DATA FLAGS

0 = no flag

1 = value removed due to maintenance and set to NA

3 = negative values set to 0  
4 = value removed due to fouling and set to NA  
5 = questionable value due to potential fouling

* Given log of maintenance days, replace **all data columns** with NAs (log found at <https://github.com/CareyLabVT/SCCData/blob/mia-data/CAT_MaintenanceLog.txt>)
  + Flag\_All set to 1
* On maintenance days, replace DO data (columns **RDO\_mgL\_1, RDOsat\_percent\_1, RDO\_mgL\_5, RDOsat\_percent\_5, RDO\_mgL\_9, RDOsat\_percent\_9**) with NAs for a longer period of time because they take longer to equilibrate to ambient conditions
  + - The period of time will be different from each depth (i.e., 9m takes longer than 1m)
    - Down for 24 hours? OR data replaced with NAs until data returns to the same value as before sensor was pulled up?
* Any negative DO values set to 0
  + Any negative values for DO at 1m, 5m, and 9m should be set to zero
    - Applies to columns **EXODO\_sat\_percent\_1, EXODO\_mgL\_1**, **RDO\_sat\_percent\_5, RDO\_mgL\_5, RDO\_sat\_percent\_9, RDO\_mgL\_9**
  + Flag\_DO\_1, Flag\_DO\_5, and/or Flag\_DO\_9 is set to 3

One time data fixes for historical fouling of EXO sensor

* Between October 2018 and March 2019, replace **EXOChla\_RFU\_1, EXOChla\_ugL\_1, EXOBGAPC\_RFU\_1, EXOBGAPC \_ugL\_1** data that is above 4\*standard deviation with NAs due to fouling of EXO sonde sensor (columns **EXOChla\_RFU\_1, EXOChla\_ugL\_1, EXOBGAPC\_RFU\_1, EXOBGAPC \_ugL\_1)**
  + - Flag\_Chla and/or Flag\_Phyco set to 4
* Flag **EXOBGAPC\_RFU\_1 & EXOBGAPC \_ugL\_1** data that is above 4\*standard deviation because it may be due to fouling (but do not remove data)
  + Flag\_Phyco set to 5