$
C_{wp}, C_{wt}	Yes	$C_{wp}, \text{est } C_{wd}, \text{est } C_s$
C_s, C_{wt}	No	$\text{est } C_{wp}, \text{est } C_{wd}$
C_s, C_{wp}	No	doesn't work
C_s, C_{wd}	Yes	$C_s, C_{wd}, \text{est } C_{wp}$ **
C_{wt}, C_{wd}	No	doesn't work

** in cases like this one C_{wp} is used for uptake from water
 and C_s is exclusively for uptake from the diet.

General “Hierarchical” rules for concentrations used:

- entered C_{wp} , and entered C_{wd} will always be used over entered C_{wt} and entered C_s in the uptake from water term, unless there is no C_{wp} and/or C_{wd} , then equations 4 or 11 in Arnot will be used to find either of them (see row 2).
- If C_s is entered it will be used no matter what for uptake from eating sediment. If it is not entered equation 11 will be used for uptake from eating sediment (see row 3, and row 7).