

# COMPASS: TEMPEST Discrete DOC Data QAQC

Freshwater Well Test: 2025-09-04

2025-09-18

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## 0.1 Run Information

```
#identify which section you are in  
cat("Run Information")
```

```
## Run Information
```

```
#a link to the Gitbook or whatever protocol you are using for this analysis  
#steph will add this soon
```

```
#anything that needs to be changed do this in the first chunk
```

```
Date_Run = "09/16/25"  
Run_by = "Stephanie J. Wilson"  
Script_run_by = "Stephanie J. Wilson"  
run_notes = "No duplicates run, because field replicates collected. "
```

```
#file path and name for summary file  
raw_file_name = "Raw Data/TMP_20250904_FW_WellTest.txt"  
#file path and name for the all peaks file
```

```
raw_allpeaks_name = "Raw Data/TMP_20250904_FW_WellTest_allpeaks.txt"
#file path and name for processed data after QAQC
processed_file_name = "Processed Data/TMP_20250904_FW_WellTest_DOC_Processed.csv"

#check standard concentrations - Update if running different checks:
chk_std_c = 1
chk_std_n = 1

#Log path
Log_path = "Raw Data/COMPASS_TMP_TOCTN_QAQClog_2025.csv"
```

## 0.2 Setup

### 0.3 Import Data Functions

#### 0.4 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 TMP_FW_Well_20250904_1225_A    2.98    0.611 9/16/2025 10:03:05 PM
## 2 TMP_FW_Well_20250904_1225_B    2.58    0.413 9/16/2025 10:25:04 PM
## 3 TMP_FW_Well_20250904_1225_C    2.68    0.471 9/16/2025 10:51:00 PM
## 4 TMP_FW_Well_20250904_1300_A    2.19    0.739 9/16/2025 11:13:51 PM
## 5 TMP_FW_Well_20250904_1300_B    2.22    0.744 9/16/2025 11:42:20 PM
## 6 TMP_FW_Well_20250904_1300_C    1.62    0.397 9/17/2025 12:08:12 AM
```

## 0.5 Assessing standard Curves

```
## Assess the Standard Curve
```

```
## New names:
```

```
## * ' ' -> '...18'
```

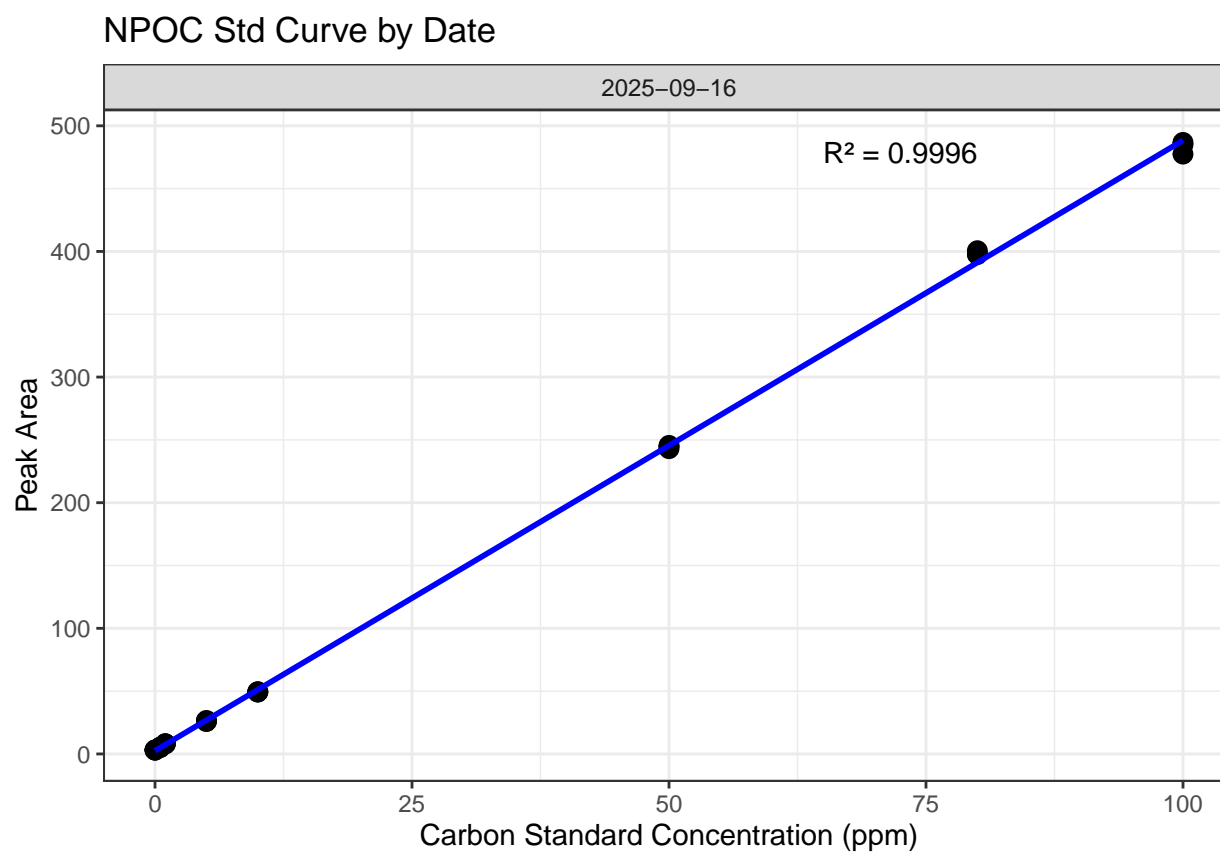
```
## Warning: One or more parsing issues, call 'problems()' on your data frame for details,
```

```
## e.g.:
```

```
##   dat <- vroom(...)
```

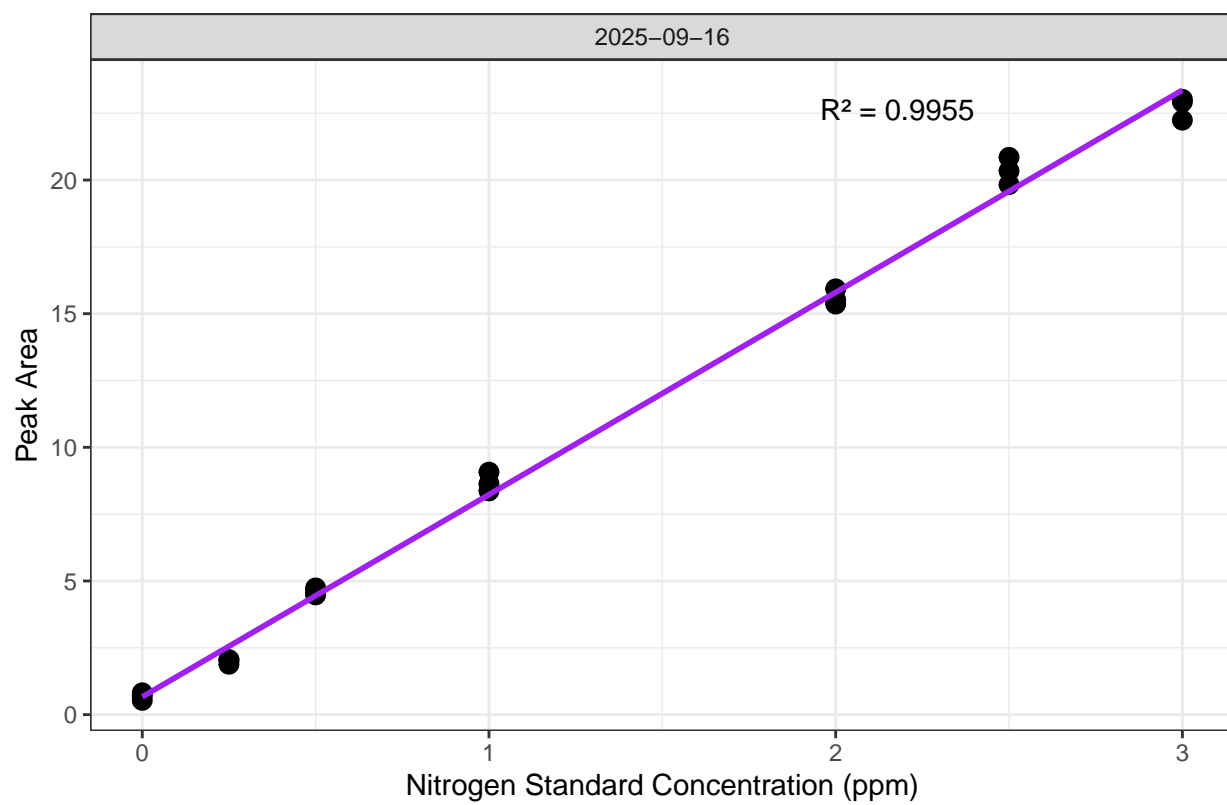
```
##   problems(dat)
```

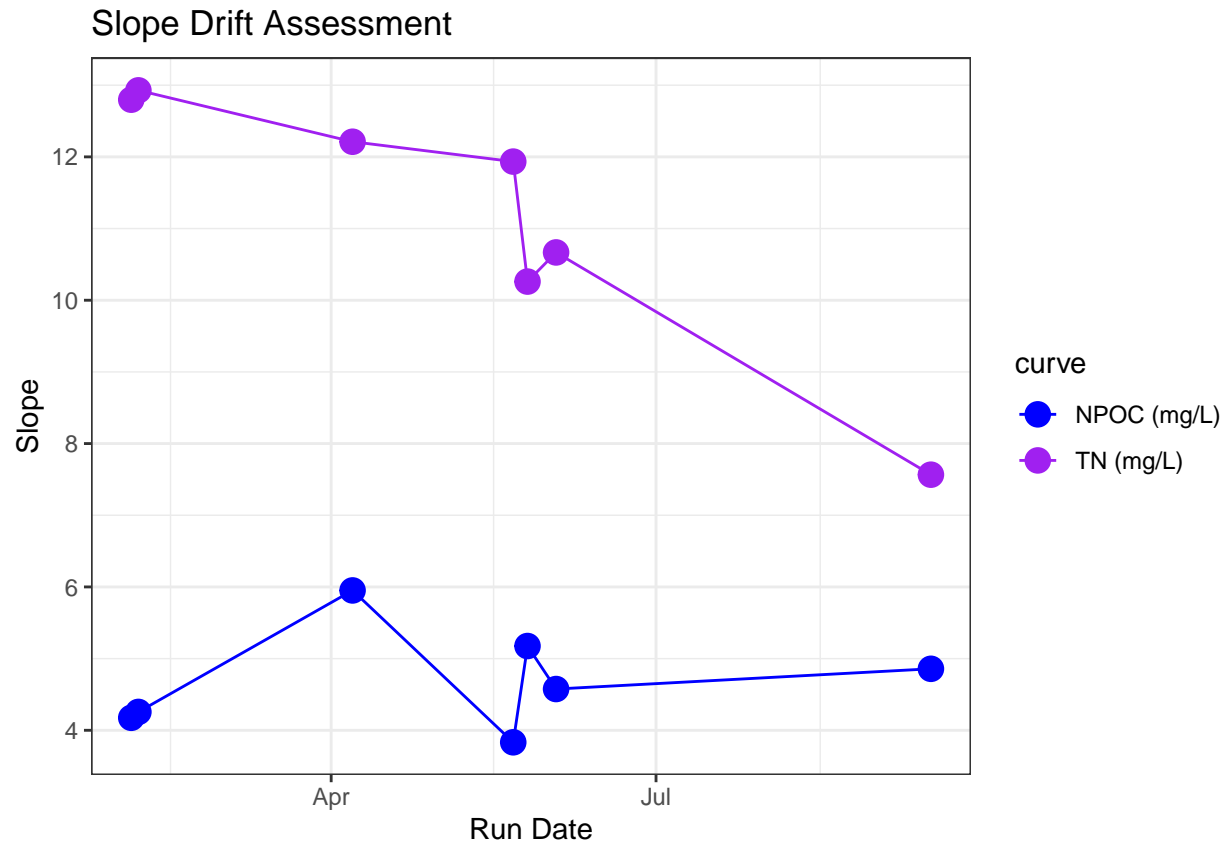
```
## 'geom_smooth()' using formula = 'y ~ x'
```



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

TN Std Curve by Date





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

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

## 0.6 Assess Check Standards

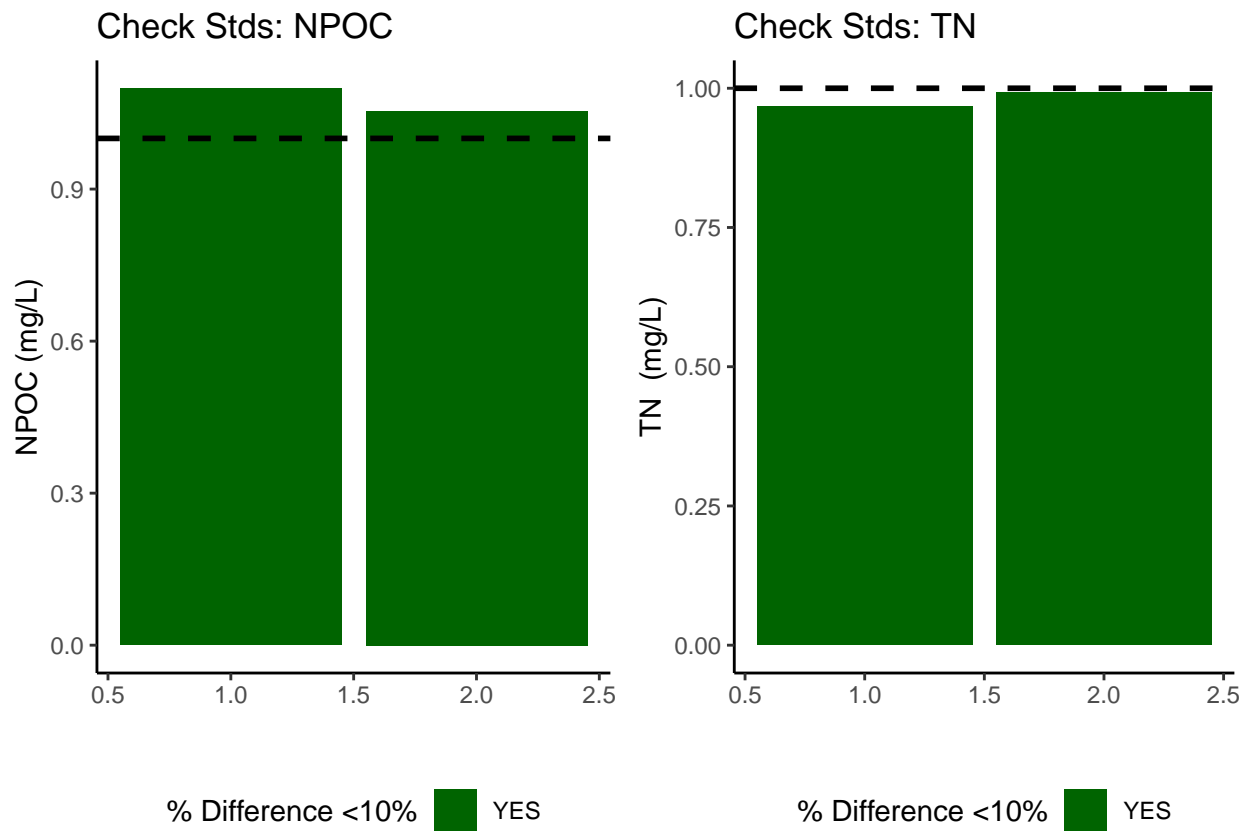
```
## Assess the Check Standards
```

```
## New names:
```

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

```
## [1] "Carbon Check Standard RSD within Range"
```

```
## [1] "Nitrogen Check Standard RSD within Range"
```



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

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

## 0.7 Assess Blanks

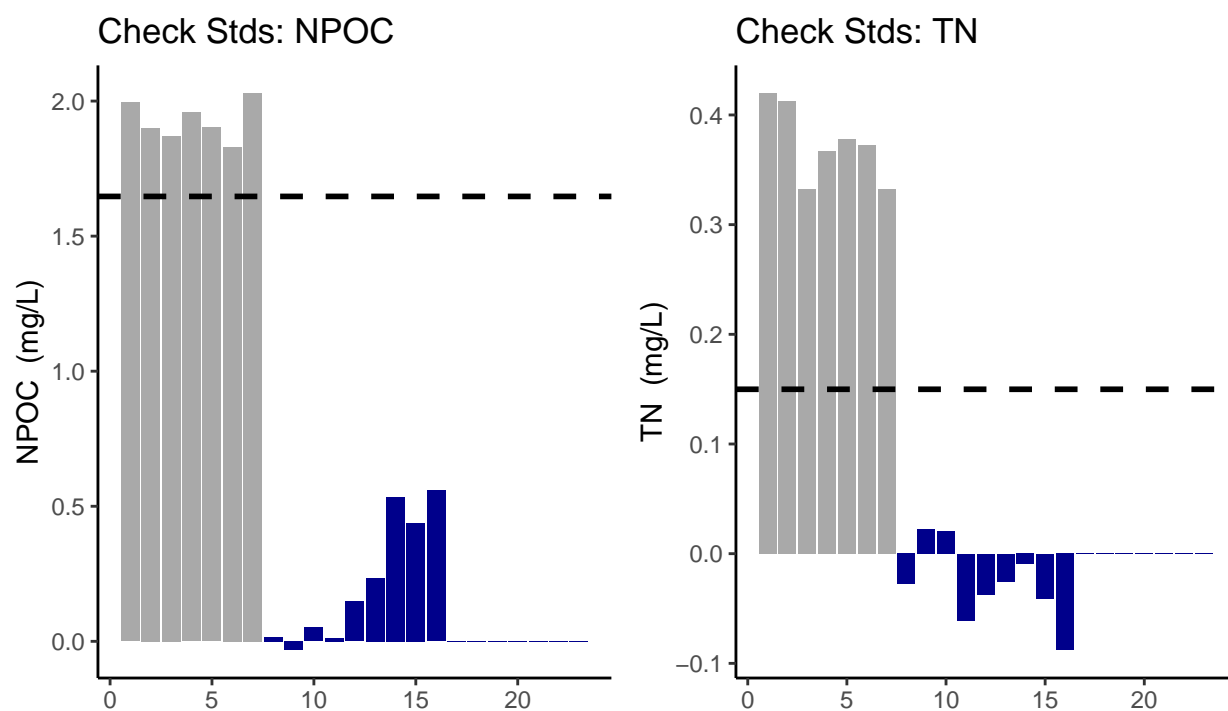
```
## Assess Blanks
```

```
## New names:
```

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

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

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



Blank Conc <25% Quartile Samples  NO, rel Blank Conc <25% Quartile Samples  NO, rerun

```
## carbon blanks:
```

```
## [1] 0.6713891
```

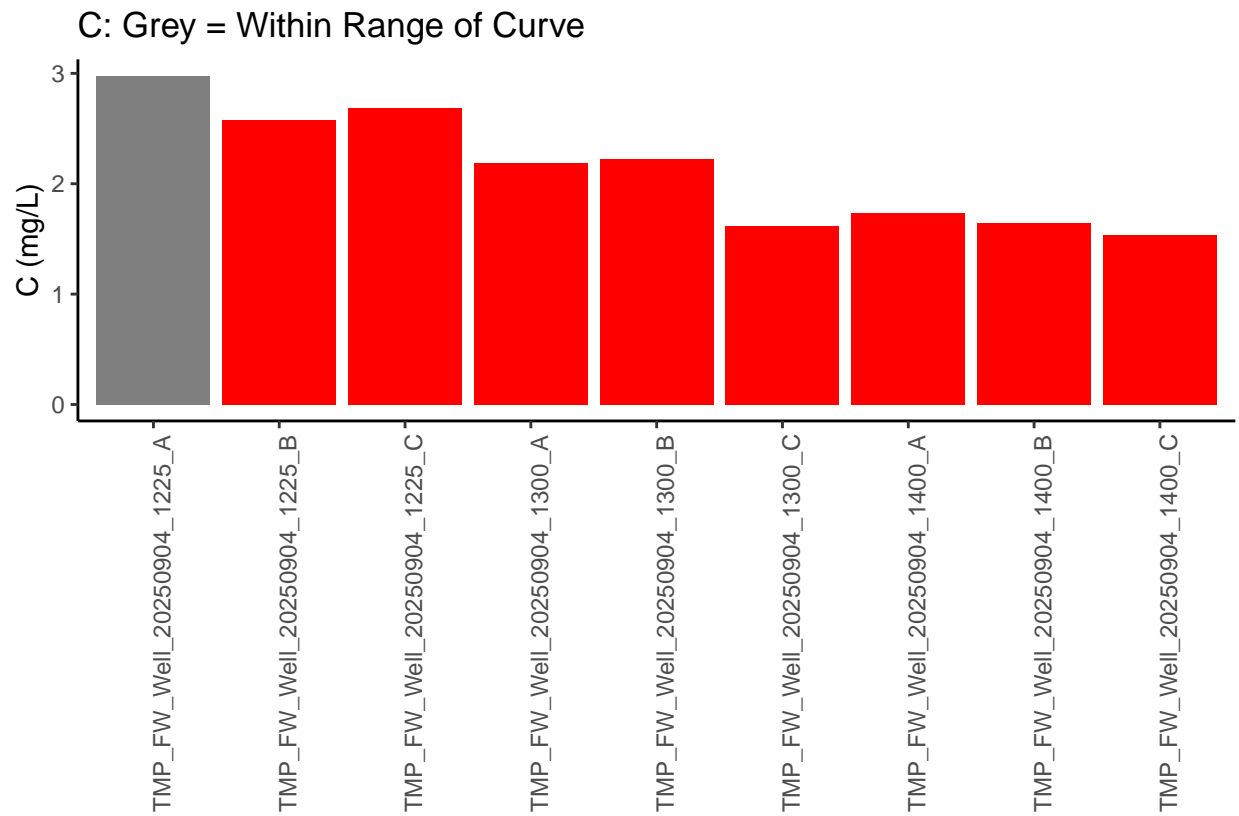
```
## nitrogen blanks:
```

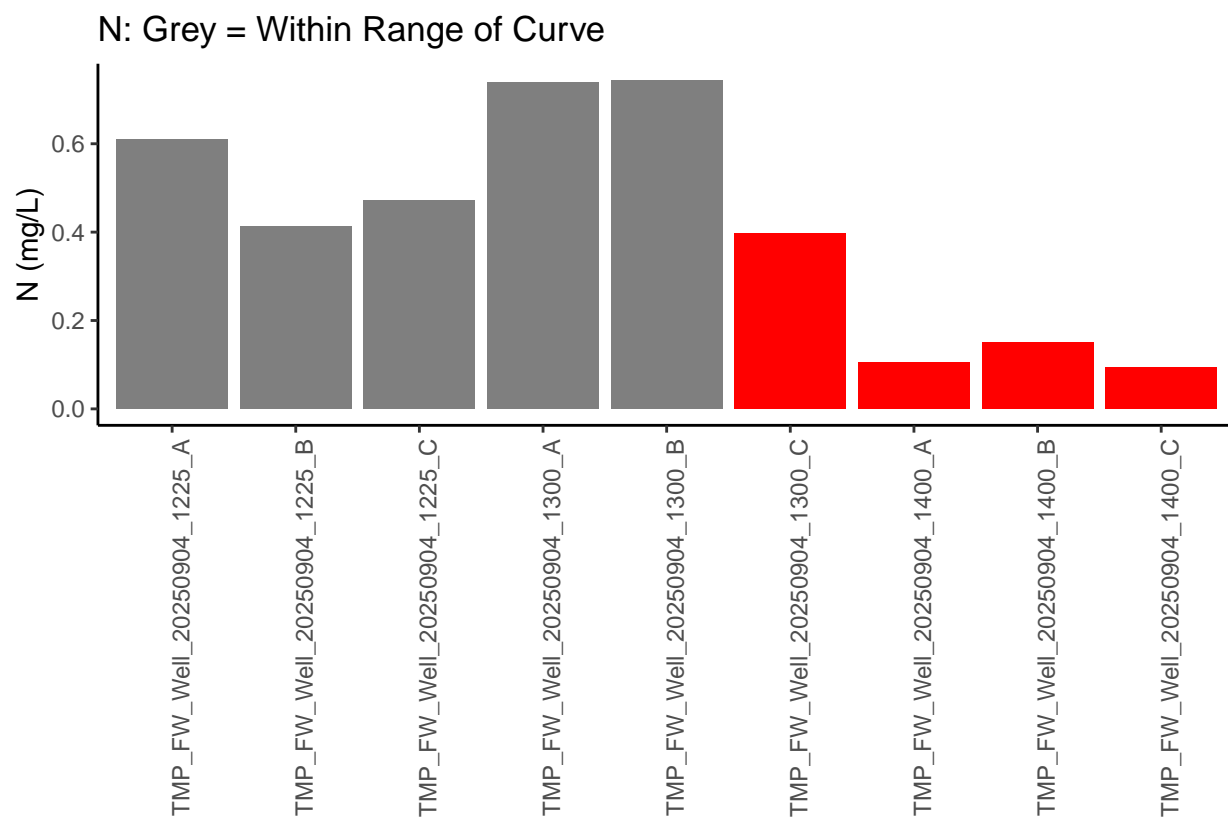
```
## [1] 0.1029187
```



## 0.8 Sample Flagging

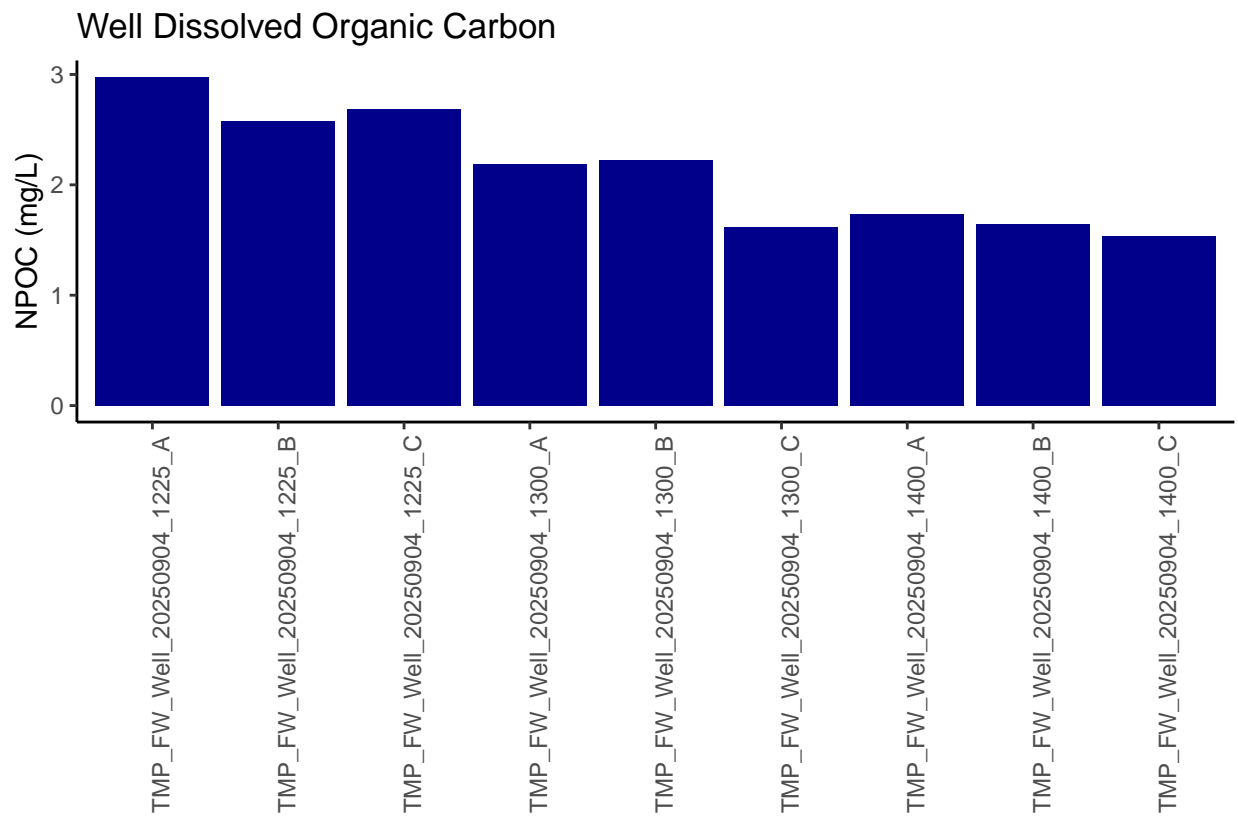
## Sample Flagging

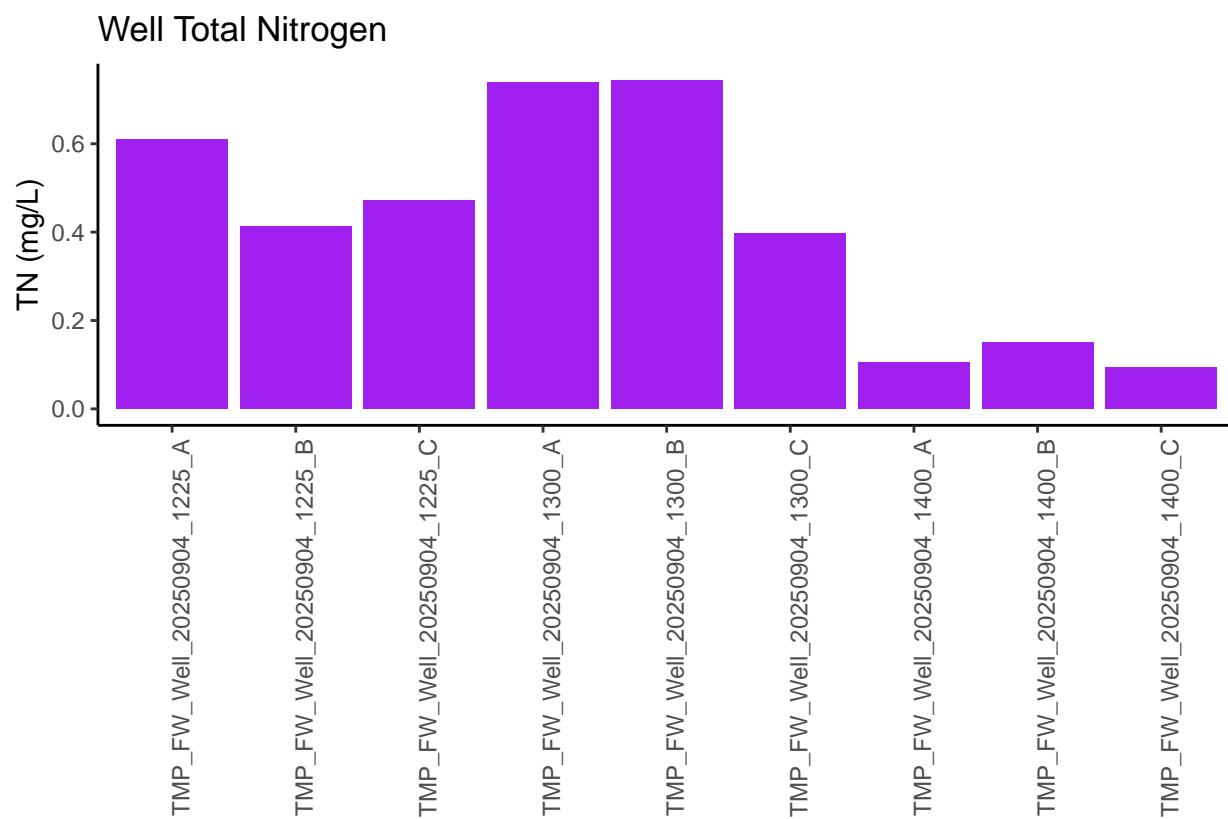




## 0.9 Visualize Data by Plot

## Visualize Data





## 0.10 Convert data from mg/L to uMoles/L

## 0.11 Export Processed Data

```
## Export Processed Data
```

```
## # A tibble: 6 x 14
##   Project Experiment      Sample_Date Sample_Time Replicate sample_name npoc_mgL
##   <chr>    <chr>          <chr>         <chr>         <chr>    <chr>      <dbl>
## 1 COMPASS TEMPEST: Well ~ 2025-09-04 12:25         A      TMP_FW_Wel~ 2.98
## 2 COMPASS TEMPEST: Well ~ 2025-09-04 12:25         B      TMP_FW_Wel~ 2.58
## 3 COMPASS TEMPEST: Well ~ 2025-09-04 12:25         C      TMP_FW_Wel~ 2.68
## 4 COMPASS TEMPEST: Well ~ 2025-09-04 13:00         A      TMP_FW_Wel~ 2.19
## 5 COMPASS TEMPEST: Well ~ 2025-09-04 13:00         B      TMP_FW_Wel~ 2.22
## 6 COMPASS TEMPEST: Well ~ 2025-09-04 13:00         C      TMP_FW_Wel~ 1.62
## # i 7 more variables: npoc_uM <dbl>, npoc_flag <chr>, tdn_mgL <dbl>,
## #   tdn_uM <dbl>, tdn_flag <chr>, Analysis_runtime <chr>, Run_notes <chr>
```

```
#end
```