

Synoptic CB: Porewater SO₄/Cl

2022-2024 Samples

2025-10-31

Contents

| | | |
|-----|--|---|
| 0.1 | Grab 2022 and 2023 All Data Files | 1 |
| 0.2 | Write out files | 2 |
| 0.3 | Visualize Data by Plot | 2 |
| 0.4 | Summarized data for Site and Zone | 3 |
| 0.5 | Summarized data for Depth, Site and Zone | 3 |
| 0.6 | Boxplot summary | 5 |

0.1 Grab 2022 and 2023 All Data Files

```
#read in 2022 Dionex Data:
dat22 <- read.csv("2022/COMPASS_SynopticCB_SO4_Cl_2022.csv")
# head(dat22)

#read in 2023 Dionex Data:
dat23 <- read.csv("2023/COMPASS_SynopticCB_SO4_Cl_2023.csv")
# head(dat23)

#read in 2024 Dionex Data:
dat24 <- read.csv("2024/COMPASS_SynopticCB_SO4_Cl_2024.csv")
# head(dat24)

all_dat <- rbind(dat22, dat23, dat24)

all_dat <- all_dat %>%
  select(
    Project, Region, Sample_ID, Year, Month, Day, Time, Time_Zone,
    Site, Zone, Replicate, Depth_cm,
    SO4_Conc_mM, SO4_Conc_flag, SO4_QAQC_flag, Cl_Conc_mM, Cl_Conc_flag, Cl_QAQC_flag, salinity,
    Analysis_rundate, Run_notes, Field_notes
    # list columns in the order you want them
  )

##Set 4 decimal points max
all_dat <- all_dat %>%
  mutate(across(where(is.numeric), round, digits = 4))
```

```
## Warning: There was 1 warning in 'mutate()'.
## i In argument: 'across(where(is.numeric), round, digits = 4)'.
## Caused by warning:
## ! The '...' argument of 'across()' is deprecated as of dplyr 1.1.0.
## Supply arguments directly to '.fns' through an anonymous function instead.
##
## # Previously
## across(a:b, mean, na.rm = TRUE)
##
## # Now
## across(a:b, \(x) mean(x, na.rm = TRUE))

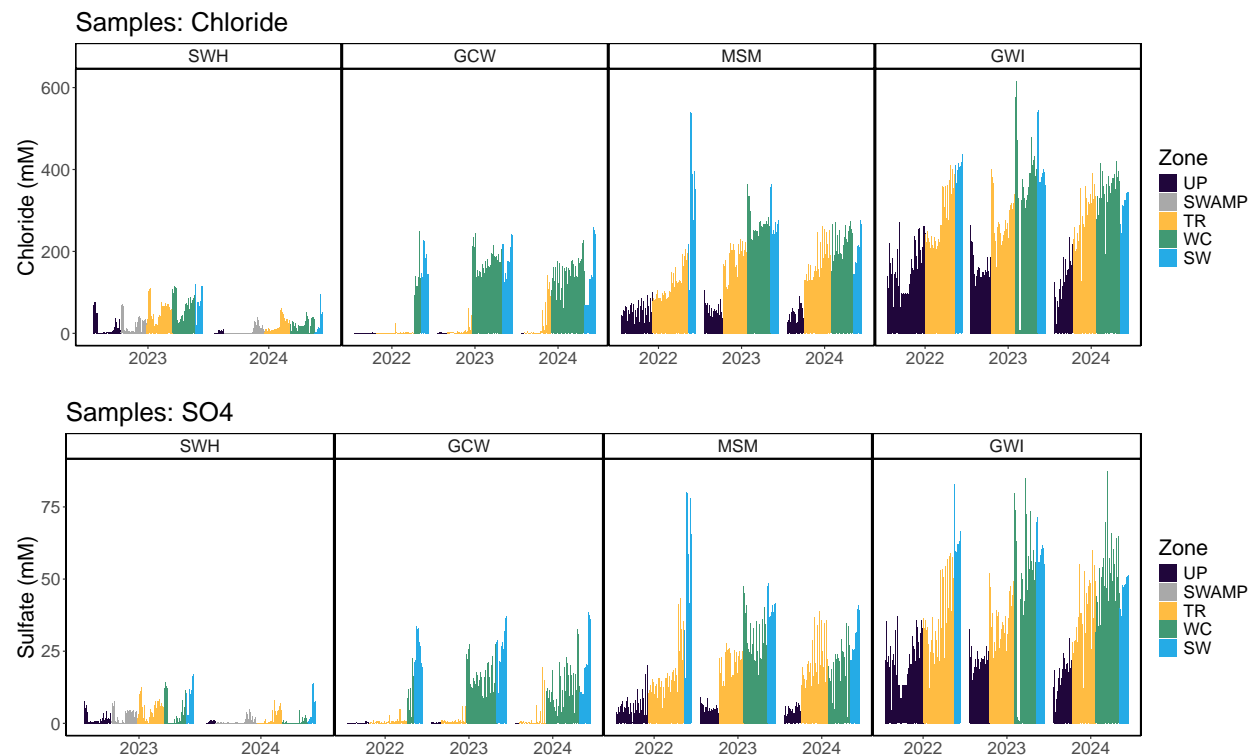
##Make Relevant Metadata Sheet
```

0.2 Write out files

```
#write out a csv of all the data to the main folder:
write.csv(all_dat, "COMPASS_SynopticCB_Dionex_AllData.csv")

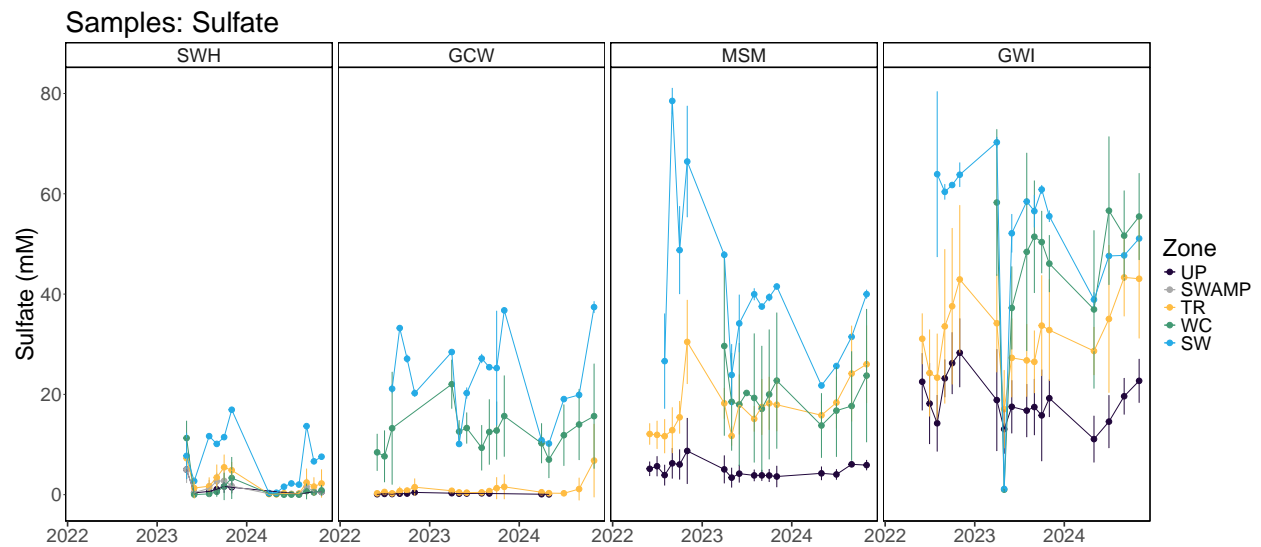
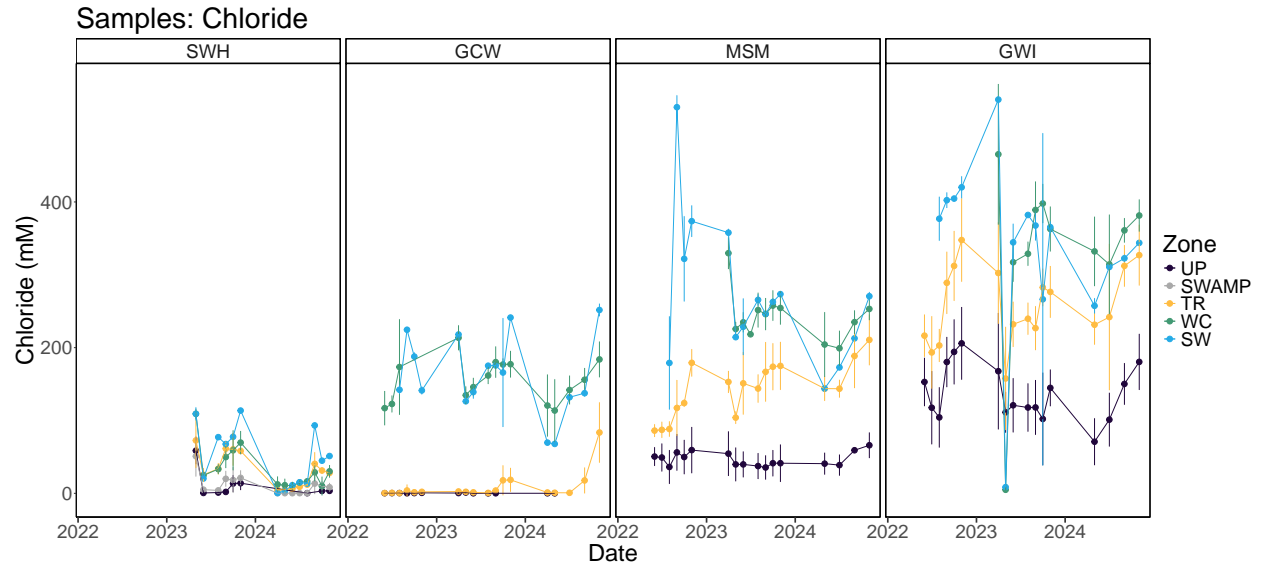
#write out a csv of the metadata associated with the data:
write.csv(metadata, "COMPASS_SynopticCB_Dionex_Metadata.csv")
```

0.3 Visualize Data by Plot



0.4 Summarized data for Site and Zone

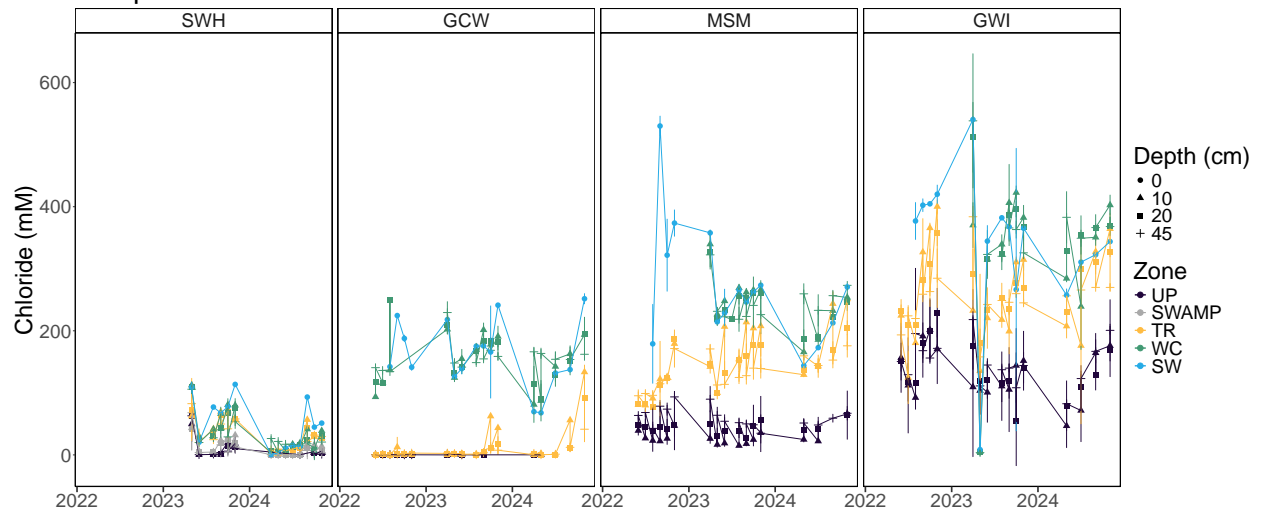
'summarise()' has grouped output by 'Month', 'Year', 'Site'. You can override
using the '.groups' argument.



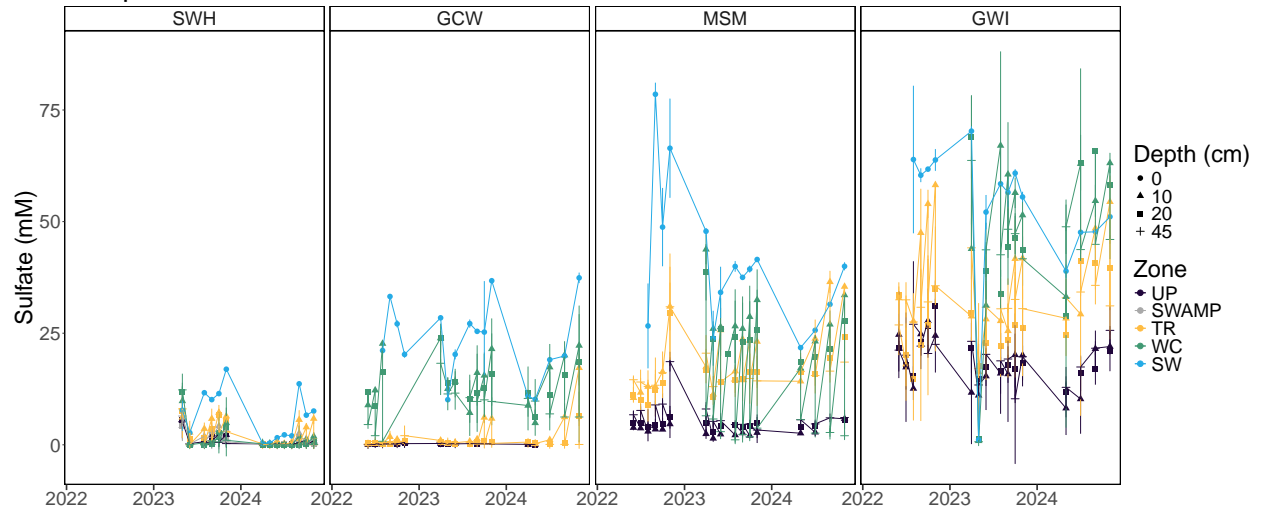
0.5 Summarized data for Depth, Site and Zone

'summarise()' has grouped output by 'Month', 'Year', 'Site', 'Zone'. You can
override using the '.groups' argument.

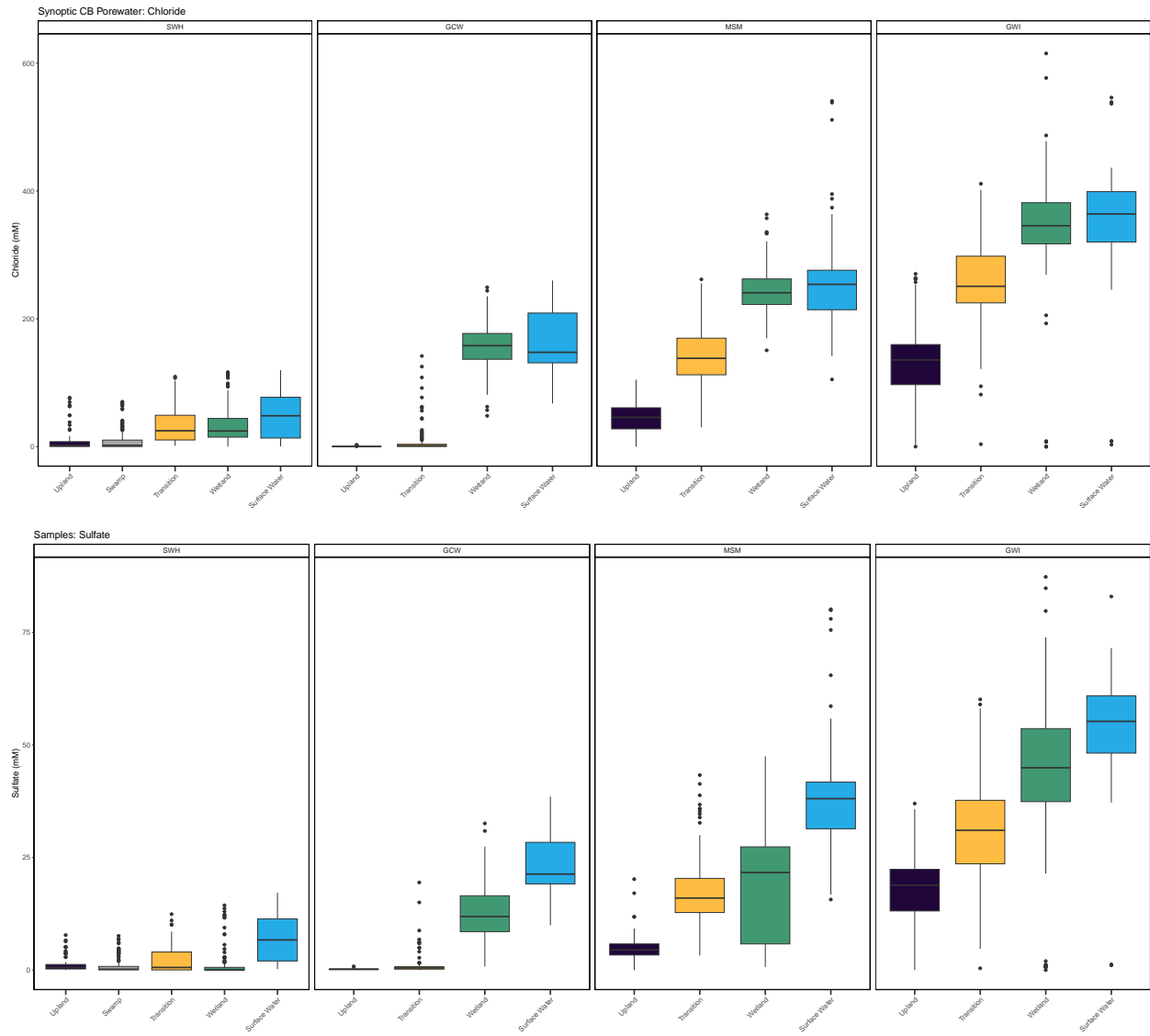
Samples: Chloride



Samples: Sulfate



0.6 Boxplot summary



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2

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2