

COMPASS Synoptic CB Porewater: DOC

July 2024 Samples

2025-10-31

```
##Setup - Change things here & write any notes
```

```
#identify section  
cat("Setup Information")
```

```
## Setup Information
```

```
##### Run information - PLEASE CHANGE  
Date_Run = "07/31/24" #Date that instrument was run  
Run_by = "Stephanie J. Wilson" #Instrument user  
Script_run_by = "Stephanie J. Wilson" #Code user  
run_notes = "Couple of samples are above the top standard." #any notes from the run  
samples <- c("GCW", "GWI", "MSM", "SWH") #whatever identifies your samples within the same names  
samples_pattern <- paste(samples, collapse = "|")  
#samples_pattern <- "GCW" #use this instead of the line above if you have only one site code  
chks_name = "Chk_Std_50C2N" #what did you name your check standards?
```

```
##### File Names - PLEASE CHANGE
```

```
#file path and name for raw summary data file  
#raw_file_name = "Raw Data/COMPASS_SynopticCB_PW_DOC_202505.txt" #example  
raw_file_name = "Raw Data/COMPASS_SynopticCB_PW_DOC_202407.txt"
```

```
#file path and name for raw all peaks file
```

```
#raw_allpeaks_name = "Raw Data/COMPASS_SynopticCB_PW_DOC_202505_allpeaks.txt" #example  
raw_allpeaks_name = "Raw Data/COMPASS_SynopticCB_PW_DOC_202407_allpeaks.txt"
```

```
#file path and name of processed data file
```

```
#processed_file_name = "Processed Data/COMPASS_SynopticCB_PW_Processed_DOC_202505.csv" #example  
processed_file_name = "Processed Data/COMPASS_SynopticCB_PW_Processed_DOC_202407.csv" #example
```

```
##### Log Files - PLEASE CHECK
```

```
#downloaded metadata csv - downloaded from Google drive as csv for this year  
Raw_Metadata = "Raw Data/COMPASS_SynopticCB_PW_SampleLog_2024.csv"
```

```
#qaqc log file path for this year
```

```
Log_path = "Raw Data/COMPASS_Synoptic_TOCTN_QAQClog_2024.csv"
```

```
##Set Up Code
```

```
##Read in metadata and create similar sample IDs for matching to samples
```

Import Data Functions

Import Sample Data

```
## Import Sample Data

## New names:
## * `` -> '...14'

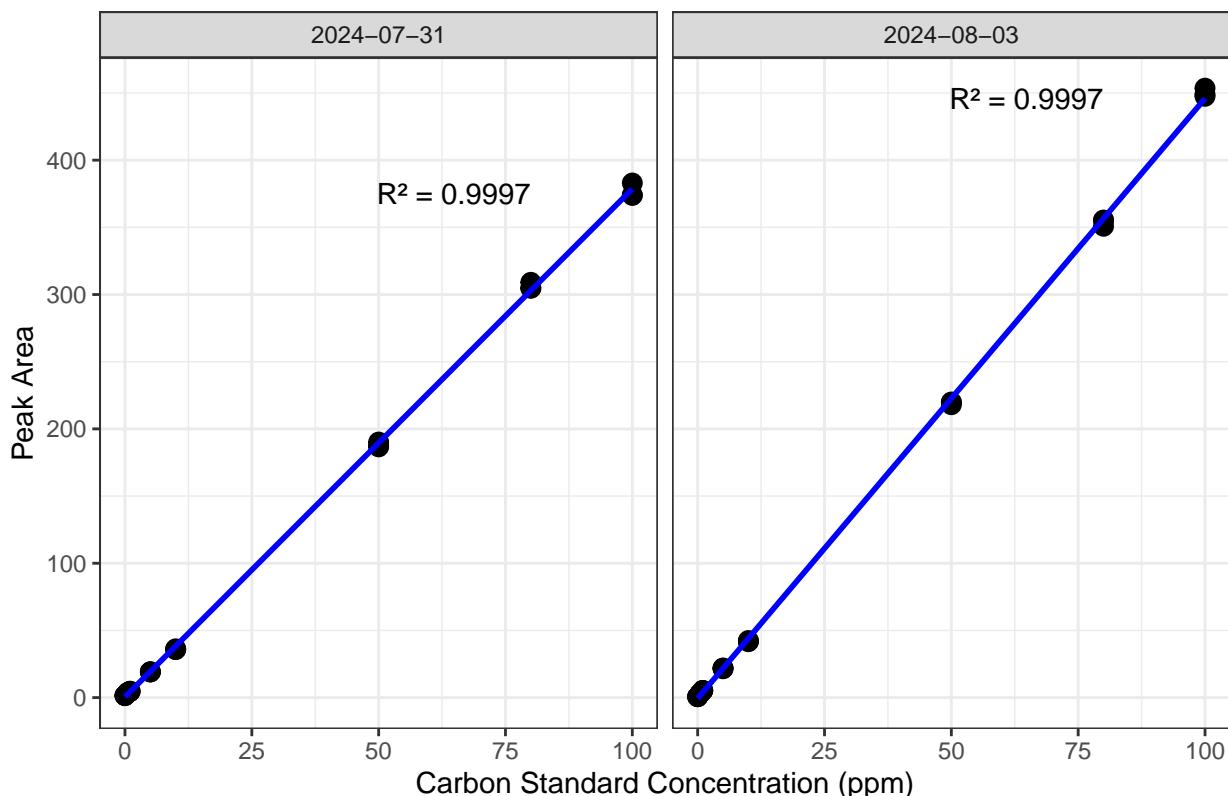
## # A tibble: 6 x 4
##   sample_name      npoc_raw    tdn_raw run_datetime
##   <chr>          <dbl>     <dbl>  <chr>
## 1 202407_GCW_TR_LysB_20cm  27.0     1.27  8/1/2024 12:48:45 AM
## 2 202407_GCW_WC_LysA_10cm  11.8     1.16  8/1/2024 1:09:37 AM
## 3 202407_GCW_WC_LysA_20cm  13.6     2.35  8/1/2024 1:36:15 AM
## 4 202407_GCW_WC_LysA_45cm  24.7     5.93  8/1/2024 2:01:27 AM
## 5 202407_GCW_WC_LysB_10cm  11.6     1.65  8/1/2024 2:22:20 AM
## 6 202407_GCW_WC_LysB_20cm  12.9     3.28  8/1/2024 2:51:22 AM
```

Assessing Standard Curves

```
## Assess the Standard Curves

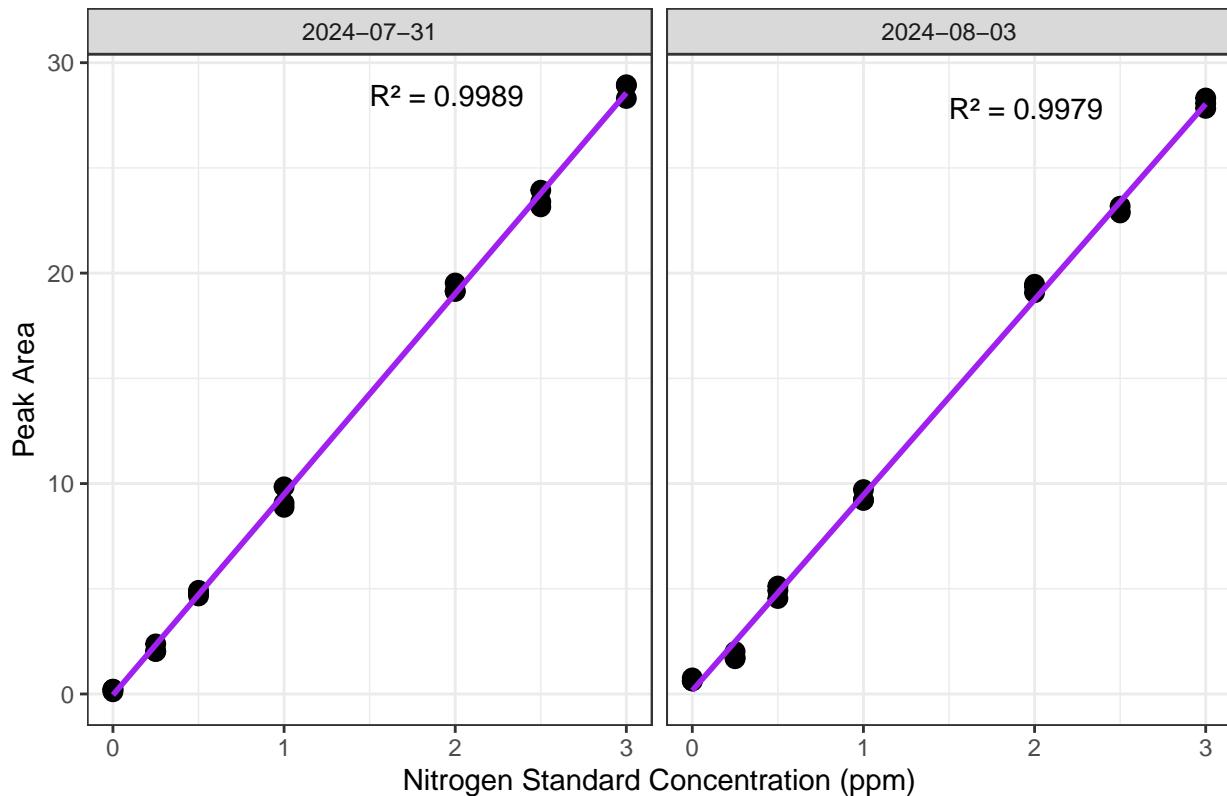
## New names:
## `geom_smooth()` using formula = 'y ~ x'
## * `` -> '...18'
```

NPOC Std Curve by Date

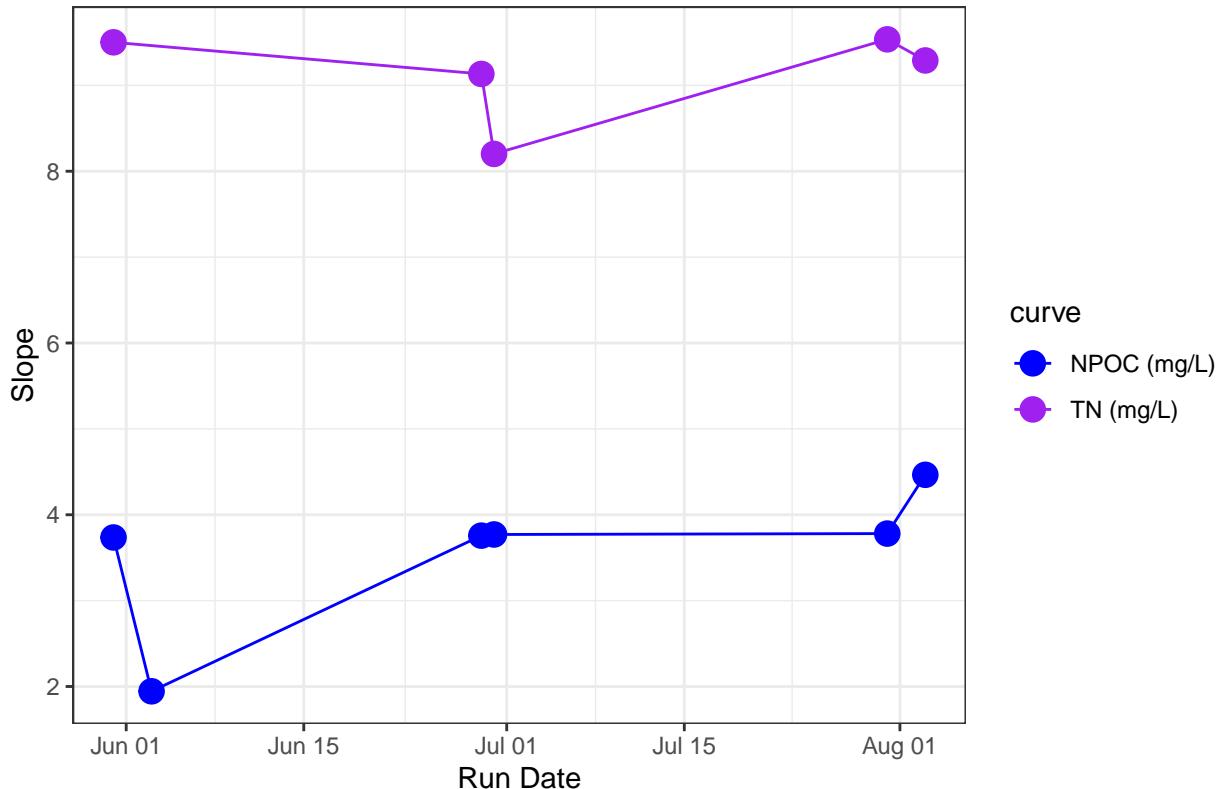


```
## `geom_smooth()` using formula = 'y ~ x'
```

TN Std Curve by Date



Slope Drift Assessment



```
## [1] "NPOC Curve r2 GOOD"
```

```
## [1] "TN Curve r2 GOOD"
```

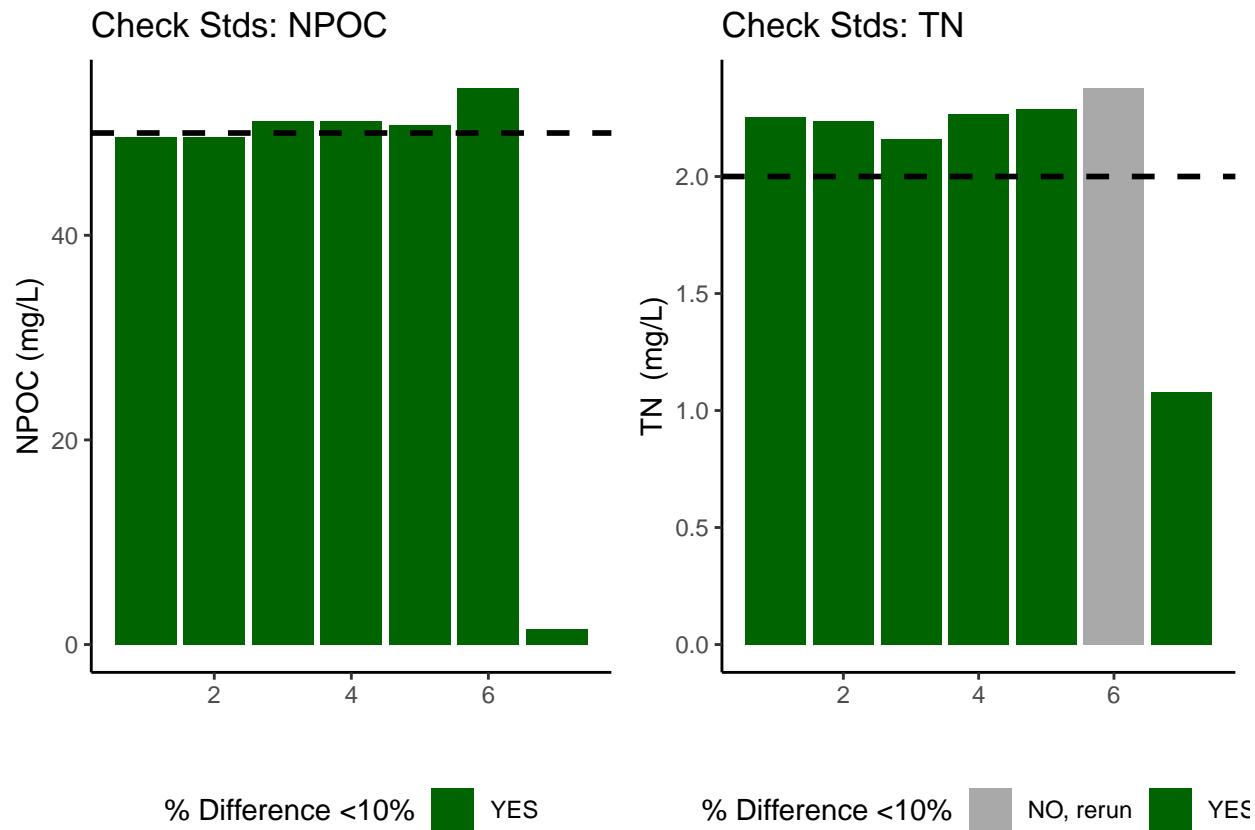
Assess Check Standards

```
## Assess the Check Standards
```

```
## New names:  
## * ' ' -> '...14'
```

```
## [1] "Carbon CHECK STANDARD RSD TOO HIGH - REASSESS"
```

```
## [1] "Nitrogen CHECK STANDARD RSD TOO HIGH - REASSESS"
```



```
## [1] ">60% of Carbon Check Standards are within range of expected concentration"
```

```
## [1] ">60% of Nitrogen Check Standards are within range of expected concentration"
```

Assess Blanks

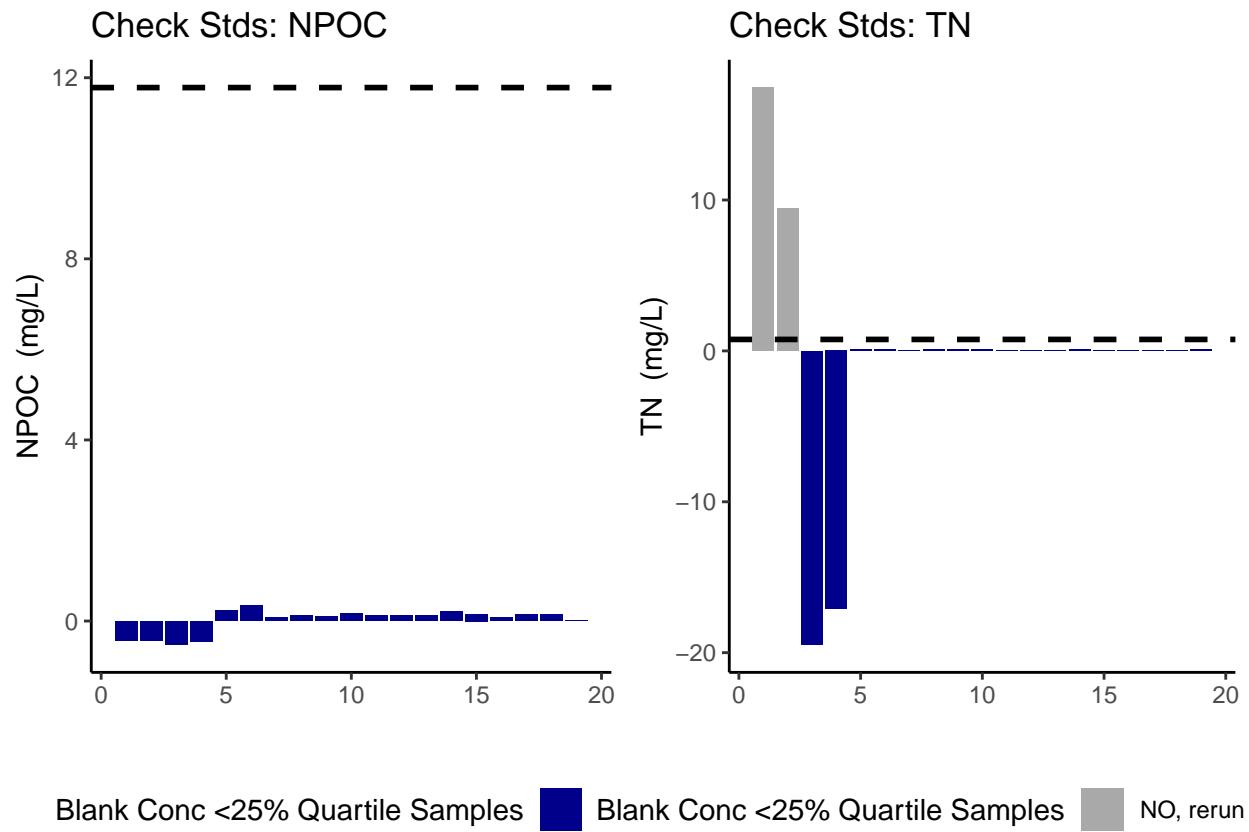
```
## Assess Blanks
```

```
## New names:
```

```
## * ` ` -> '...14'
```

```
## [1] ">60% of Carbon Blank concentrations are lower 25% quartile of samples"
```

```
## [1] ">60% of Nitrogen Blank concentrations are lower 25% quartile of samples"
```



```
## carbon blanks:
```

```
## [1] 0.01786158
```

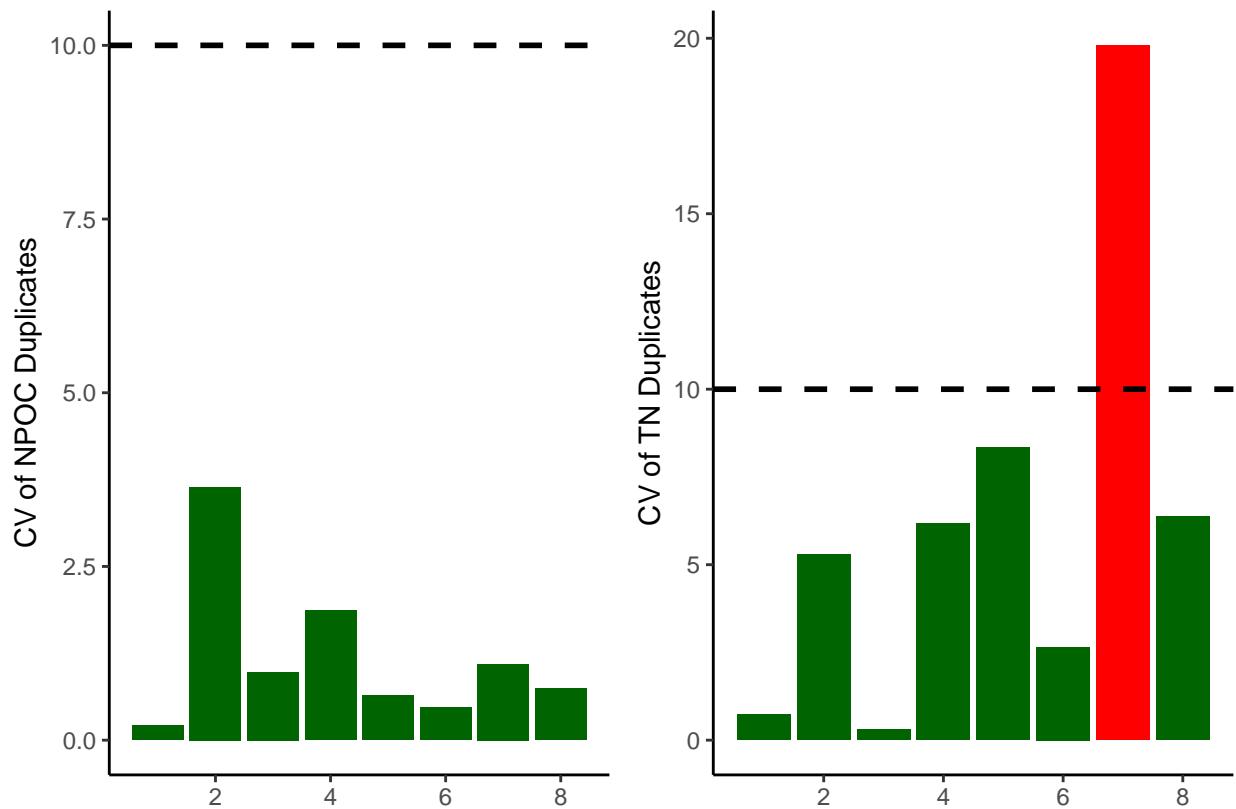
```
## nitrogen blanks:
```

```
## [1] -0.4630684
```

Assess Duplicates

```
## Assess Duplicates
```

```
## Warning: Using `size` aesthetic for lines was deprecated in ggplot2 3.4.0.
## i Please use `linewidth` instead.
## This warning is displayed once every 8 hours.
## Call `lifecycle::last_lifecycle_warnings()` to see where this warning was
## generated.
```



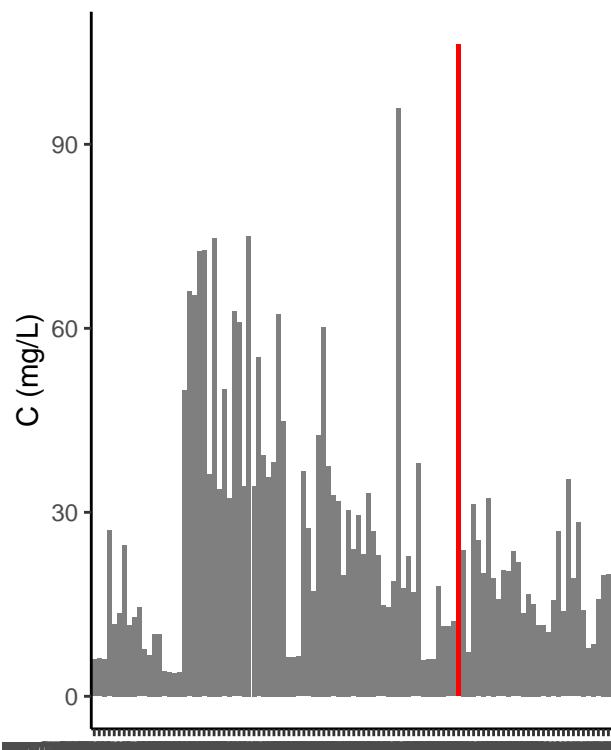
```
## [1] ">60% of Carbon Duplicates have a CV <10%"
```

```
## [1] ">60% of Nitrogen Duplicates have a CV <10%"
```

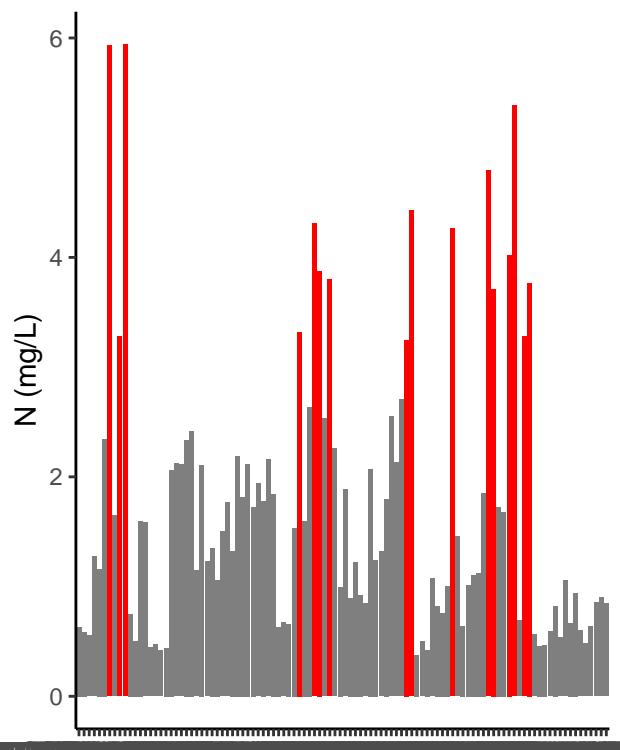
Sample Flagging - Are samples Within the range of the curve?

```
## Sample Flagging
```

C: Grey = Within Range of Curve



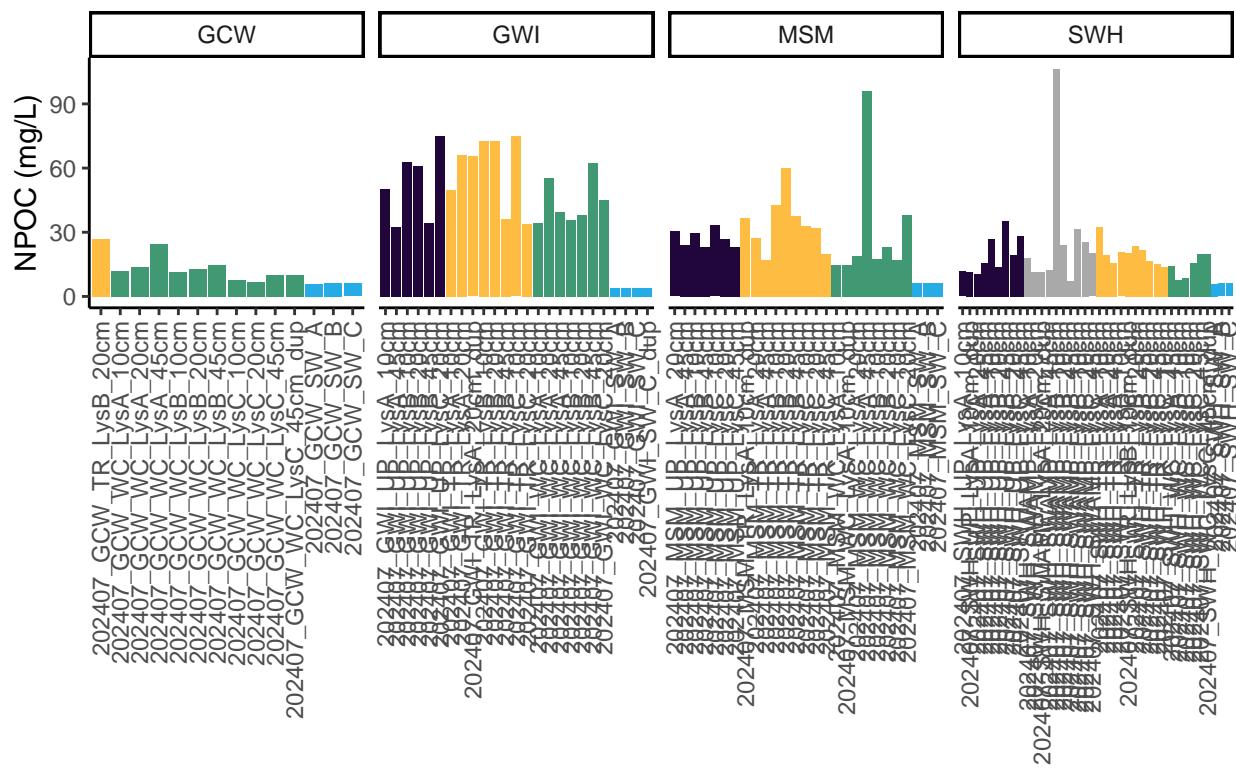
N: Grey = Within Range of Curve

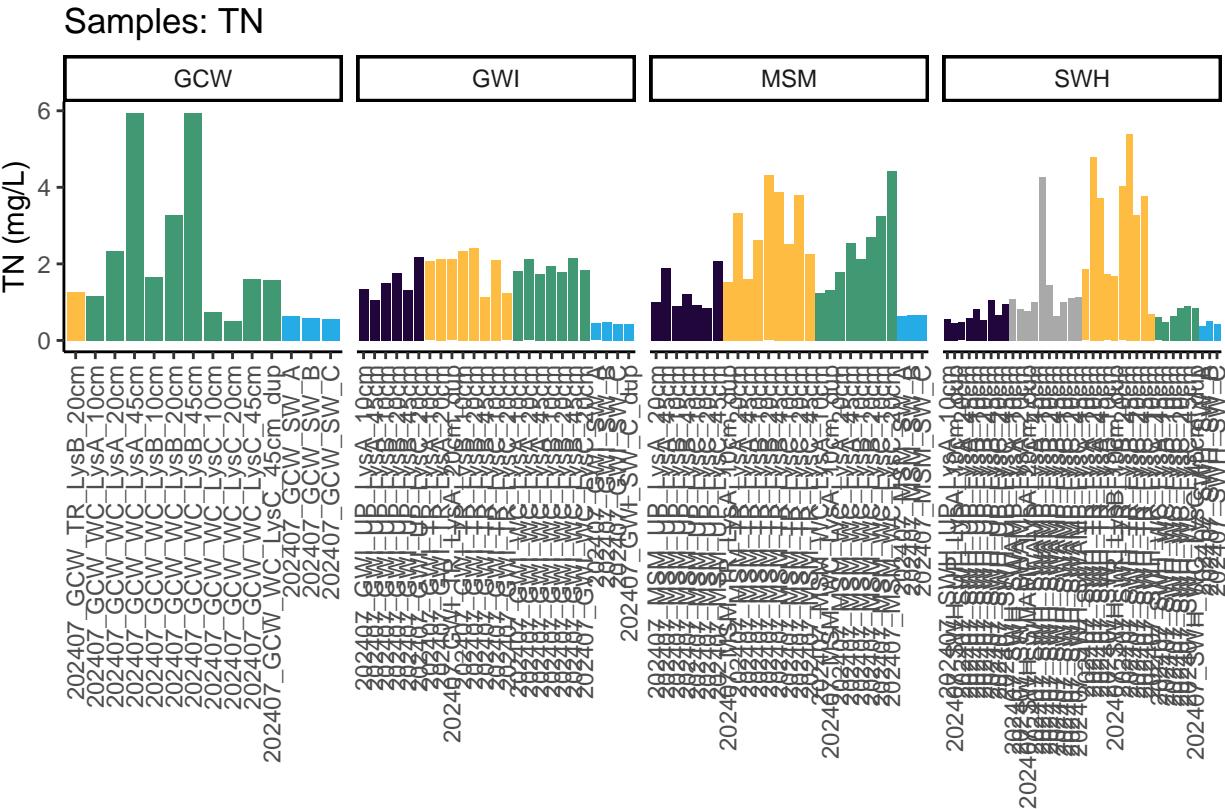


Visualize Data by Plot

```
## Visualize Data  
  
## Warning in rbind(c("202407", "GCW", "TR", "LysB", "20cm"), c("202407", "GCW", :  
## number of columns of result is not a multiple of vector length (arg 1)
```

Samples: NPOC





Convert data from mg/L to uMoles/L

Check to see if samples run match metadata & merge info

```
## Check Sample IDs with Metadata
## All sample IDs are present in metadata.
```

Export Processed Data

```
## Export Processed Data
## # A tibble: 6 x 21
##   Project     Region Site Zone Replicate Depth_cm Sample_ID Year Month Day
##   <chr>      <chr>  <chr> <fct> <chr>       <int> <chr>    <int> <int> <int>
## 1 COMPASS: Sy~ CB     MSM  UP    A           20 202407_M~ 2024    7    18
## 2 COMPASS: Sy~ CB     MSM  UP    A           45 202407_M~ 2024    7    18
## 3 COMPASS: Sy~ CB     MSM  UP    B           10 202407_M~ 2024    7    18
## 4 COMPASS: Sy~ CB     MSM  UP    B           45 202407_M~ 2024    7    18
## 5 COMPASS: Sy~ CB     MSM  UP    C           10 202407_M~ 2024    7    18
## 6 COMPASS: Sy~ CB     MSM  UP    C           20 202407_M~ 2024    7    18
## # i 11 more variables: Time <chr>, Time_Zone <chr>, npoc_mgL <dbl>,
## #   npoc_uM <dbl>, npoc_flag <chr>, tdn_mgL <dbl>, tdn_uM <dbl>,
## #   tdn_flag <chr>, Analysis_runtime <chr>, Run_notes <chr>, Field_notes <chr>
```

#end