

CITIZEN LAKE MONITORING NETWORK REFRESHER TRAINING



- Chemistry Procedures Review
- Quality Assurance

Sample collection

- ▣ First sample is phosphorus only and should be collected within 2 weeks of ice off
- ▣ Total phosphorus and chlorophyll-a samples are collected the last two weeks of June, July and August
- ▣ Please try to collect Secchi readings throughout the open water season in addition to your 4 chemistry samples

Notice: Information is collected under s. 33.02, Wis. Stats. Personally identifiable information, including names of volunteers, will be broadly distributed in conjunction with lakes data.

Station ID # (use separate form for each site)			Lake Name				County		Year	
Names of each volunteer who sampled on each date	Date Use 4 digits, e.g., May 19 is 0519	Time Round to nearest hour	Secchi Depth Round to nearest quarter of a foot	Hit Bottom Yes No	Lake Level High Low Normal	Appearance Clear Murky	Water Color Blue; Green; Brown; Red; Yellow	*Perception 1 - 5	Date Entered	

Observations:

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Observations:

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Observations:

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Observations:

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Observations:

Date:		
Depth	Temp. F	D.O. mg/L

Date:		
Depth	Temp. F	D.O. mg/L

Date:		
Depth	Temp. F	D.O. mg/L

Date:		
Depth	Temp. F	D.O. mg/L

***Perception** = Perception of the amount of algae in the water at your sample location:

- 1=Beautiful, could not be any nicer.
- 2=Very minor aesthetic problems; excellent for swimming and boating enjoyment.
- 3=Swimming and aesthetic enjoyment of lake slightly impaired because of high algae levels.
- 4=Desire to swim & level of enjoyment of lake substantially reduced because of algae; would not swim, but boating is OK.
- 5=Swimming and aesthetic enjoyment of lake substantially reduced because of algae levels.

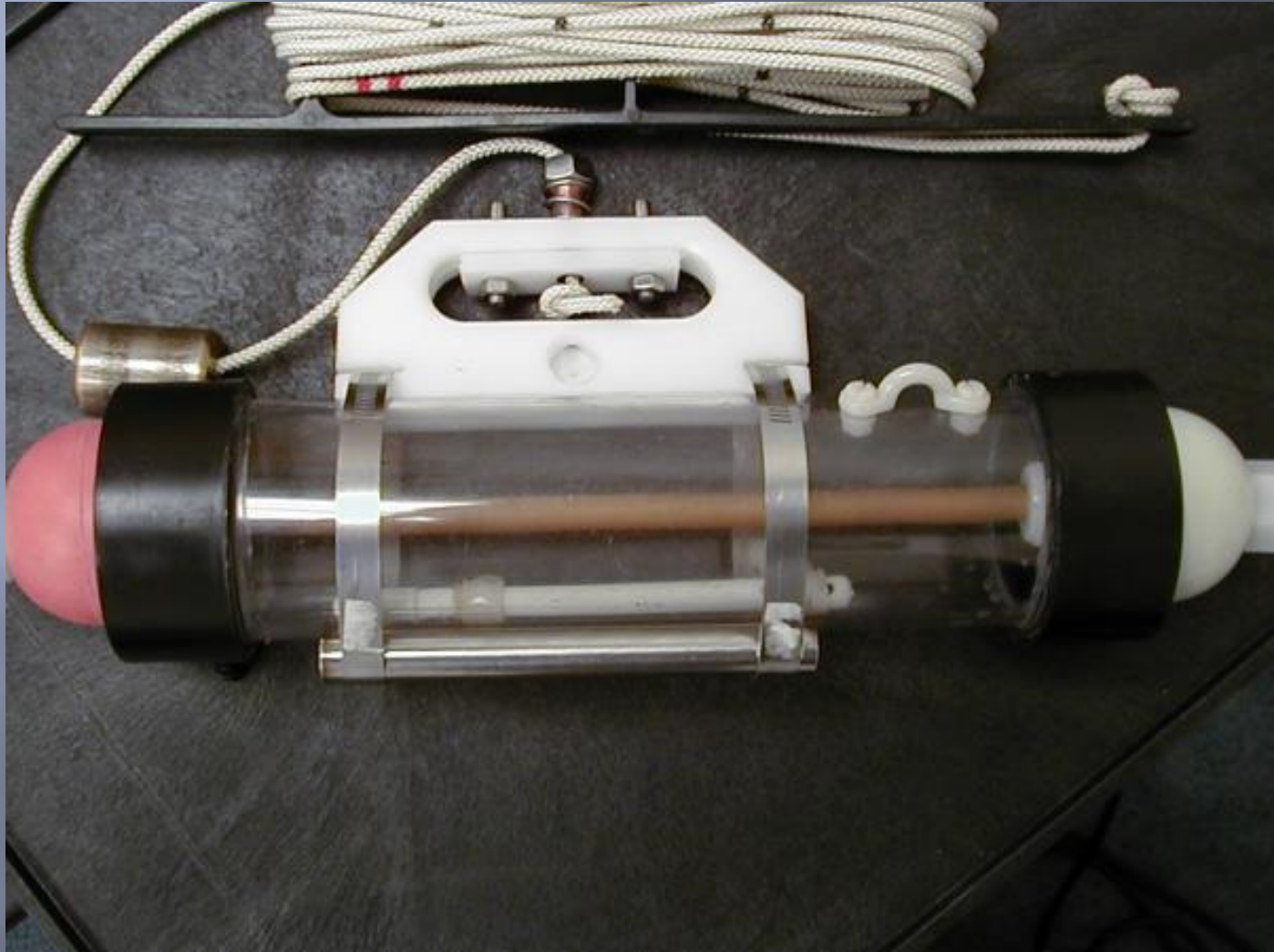
Temperature meter update

- ▣ The company that made our little units in California doesn't want to continue
- ▣ Paul McGinley and Paul Skawinski have a final prototype that is similar to the one that we have been using.
- ▣ If you are in need of a new temperature meter, please let your Coordinator know and Paul Skawinski can make a list. Your new unit will be sent to you when it is ready.

Integrated Sampler

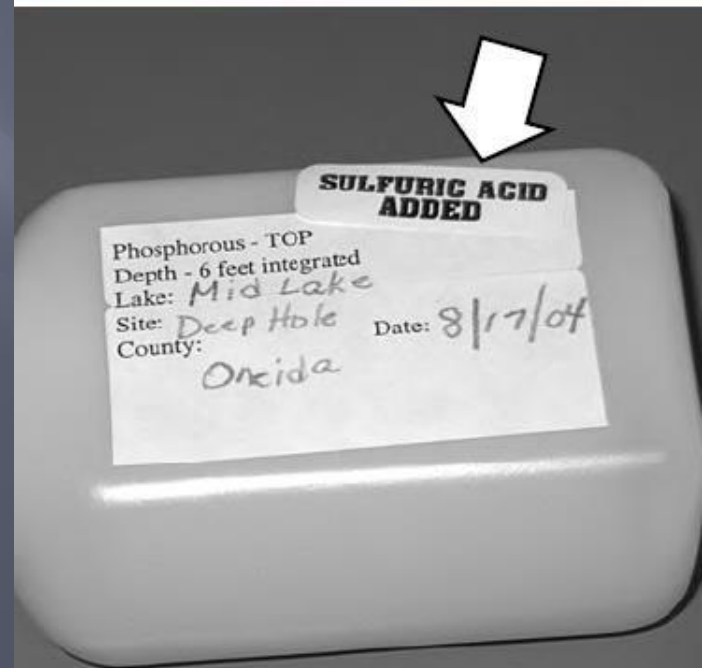


Van Dorn water collection bottle



Phosphorus

1. Add 1 vial of acid
2. Label the bottle
3. No need to check pH
4. Chill sample before shipping



Phosphorus - CLMN
Depth - 6 feet integrated
Lake: EXAMPLE
Station ID # xxxxxx
County: PORTAGE

Date: 8/25/17

CONTAINS 0.1%
SULFURIC ACID

SULFURIC ACID <51%



DANGER
7664-93-9
7732-18-5

THERMO FISHER SCIENTIFIC
520 NORTH MAIN STREET
MIAMI, OK 74354
1-828-658-2711

Contains: 1:3 H₂SO₄

May be corrosive to metals. Causes severe skin burns and eye damage. Do not breathe fume/mist/vapours. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wash contaminated clothing before reuse. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Store in corrosive resistant container with a resistant inner liner.

Contains: 1:3 H₂SO₄
Lot No.: SA7299050
Expires: 10/26/18
See Safety Data Sheet (SDS)
See Safety Data Sheet (SDS)

Remove label from vial and put on lab form

Place Sulfuric Acid Vial Sticker
Over This Box

250 ml Nutrients Bottle (Acidify w/ Sulfuric Acid)

Tot.- Phosphorus

Chlorophyll-a



MEASURE LAKE SAMPLE

200 ml if Secchi > 1.5 ft

100 ml if Secchi 1 - 1.5 ft

50 ml if Secchi < 1 ft

POUR INTO FILTER CUP



USE TWEEZERS TO
PLACE FILTER ON
CUP BASE

*Be careful not to
touch or tear filter

Either side of filter can
be used

Use filter forceps

Rinse graduated
cylinder with
distilled water

Rinse sides of
cup with
distilled water





**PLACE
FILTER PAPER
IN TUBE**

**Roll or Fold
As Long As It
Gets
In The Tube**

Billing and Reporting

Account Number SH024	Field Number (Bottle Label ID) Spring-193010
DNR User ID DICKMJC	Report To Name Jake Dickmann

Date and Time of Sample Collection

Date (mm/dd/yyyy)	Time (24-hr clock)
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Sample Type

Sample Type: SU Surface Water

Who collected the sample

Collected By Name	Telephone	Email
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Where the sample was collected

Station ID (STORET #) 193010	Sample Address or Location Description Frog Lake - Deepest Part	
County 19-Florence	Waterbody ID (WBIC) 585700	Point / Outfall (or SWIMS Fieldwork Seq No) 184713861

Sample Details

Sample Description / Device Description	If Field QC Sample (select one): <input type="radio"/> Duplicate <input type="radio"/> Blank <input type="radio"/> _____	Depth of Sample (grab/Van Dorn): <input checked="" type="radio"/> F <input type="radio"/> M <input type="radio"/> In <input type="radio"/> Cm Or Top and Bottom of Sample Interval (integrated sampler): <input checked="" type="radio"/> F <input type="radio"/> M <input type="radio"/> In <input type="radio"/> Cm
	Grant or Project Number CLMN-193010	0-6

Analyses Requested

<p>Do not sample for chl until after May 31st.</p> <p><input type="checkbox"/> Chlorophyll A (if Field Filtered, give ml _____ filtered)</p>	<p>Place Sulfuric Acid Vial Sticker Over This Box</p>
	<p>250 ml Nutrients Bottle (Acidify w/ Sulfuric Acid)</p> <p><input checked="" type="checkbox"/> Tot.- Phosphorus</p>

Please enclose this form in the mailer along with the sample and send to the State Lab of Hygiene.

For lab use: Sample Temp _____ C Iced

Lab Form

- Complete highlighted areas
- Amount of water you filtered
- Sticker from acid vial
- Make sure depth of sample is filled in
- Send form with samples

Chlorophyll-field filtered
Depth: 6 feet integrated
Lake: EXAMPLE
Station ID# xxxxxx
mls water filtered: 200

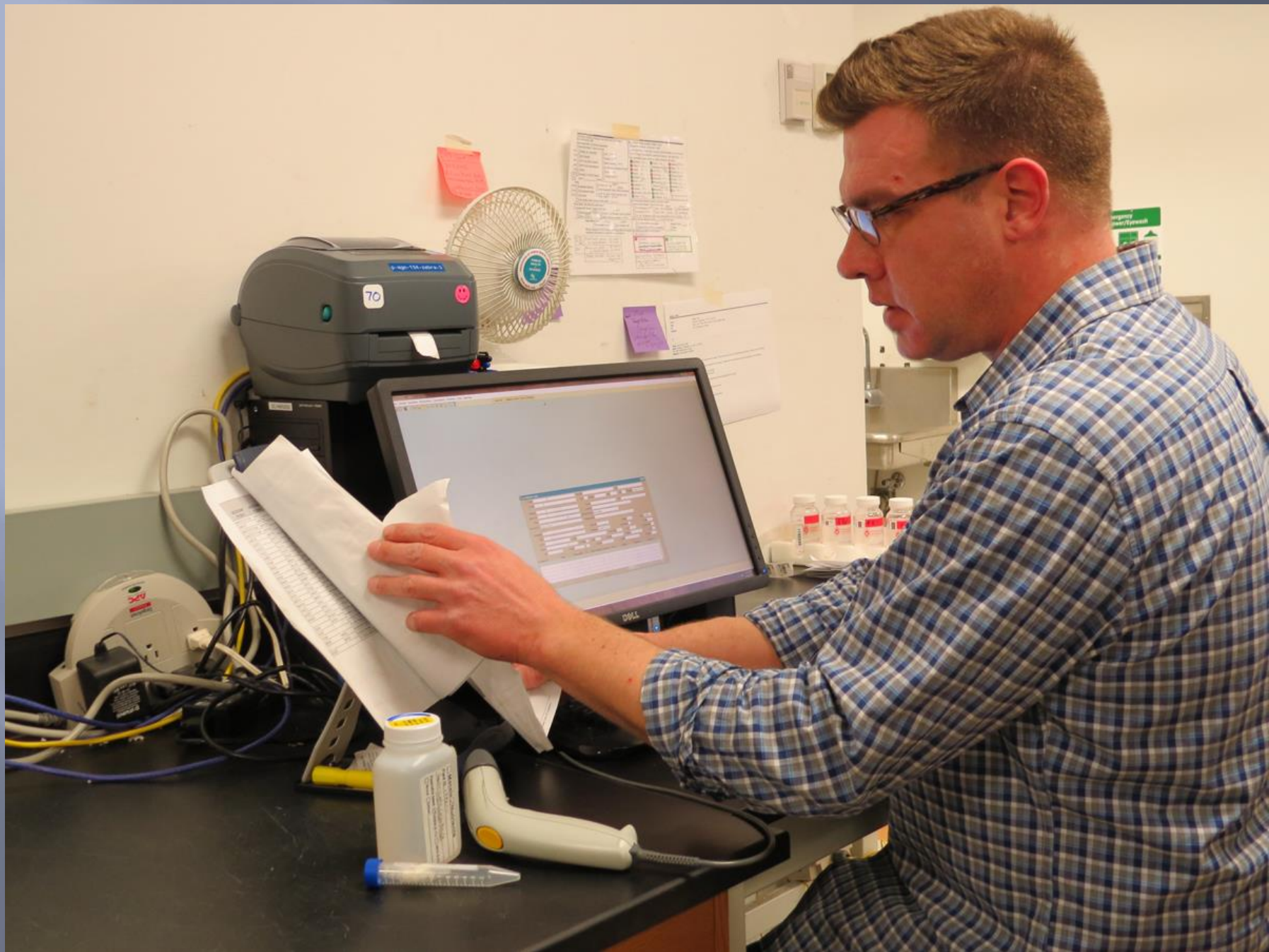
Common Problems Reported by State Lab of Hygiene

- Using wrong bottles
- No or not enough ice
- Bottles received, but no lab slip
- Outdated lab slip
- Zip lock bag not sealed and box is soaked
- Missing or errors on lab slip
- P Samples not preserved with acid

Any of these will delay or prevent getting the results and makes Lab staff crabby



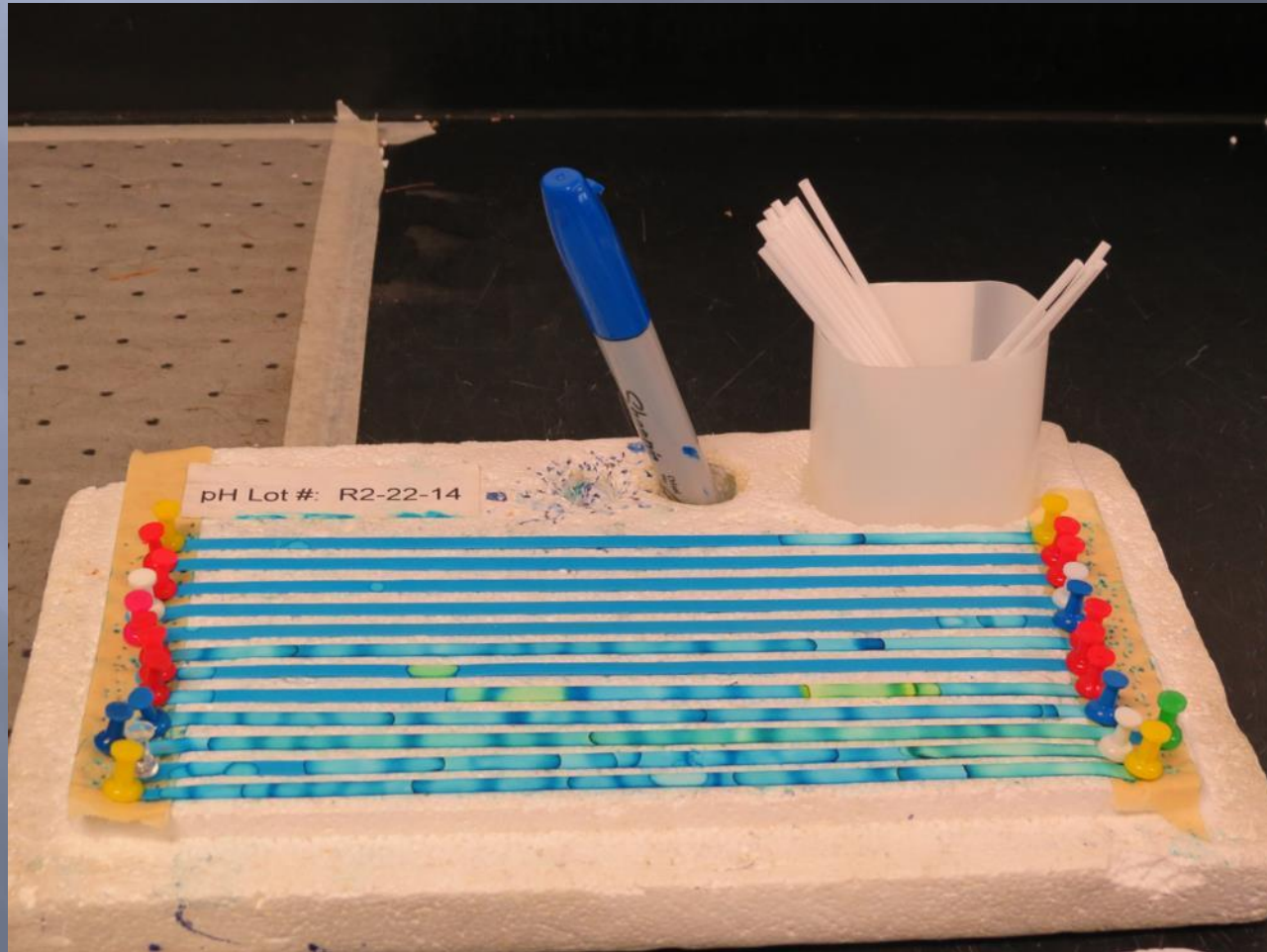




Total Phosphorus samples at Lab



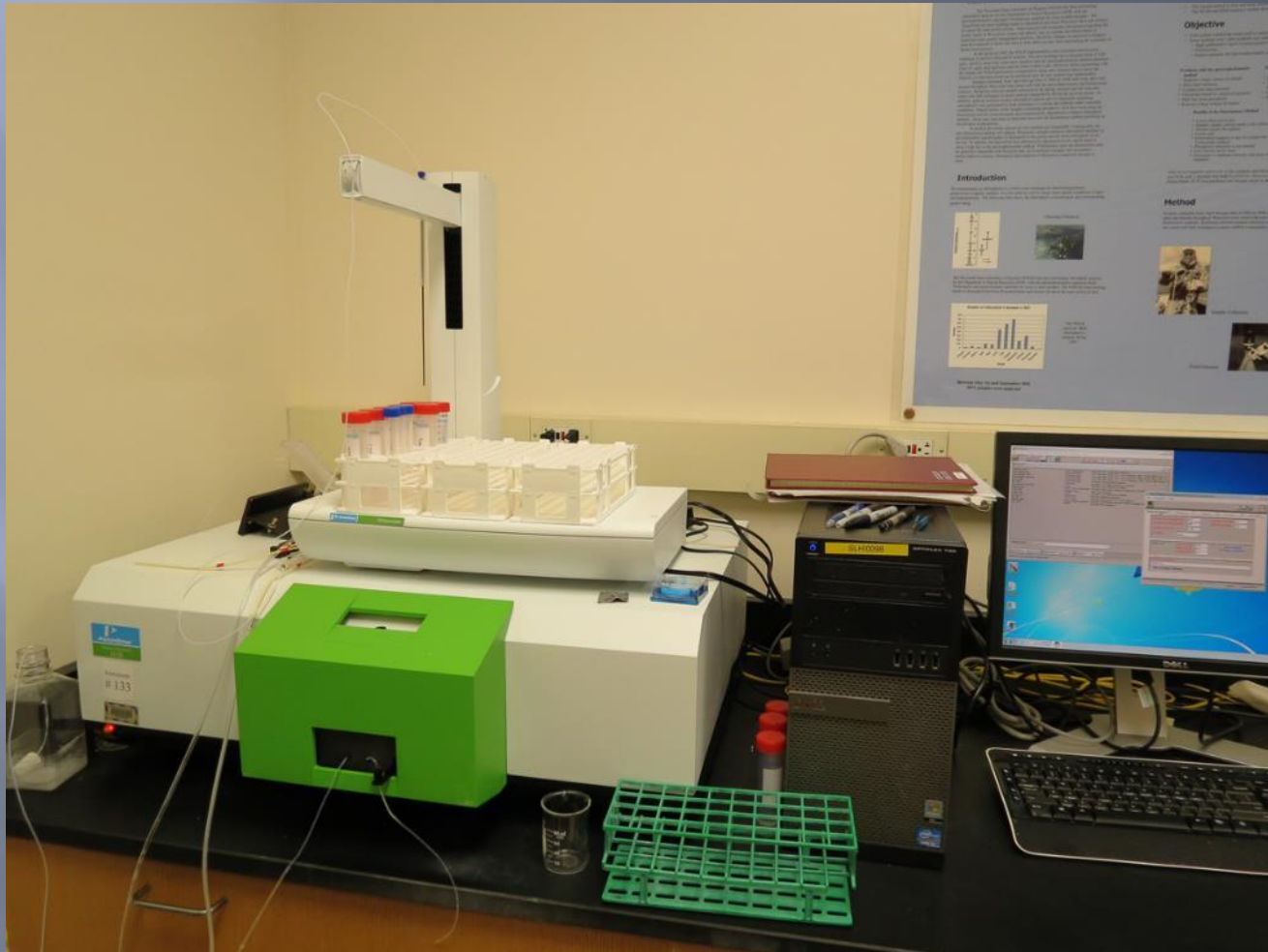
Lab checks pH



Phosphorus analysis



Chlorophyll analysis





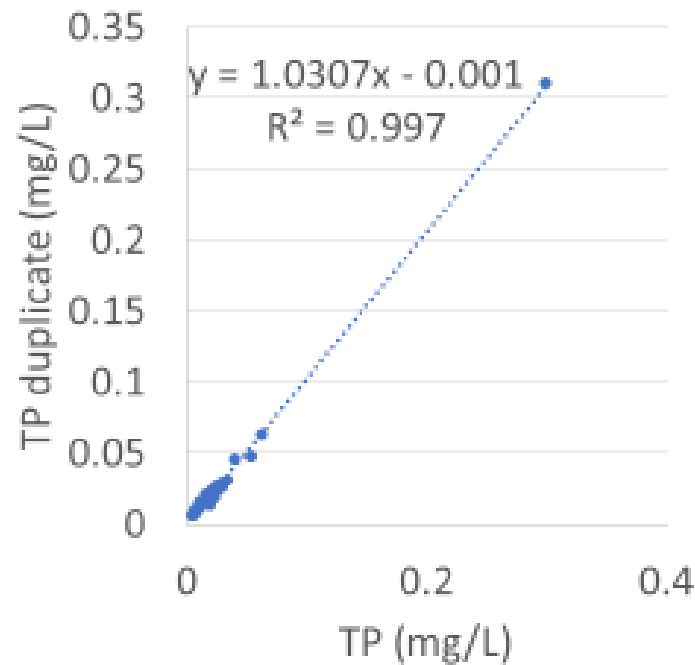
CLMN 2018 QA results

QAQC – TP Blanks

- 18% (6/33) above Limit of Detection (5 ug/L)
- 5 samples ranged from 5.08 – 7.28 ug/L
- 1 sample at 61.2 ug/L (Lake Esadore, Taylor)

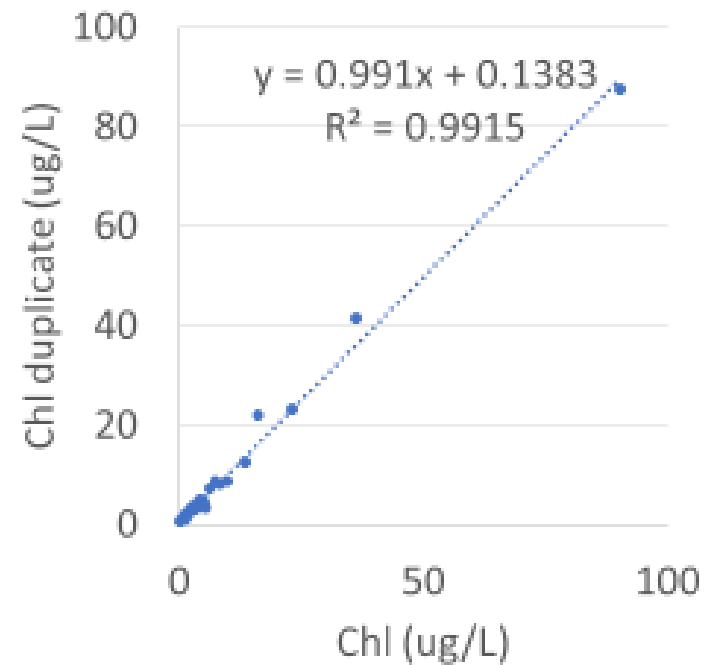
QAQC – TP & chlorophyll duplicates

Total Phosphorus



50% of TARGET (34/69)

Chlorophyll α



Please agree to participate!

- If you are asked to participate in the quality assurance project, please help us out by collecting the duplicate and blank samples.