

# CLMN Quality Assurance Quality Control

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2025 Wisconsin Lakes and Rivers Convention

March 26<sup>th</sup> 2025





CLMN  
QA/QC

**10% of water chemistry volunteers are randomly chosen to participate in QA/QC sampling each year**

These volunteers collect:

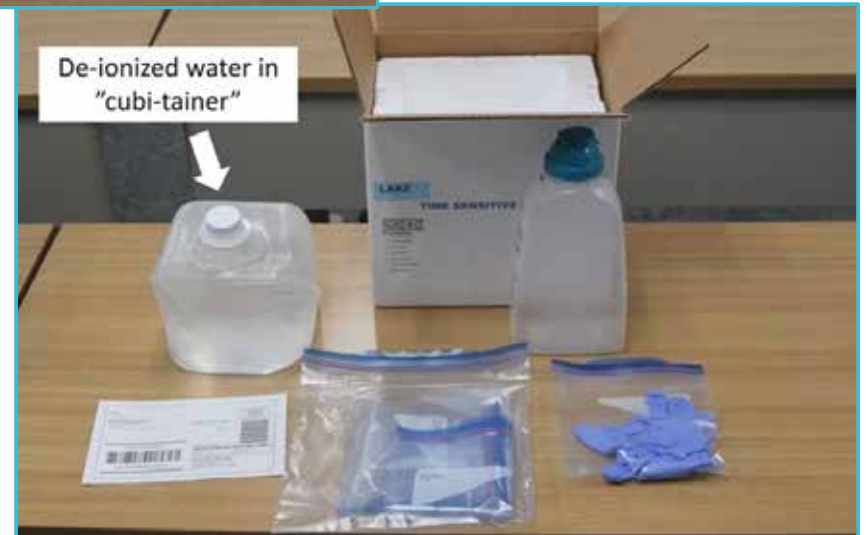
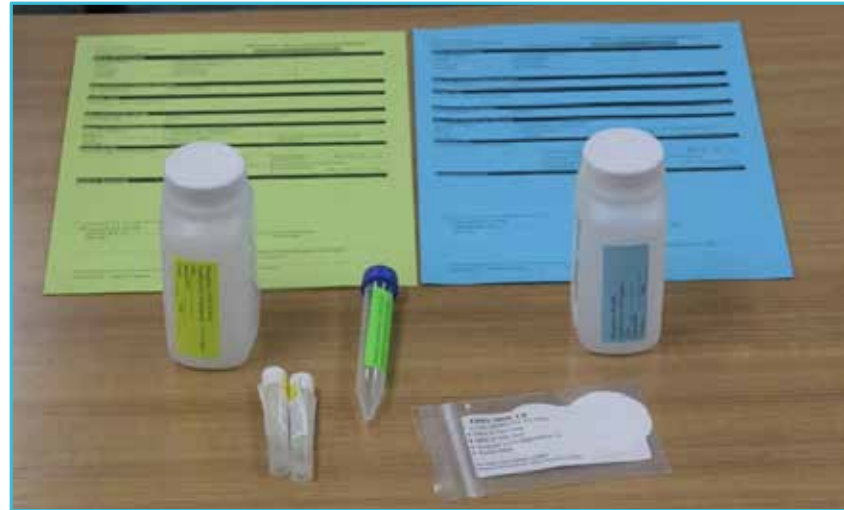
1 extra phosphorus sample ("duplicate")

1 extra chlorophyll sample ("duplicate")

1 sample of de-ionized water run through their sampler ("blank")



CLMN  
QA/QC  
supplies  
provided





CLMN  
QA/QC  
“blank”  
sample

## How to collect your **blank** phosphorus sample

Please prepare your **blank** phosphorus sample on land OR in the boat prior to collection your other samples.

A 2<sup>nd</sup> person is helpful when preparing the blank sample.



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QA/QC  
“blank”  
sample





# CLMN QA/QC “blank” sample





CLMN  
QA/QC  
“blank”  
sample







CLMN  
QA/QC  
“duplicate”  
samples

## How to collect your **duplicate** phosphorus and chlorophyll samples

Your **duplicate** samples are collected exactly the same way as your regular phosphorus and chlorophyll samples.

Collect the **duplicate** water sample immediately after collecting your regular sample and process them both the same way when you return to shore.



“

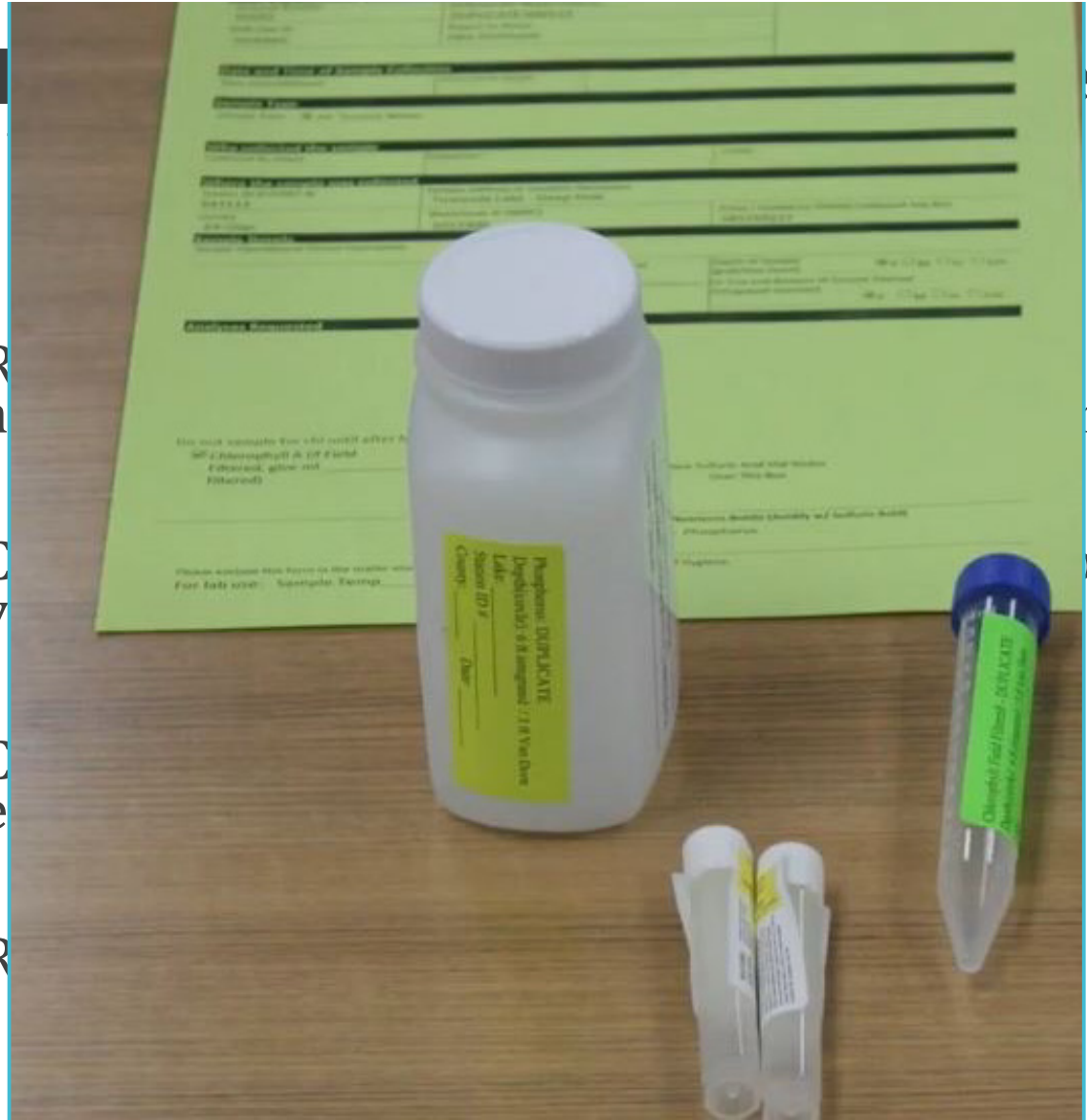
**Rinse &  
equipment**



CLMN  
QA/QC  
“duplicate”  
samples



1. R
2. C
3. C
4. R



title  
C  
D  
r



# CLMN QA/QC shipping





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# Thank You

Your Quality Assurance samples are extremely important for us to demonstrate the high quality of citizen-collected lake data.

<https://www.youtube.com/watch?v=Rzqi2gHc6DU>

PP Credits to: Paul Skawinski, Sandy Wickman, Sara Windjue and Amy Kowalski



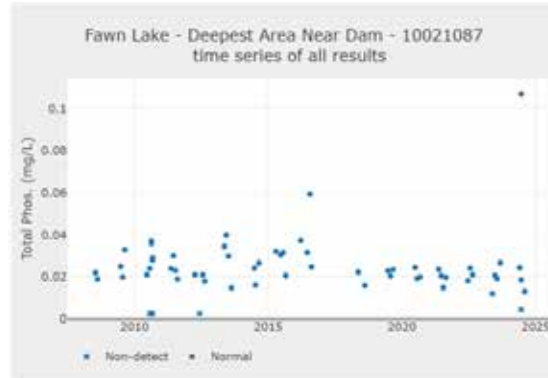
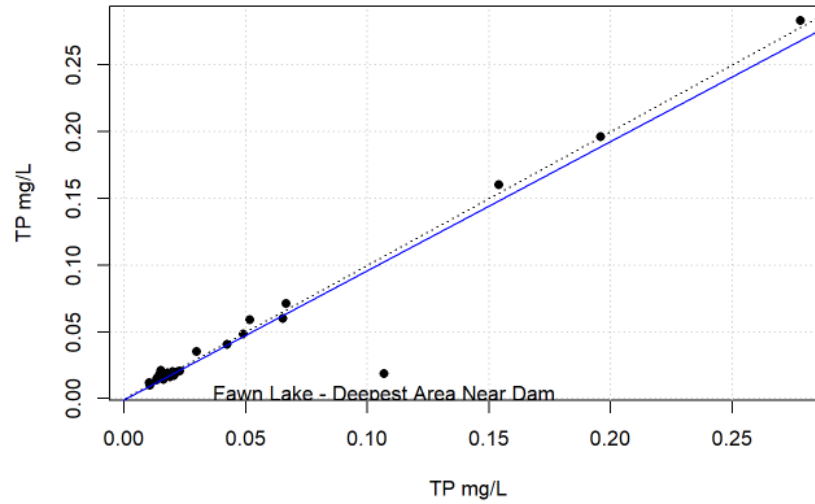
# CLMN QA/QC 2023 Results

- **64 Lakes were asked to participate in 2024**
- **34 lakes of those lakes sampled in 2024**

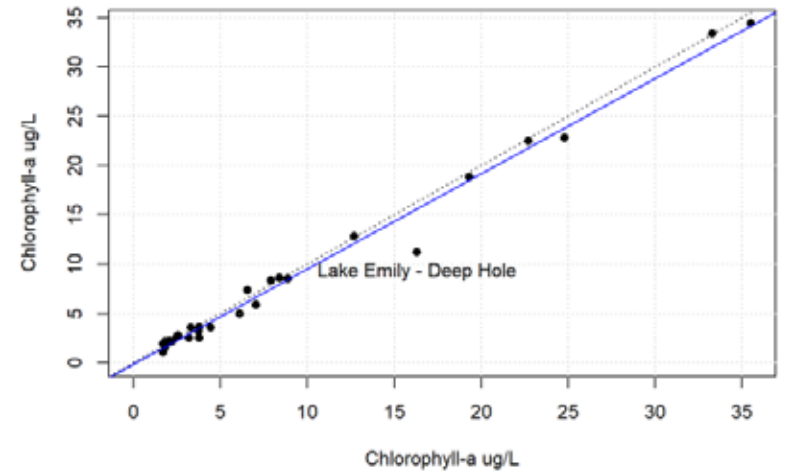


# CLMN QA/QC 2023 Results

TP Duplicate Samples



Chlorophyll-a Duplicate Samples





# CLMN QA/QC 2023 Results

## Total Phosphorus Blanks ( deionized water) in 2024

- We hope that all deionized water samples are below detection
- 91% (29 of 32) of TP blank samples were below the limit of detection\* but all had other errors in sampling
- We will follow up with individuals to make sure they have clean sampling techniques

## Chlorophyll a sampling

- Blanks were taken at 4 sites, not sure how this occurred as we don't provide extra chlorophyll tubes or labslips with chlorophyll a checked.
- 2 were ND, so did use deionized water, 2 seemed to be extra duplicates.
- 2 sites did sampling in early spring, so they did not take duplicate or regular sample either.



# CLMN QA/QC Questions

