

Lake Anasagunticook Assn. Annual Meeting



September 15, 2020

Agenda

Call To Order

Remembrance of Members who have passed

Membership Recognition

Review Minutes from Annual Meeting 2019

Treasurer's Report

President's Report for 2019 - 2020

Watershed Mitigation

Water Quality/Climate Change

Elections: Directors, Officers

New Business

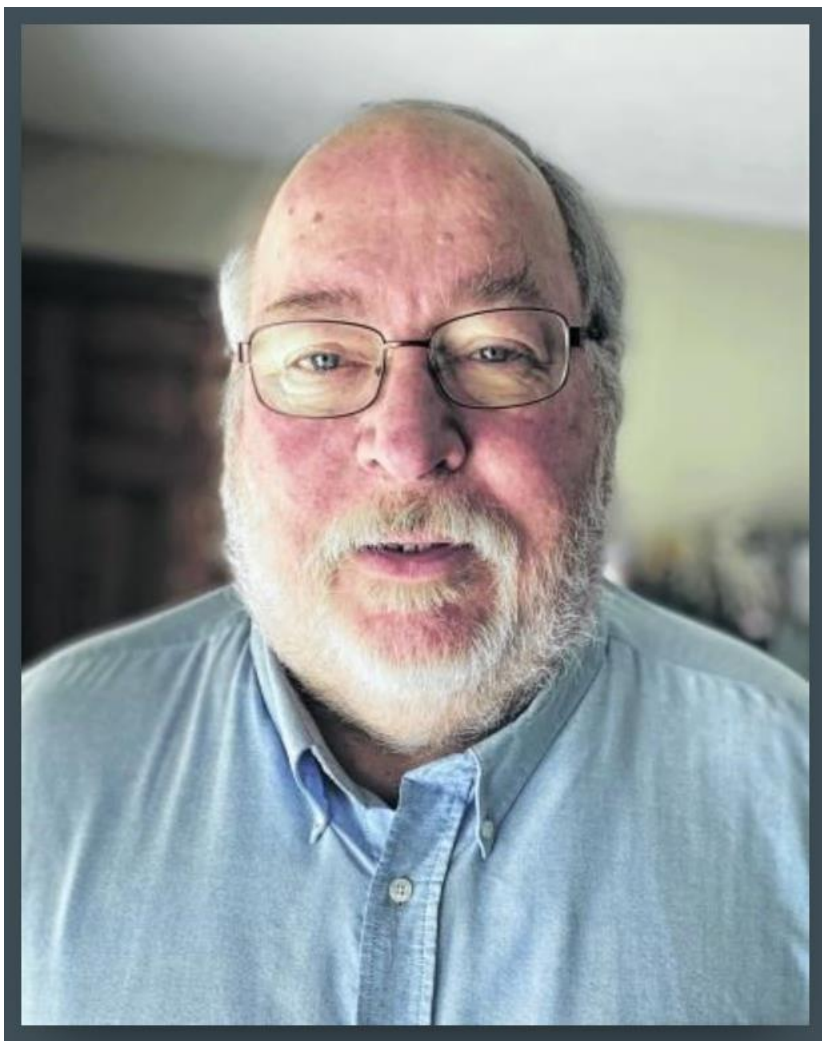
President's Direction for 2020-2021





In Remembrance

Michael R. Poulin
1950 - 2020



Paul A. Barron
1946 - 2019





George Lavoie
1945 - 2020

Membership Recognitions



25 Years: Osprey Award

Biff & Mary Atwater
Terri & Michael Swanick
Jean & Dick Williams



10 Years: Loon Award

Elaine Gammon

Thank you for your steady support!

Review Annual Meeting 2019 Minutes

- ❖ Any revisions?
- ❖ Motion to accept?
- ❖ Second?
- ❖ Vote on the motion



	LAKE ANASAGUNTICOOK ASSOCIATION		
	Treasurer's Report Budgets 2019 through 2020		
	INCOME	BUDGET	BUDGET
	7/1/2019-6/30/20	7/1/2019-6/30/2020	7/1/2020-6/30/2021
INCOME			
Dues	\$970.00	\$1,650.00	\$990.00
Unencumbered Donations	\$559.33	\$350.00	\$350.00
Water Quality Monitoring Fund	\$870.00	\$200.00	\$250.00
Dividends	\$10.25	\$15.00	\$11.00
Fundraising Events - cash/wd	\$200.00	\$500.00	
Watershed Survey Grants		\$2,000.00	\$2,000.00
Watershed Donations	\$1,475.00		
Misc receipts transfer from savings	\$2,738.00		
raffle receipts	\$485.00		\$500.00
TOTAL INCOME	\$7,307.58	\$4,715.00	\$4,101.00



	LAKE ANASAGUNTICOOK ASSOCIATION		
	Treasurer's Report Expenses 2019 through 2020		
EXPENSES	EXPENSES	BUDGET	BUDGET
	7/1/2019-6/30/20	7/1/2019-6/30/2020	7/1/2020-6/30/2021
Newsletters			
Membership Communications			
Insurance for Board	\$984.00	\$965.00	\$698.00
Annual Report	\$35.00	\$35.00	\$35.00
LAA Membership Dues Maine Lakes		\$200.00	\$200.00
Contributions to Tax Exempt	\$200.00	\$200.00	
Lake Stewards of Maine			
Prizes for events - raft race	\$150.00	\$150.00	
Canton Recreation			
LAA Website	\$573.53	\$150.00	\$250.00
Conference Fees		\$50.00	
Office /Misc Expenses	\$80.45	\$100.00	\$100.00
Sales Taxes			
Raffle Cash Fundraising Events	\$200.00		
Special Projects			
Annual Meeting - Program	\$370.00	\$200.00	
Watershed Survey	\$3,385.68		\$2,000.00
Awards - plaques etc		\$100.00	
Logo Update - T shirts	\$60.00		\$350.00
Water Quality Monitoring	\$318.55		\$400.00
Mobile re mobile dep	\$145.00		
TOTAL EXPENSES	\$6,502.21	\$2,150.00	\$4,033.00
BALANCE (Income-Expenses)	\$805.37	\$14.00	\$68.00



LAKE ANASAGUNTICOOK ASSOCIATION		
Treasurer's Report Balance Sheet 30-Jun-2020		
Assets		
	<u>Current</u>	
	Otis Savings	3585.92
	Otis Checking	795.46
	Total Current Assets	\$4,381.38
Liabilities & Equity		
	<u>Equity</u>	
	Restricted	
	Water Quality Funds	910.44
	Unrestricted	3470.94
	Total Equity	\$4,381.38
TOTAL LIABILITIES AND EQUITY		\$4,381.38

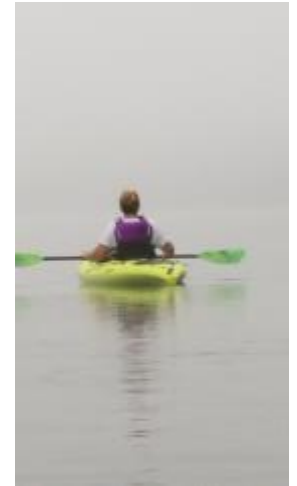
Presidents Report

Last year we had a pretty aggressive 2020 plan and the good news, even with COVID, is that we have accomplished our major objectives.

- The big one of course was winning the DEP Grant. So in this next year LAA will need to focus on executing the first years' worth of projects under the direction of our consultant, Jeff Stern.
- We've had universal compliments on the work at the boat launch to manage trash, inspect trailers, meet people, build LAA membership and, in general, promote responsible boating safety issues. Thanks Bill, Diane, Mike and anyone else who helped out.
- CEO situation in both Hartford and Canton continues to be in flux but issues reported to the LAA board are all reviewed, investigated, and reported if necessary. Usually a Lake Smart review helps to inform owners of the lakeshore zoning requirements. The more of these we get done the better, so please encourage your friends and neighbors. Ready for a review?
- Our water quality statistics are holding steady according to Dr. Hamilton so, collectively, all our efforts are paying off.

As new families move to the watershed and waterfront, we hope they join LAA and support all the terrific work our volunteers do to protect the ecosystem of Lake Anasagunticook. When Covid subsides, we'll get back to in-person meetings and activities. In the meantime, stay healthy, stay in touch, and thanks for helping us protect our Lake!

Tim Kirwan - President

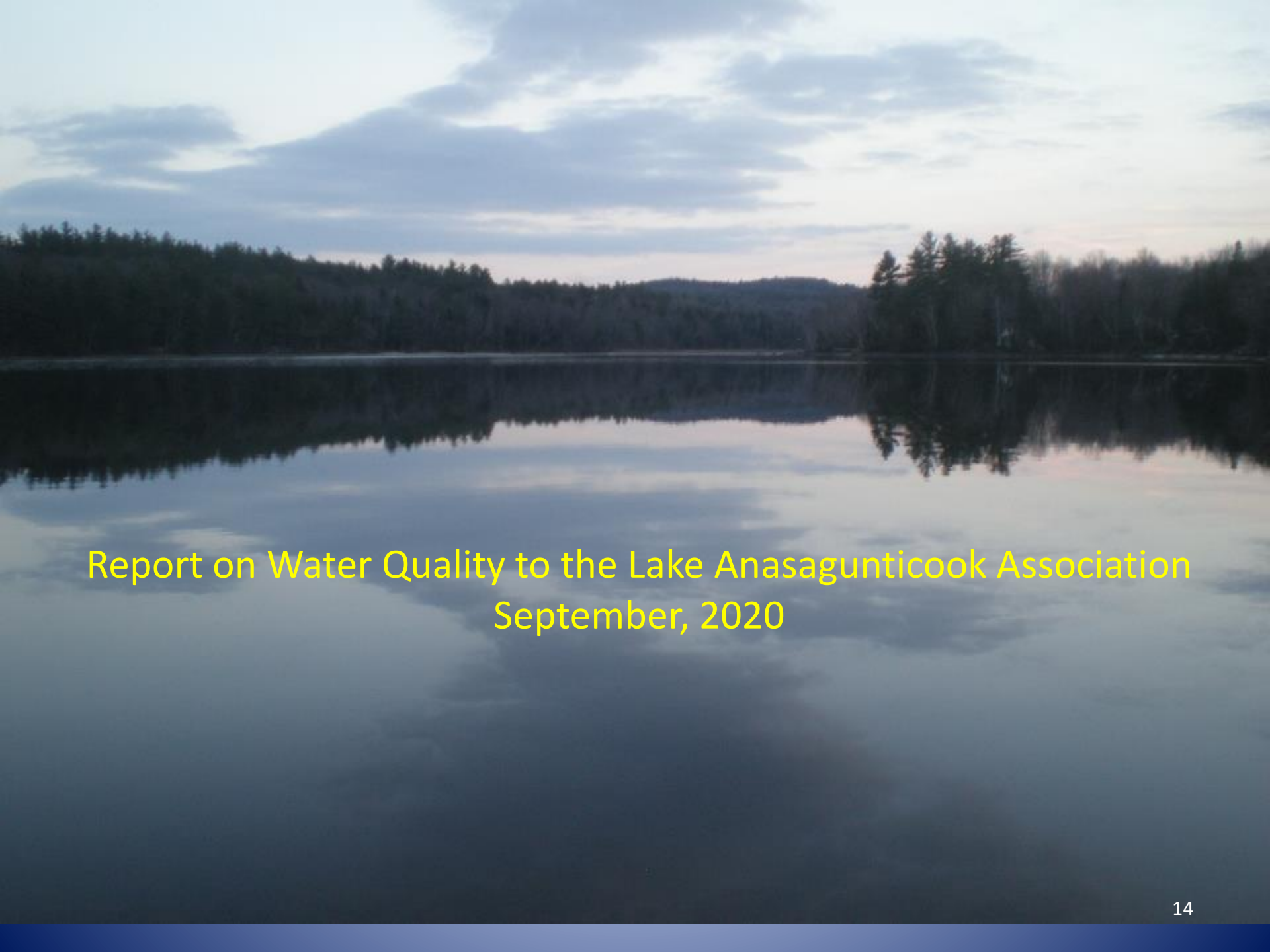


Watershed Mitigation Work Plan

Task	Overall Timing
Project Administration	Jan 1, 202 – Dec 31, 2022
Steering Committee (OCSWCD, LAA, ARWC, DEP, Towns of Canton & Hartford, Lake Shore Drive, Canton Mountain Wind, Pine Shores Subdivision, other watershed residents)	Jan 1, 202 – Dec 31, 2022 Meet semi-annually
NPS Abatement Projects <ul style="list-style-type: none"> • At least 14 high and medium impact sites identified in the 2019 Watershed Survey) • Technical assistance and up to 50% cost sharing for construction costs • Cost sharing agreements that detail the costs, match and maintenance requirements in place prior to any work 	Mar 1, 2021 – Nov 15, 2022
Technical Assistance <ul style="list-style-type: none"> • Project partners provide for at least 22 sites • Reduce soil loading by at least 5 tons per year 	Apr 15, 2021 – Nov 30, 2022
Residential Matching Grants <ul style="list-style-type: none"> • Steering Committee will offer 50/50 cost share grants to at least 7 residential properties • Cost sharing agreements and permits must be in place prior to work 	April 15, 2021 – Nov 30, 2022
Education and Outreach	Jan 1, 2021 – Dec 31, 2022
Pollution Load Reduction Estimates	Apr 30, 2021 – Dec 31, 2022

Watershed Mitigation Deliverables

Deliverables (electronic copies)
1. Grant agreement between OCSWCD, DEP, sub-contract with ARWC, semi-annual progress reports, final project report, NPS site tracker
2. NPS site reports of NPS Abatement Projects, including pre-[post photos
3. Summary of technical assistance provided – description, recommendations, outcome
4. Summary of residential matching grants, pre/post construction photos
5. Copies of all newspaper articles, press releases, web and Facebook postings
6. Pollutants controlled report each year until project completion

A wide-angle photograph of a calm lake at dusk or dawn. The sky is filled with soft, grey clouds, and the water perfectly reflects the sky and the dark, silhouetted forest along the far shore. The overall mood is peaceful and quiet.

Report on Water Quality to the Lake Anasagunticook Association September, 2020

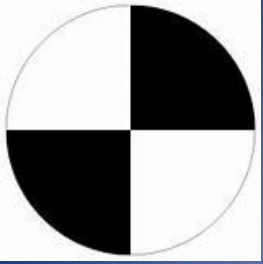
Secchi Disk for Measuring Water Clarity

How it's done

Where it's done

www.lake stewardsofmaine.org/

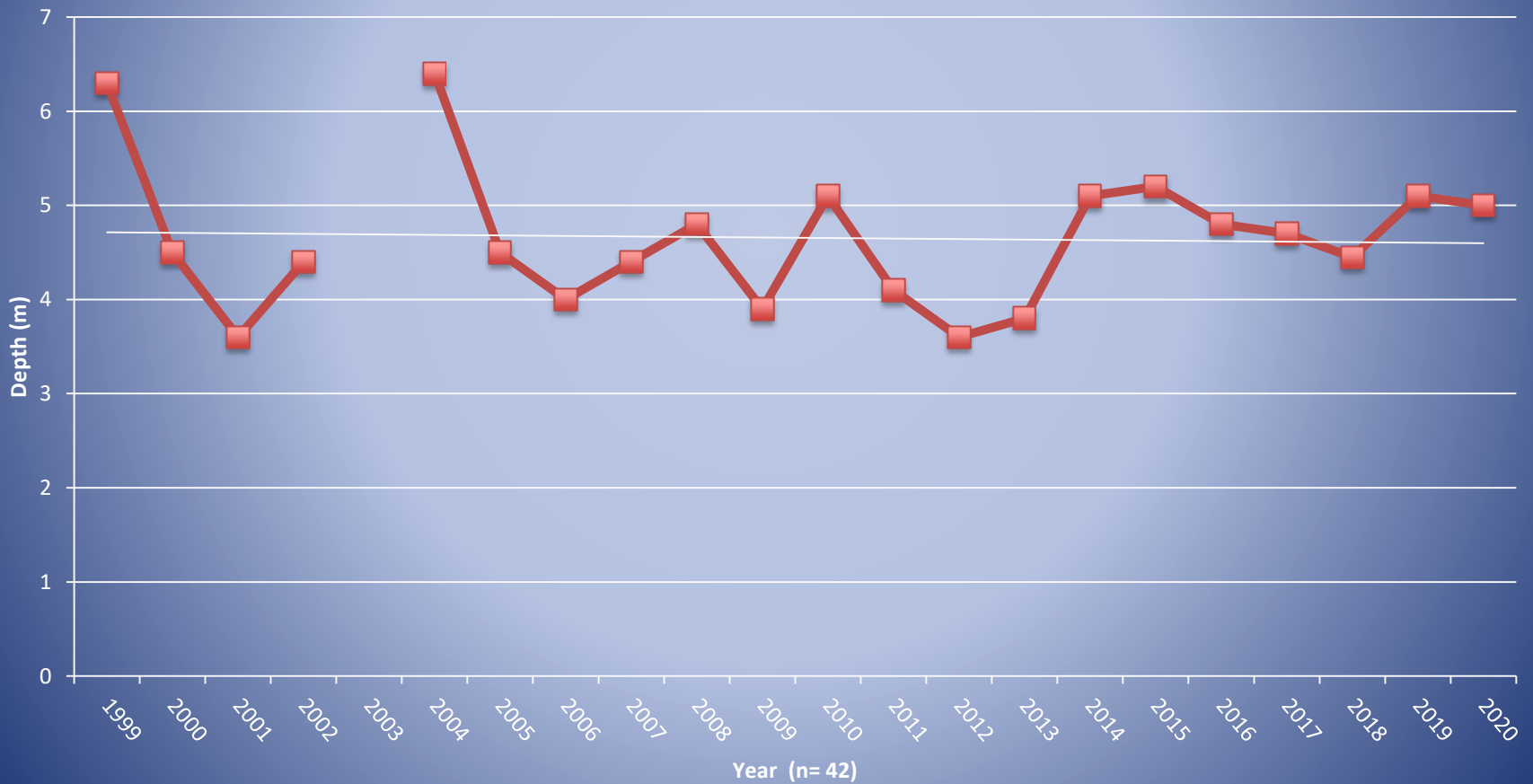


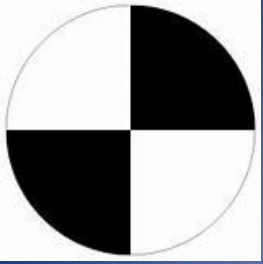


Water Clarity



Lake Anasagunticook
Average Secchi Readings for June
1999 - 2020

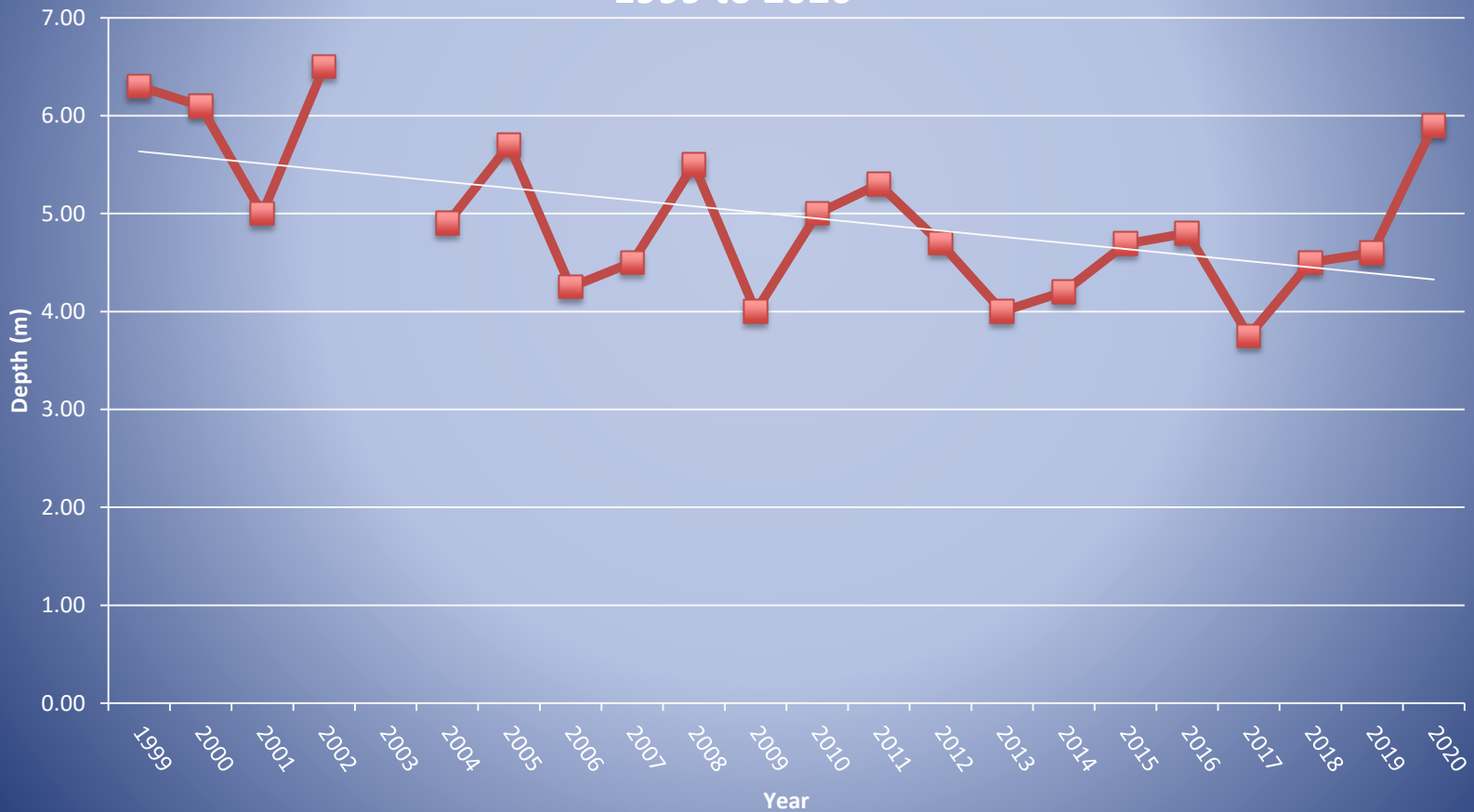


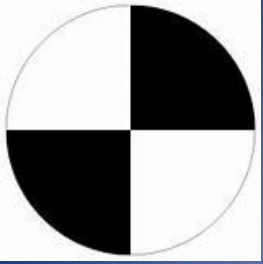


Water Clarity



Lake Anasagunticook
Mean Secchi Readings for July
1999 to 2020





Water Clarity

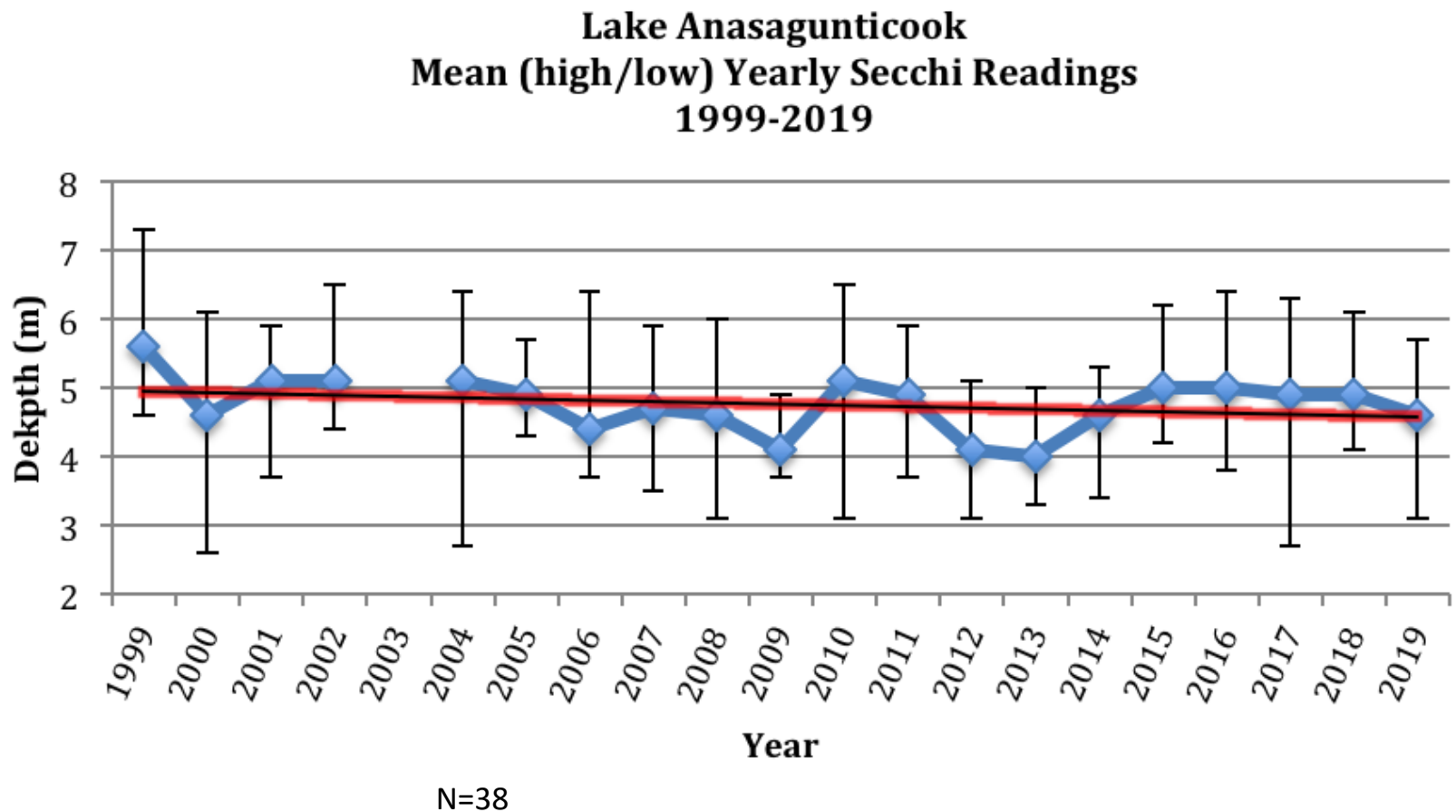


Mean Secchi Readings
August 1999-2020

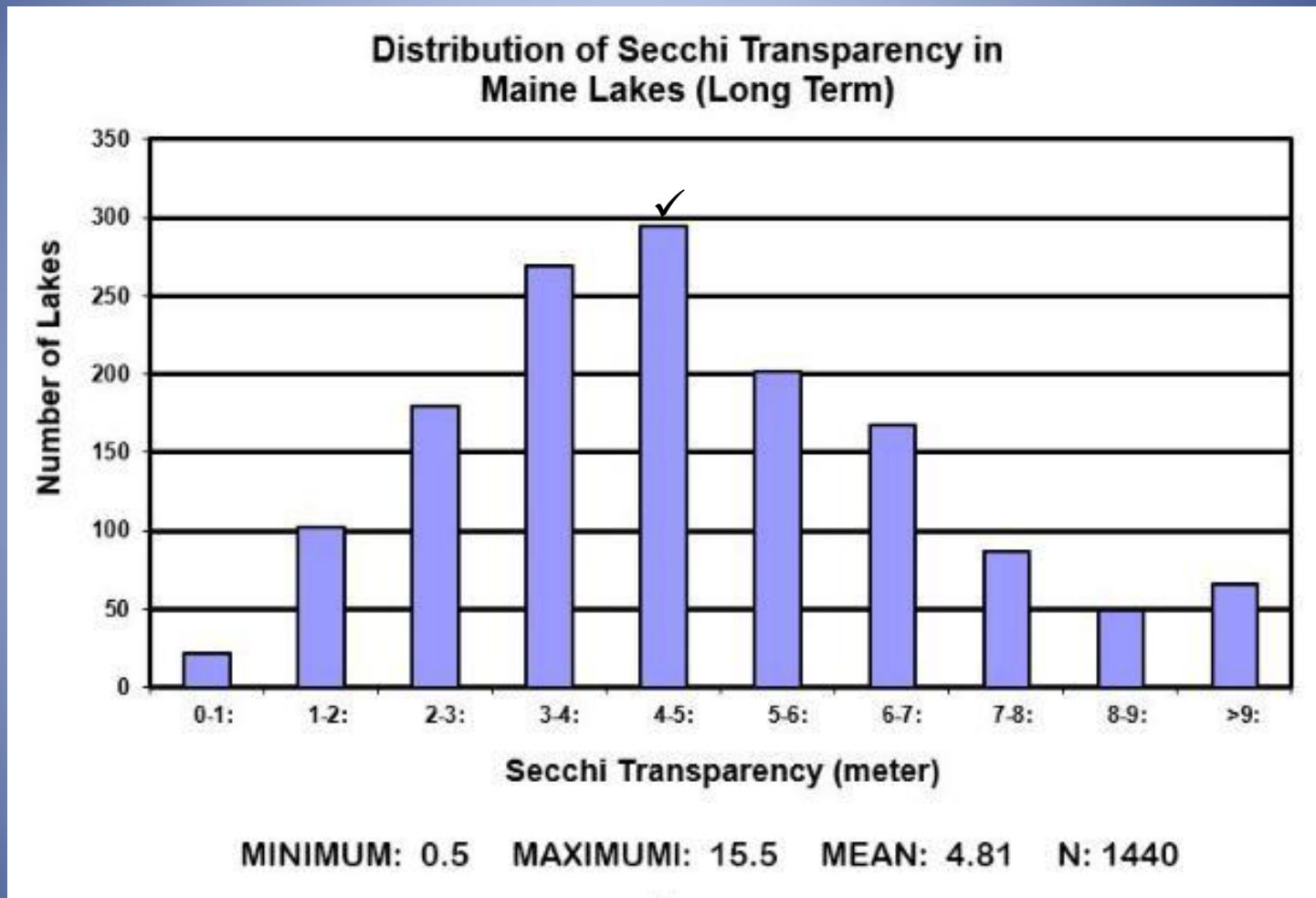


The data show that LAA clarity has decreased on average about one foot since 1999.

1 m = 3.3 ft.



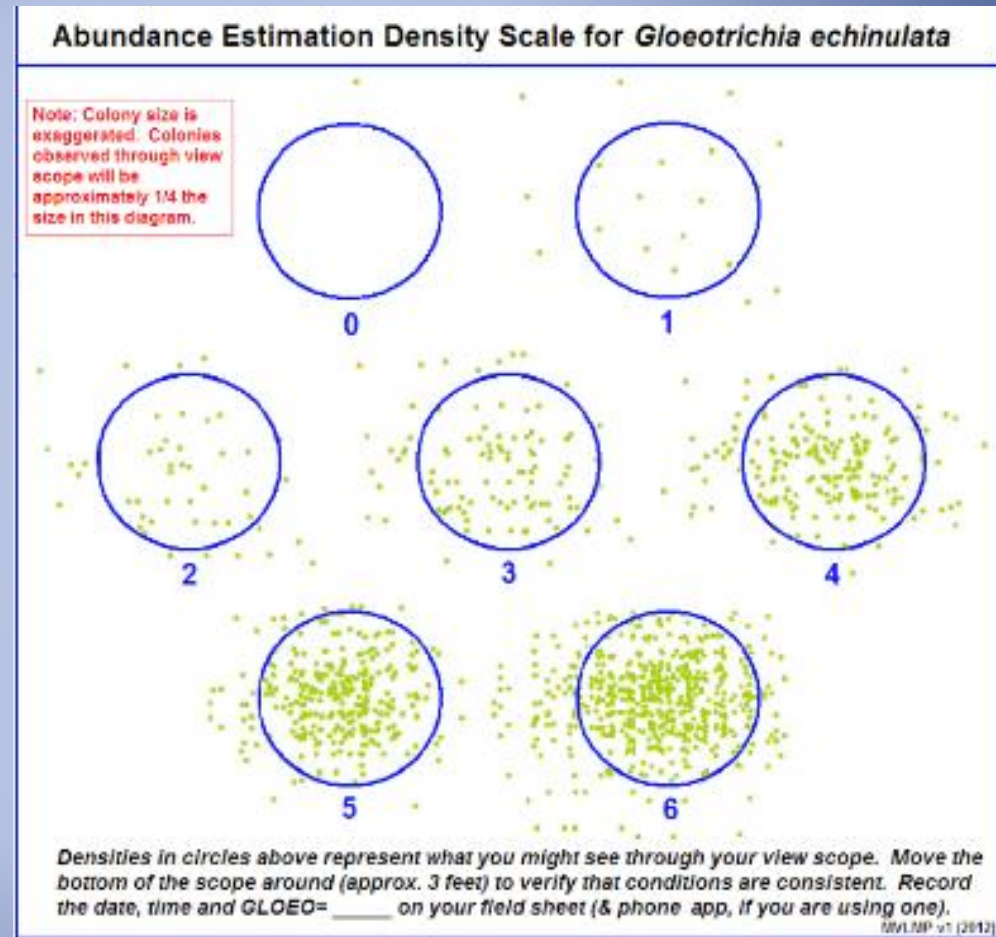
Lake Anasagunticook sits in the middle of Maine Lakes clarity distribution.



<https://www.lakestewardsofmaine.org/distribution-of-water-quality-data/#Total Phosphorus>



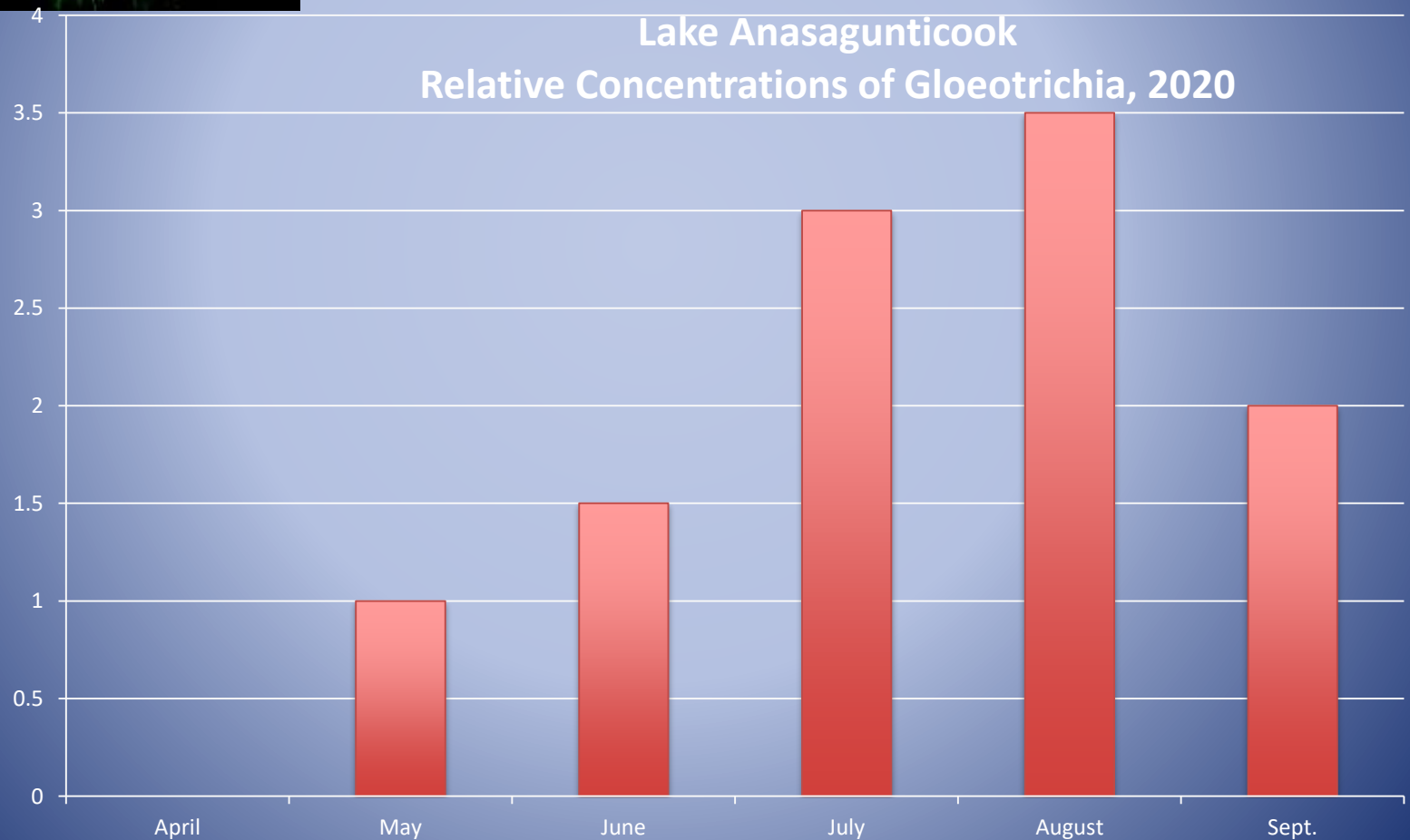
Gloeotrichia (pronounced “glee-oh-tricky-ah”) *echinulata*



Gloeotrichia are colonial cyanobacteria that form tiny spheres, which can be seen without magnification in lake water.

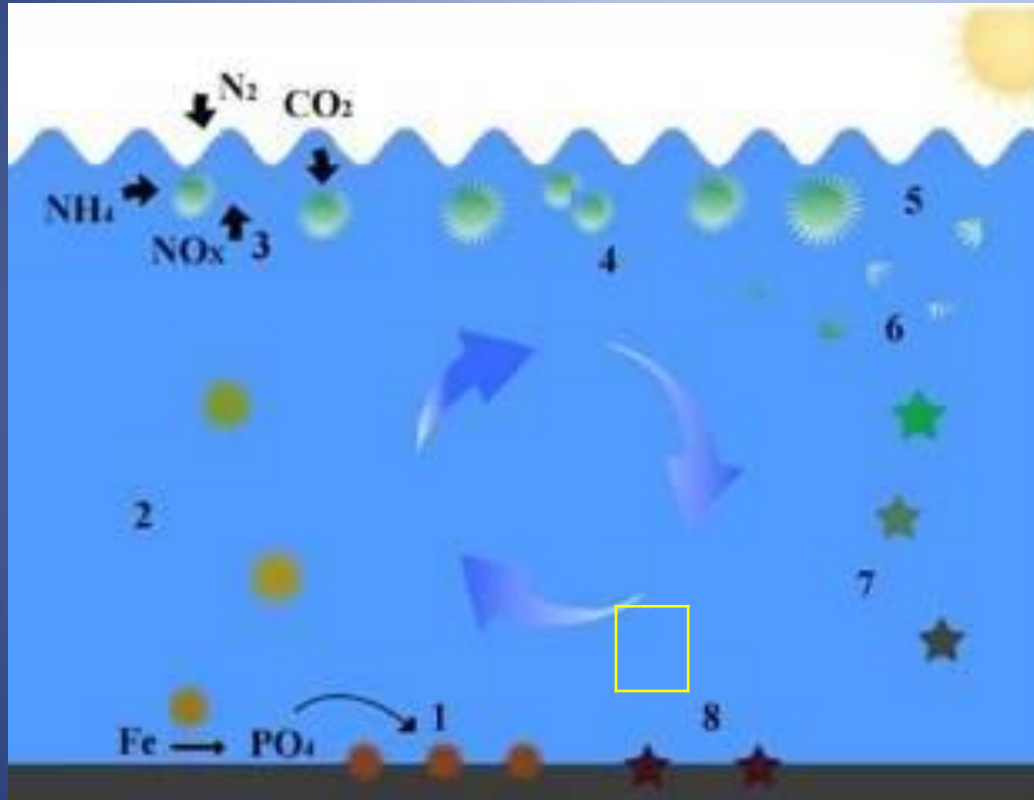


Gloeotrichia (pronounced “glee-oh-tricky-ah”)
echinulata



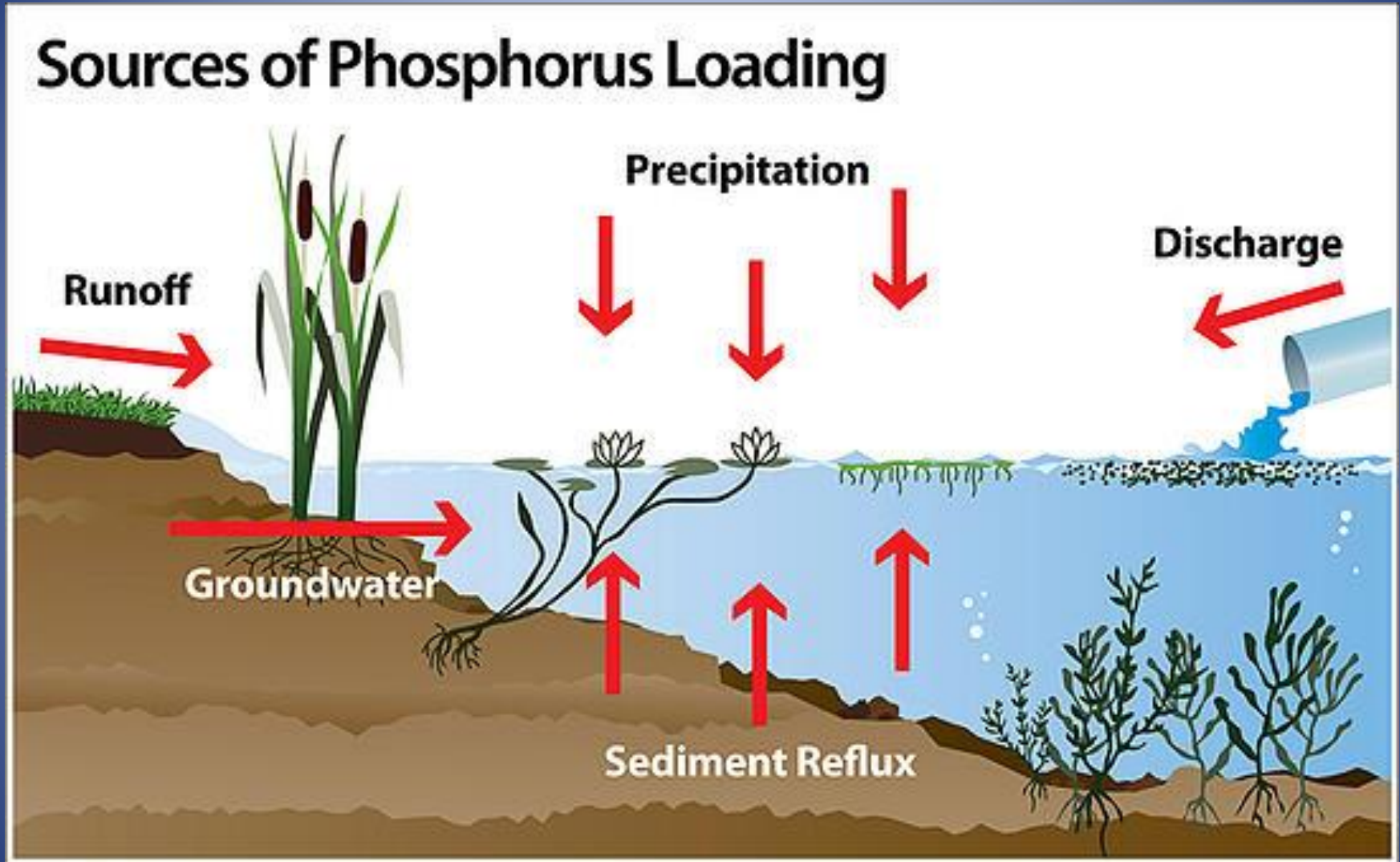


Life Stages of *Gloeotrichia echinulata*



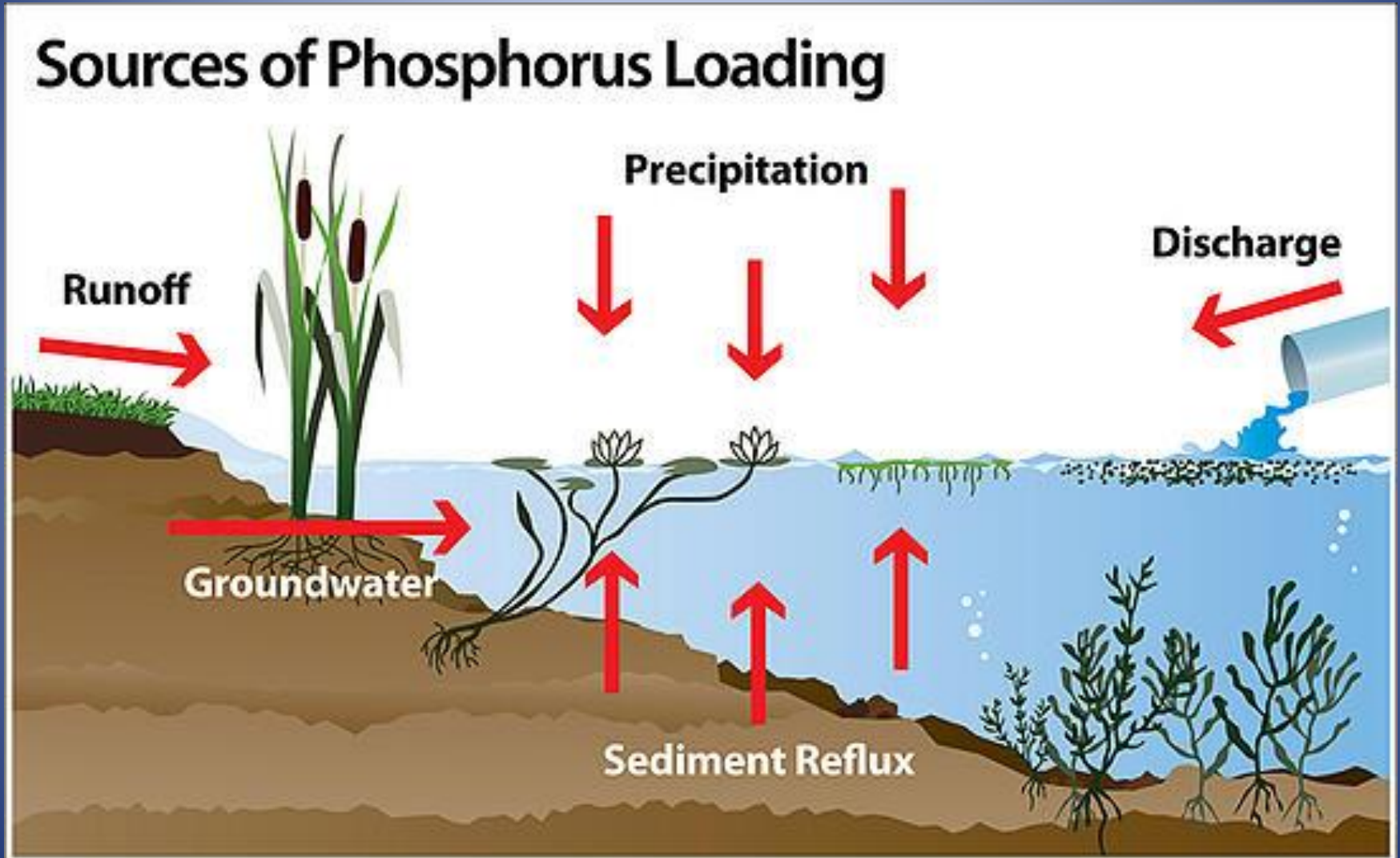
1. At the bottom of the lake the organism begins to grow and acquire nutrients from the sediments
2. After acquiring sufficient nutrients from the sediment, it begins to develop gas vesicles
3. As it rises it divides and grows forming colonies
4. In the summer it depletes its phosphate reserves
5. Late in the summer the gas vesicles degenerate
6. As the gas vesicles degenerate colonies sink
7. Its life stage changes form
8. The cyanobacteria settle in the detritus at the bottom and wait for summer conditions

Total Phosphate Concentrations in Anasagunticook



Total Phosphate Concentrations in Anasagunticook

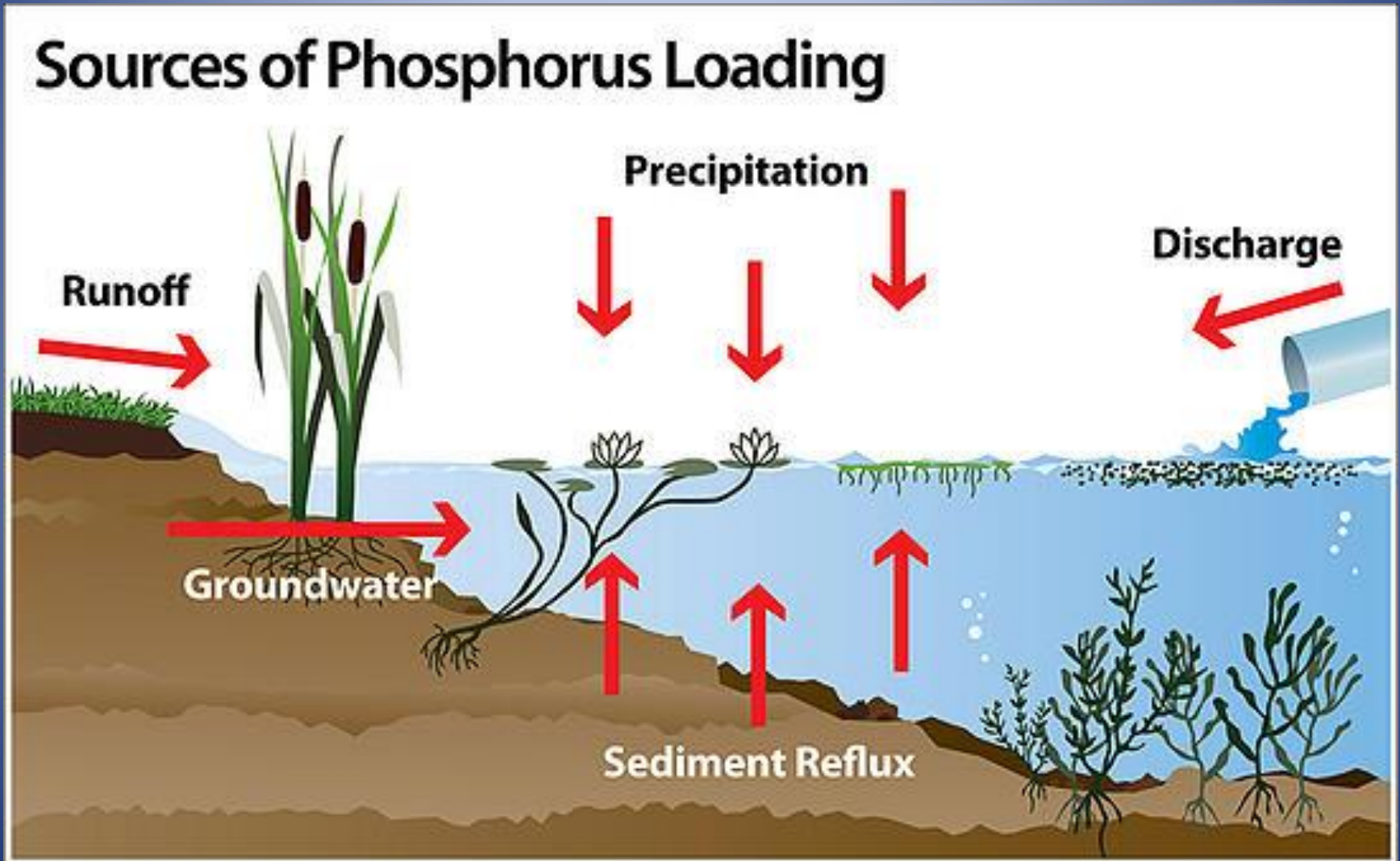
Total Phosphate is measured in parts per billion.



Total Phosphate Concentrations in Anasagunticook

Total Phosphate is measured in parts per billion.

How small is one part per billion?



How small is one part per billion?

1 ppb is 1 inch in 16,000 miles

1 drop of water in an Olympic-size swimming pool

1 penny in 10 million dollars

1 second in 32 years

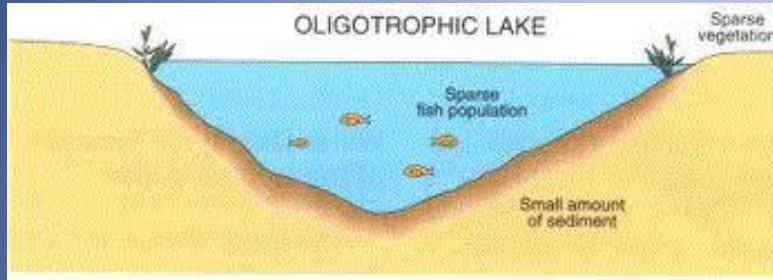
How big is a billion ?

If you made \$10/hour and worked 40 hours/week with no days off and saved every penny (no taxes, rent, etc.) it would take you over 48 thousand (48,076) years to earn a billion dollars (\$1,000,000,000) that's longer than all of recorded history

Total Phosphorus for Anasagunticook (Surface Grab).

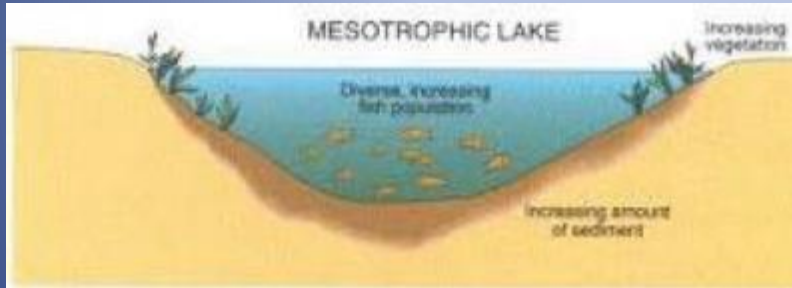
Year	June	July	August	September	October .
2013			8 ppb	9 ppb	7 ppb
2015			4 ppb	5 ppb	6 ppb
2017		7 ppb	6 ppb	5 ppb	6 ppb
2018			6 ppb	4 ppb	4 ppb
2019		6 ppb	5 ppb	6 ppb	
2020	5 ppb	6 ppb	5 ppb		

Total Phosphorus for Anasagunticook (Surface Grab).

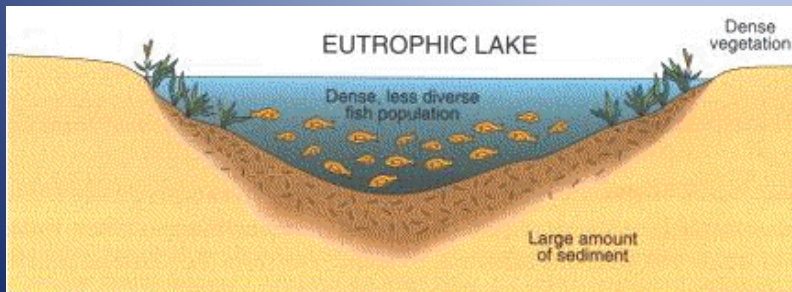


Oligotrophic 5-10 ppb

✓ LA

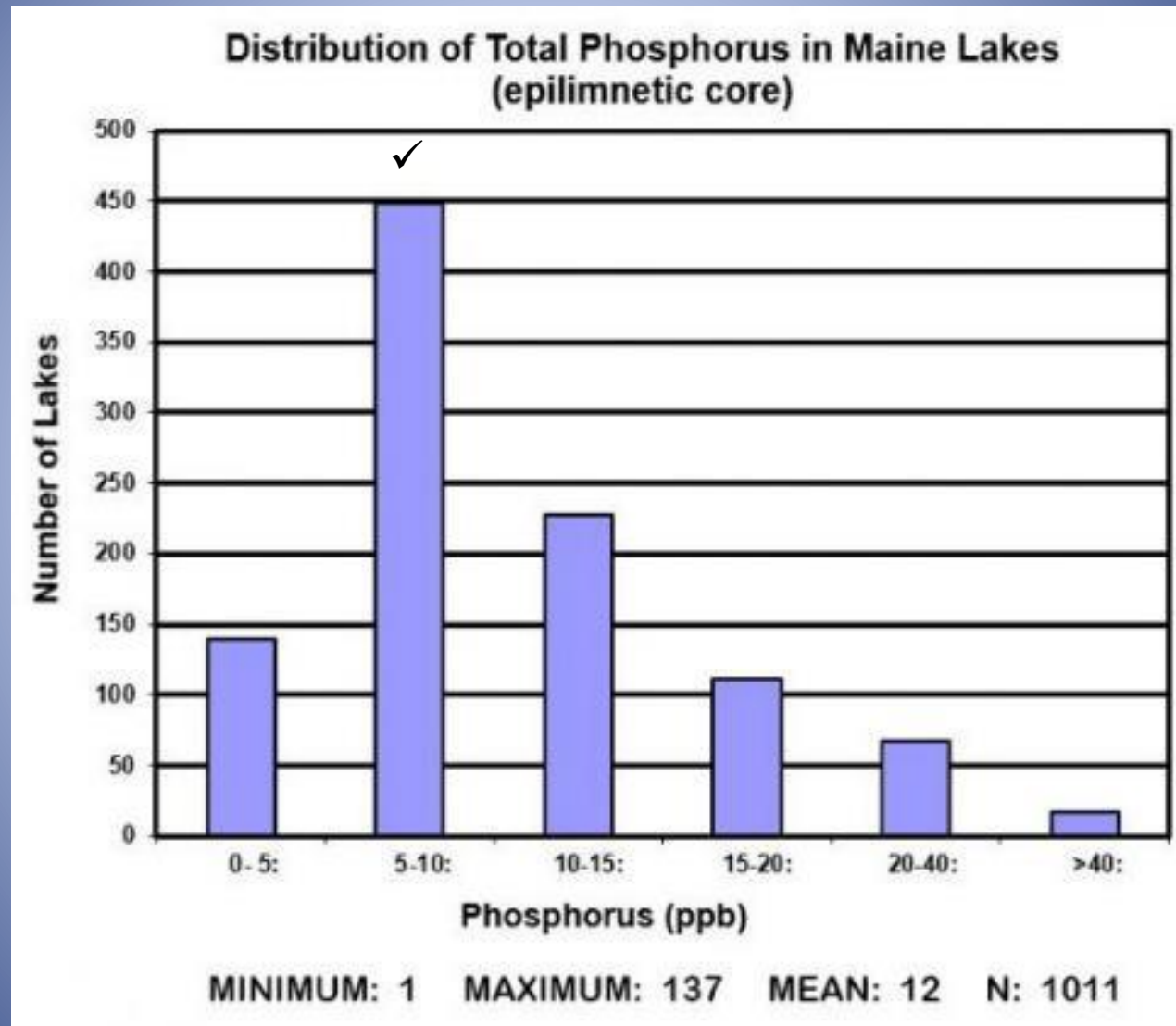


Mesotrophic 10-30 ppb



Eutrophic 30-100 ppb

Lake Anasagunticook is in the peak distribution for lakes in Maine



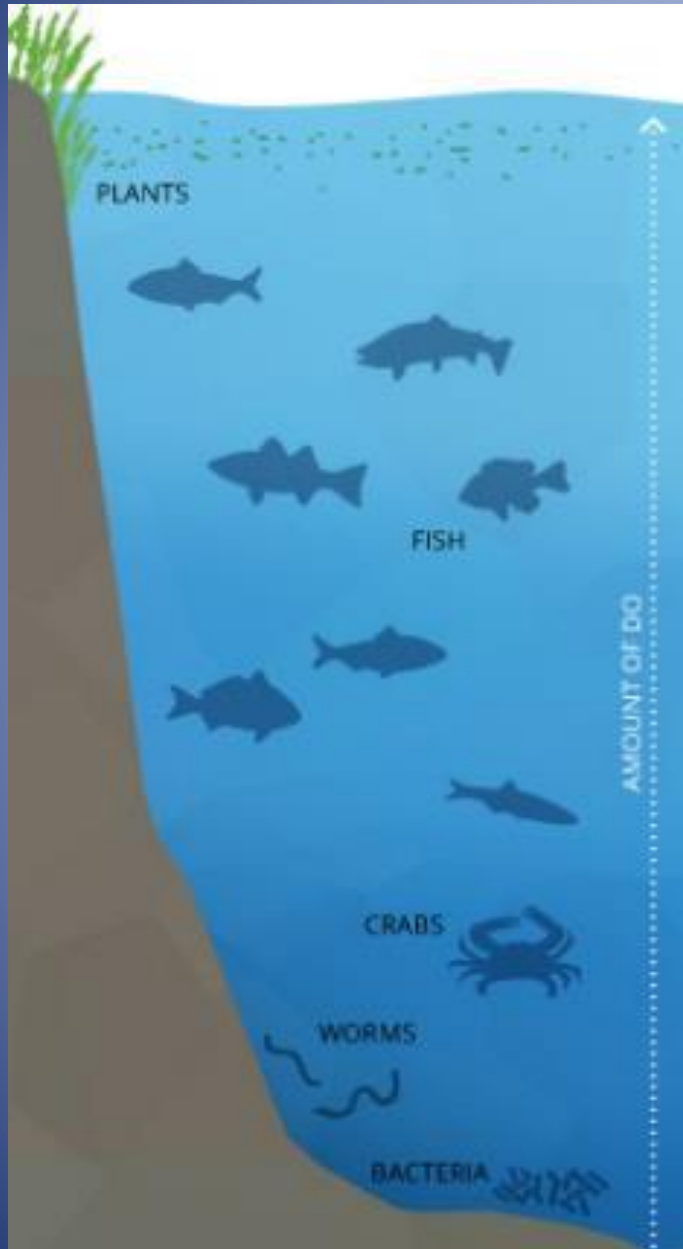
Dissolved Oxygen

Water is H_2O

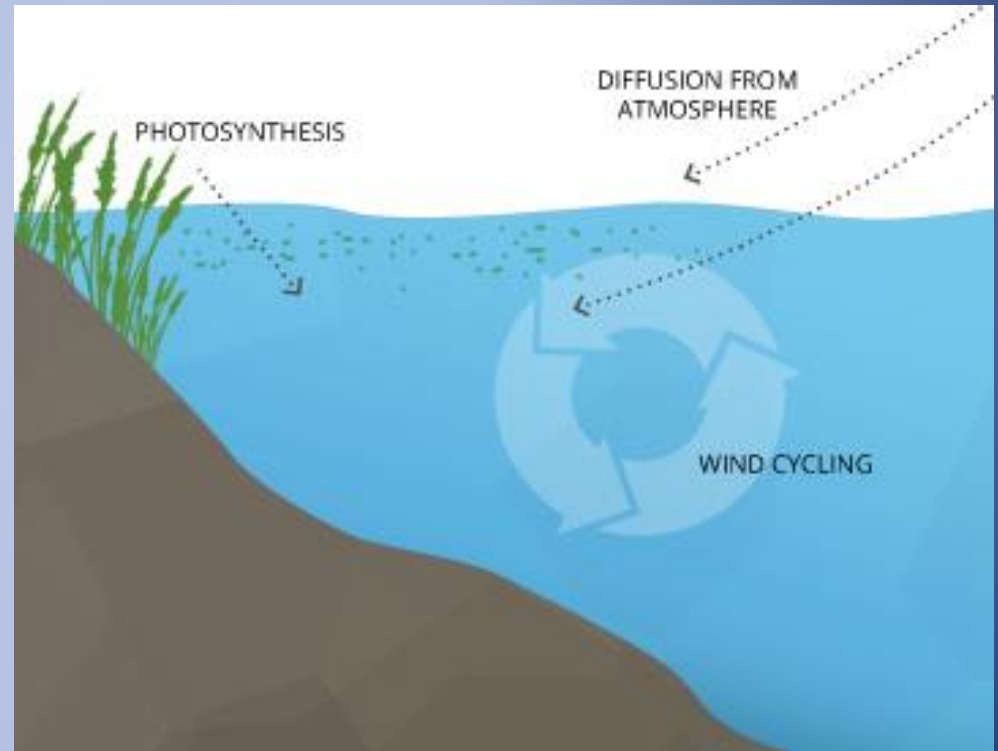
Dissolved oxygen is O_2



Dissolved Oxygen in a Lake



www.fondriest.com

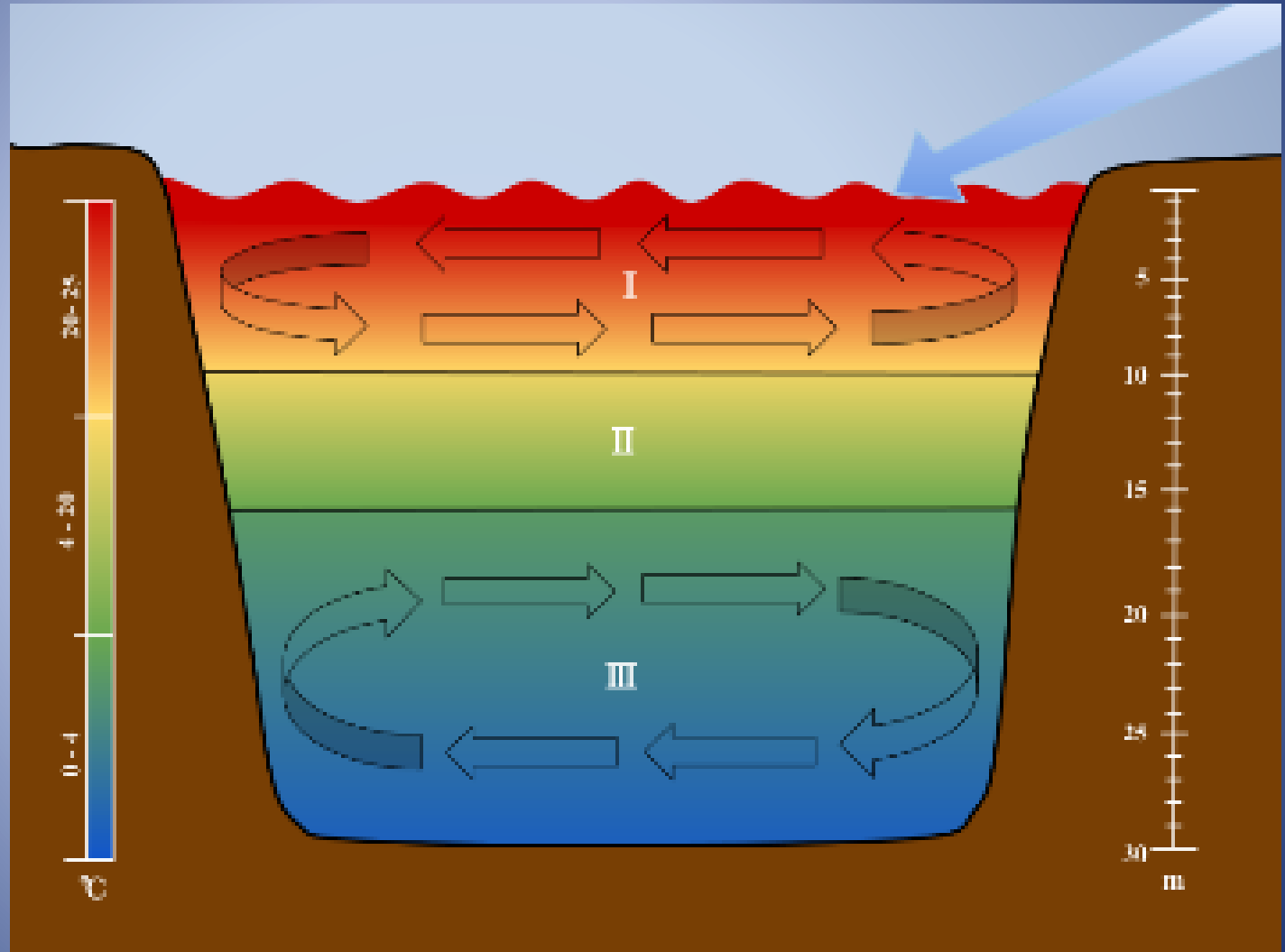


www.fondriest.com/

Lake Dynamics - Summer

Establishment of
the Thermocline

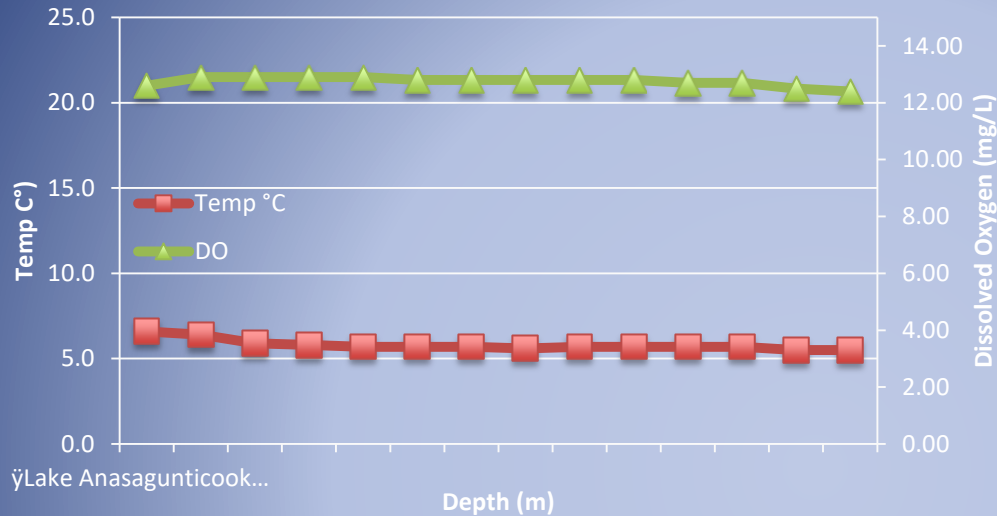
20°C = 68°F



Lake Dynamics – Summer & Fall

Anasagunticook Temp and DO Profile

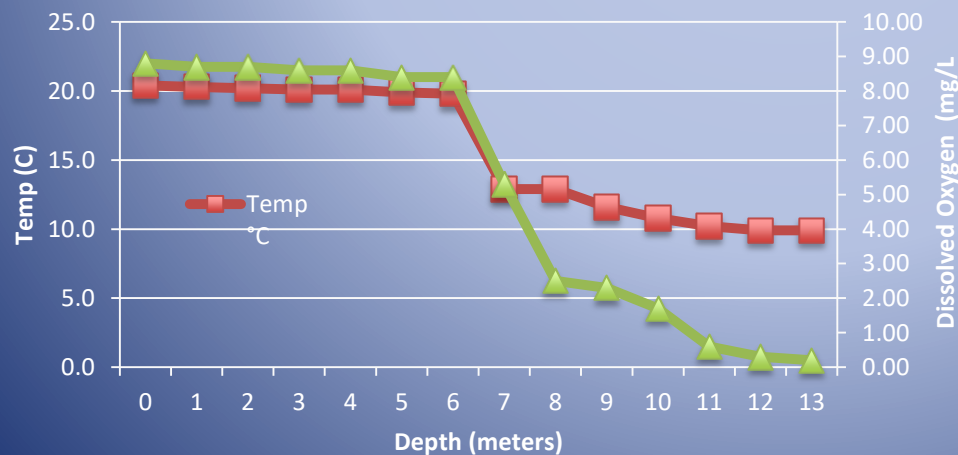
April 19, 2020



Warm water holds less oxygen than cold water.

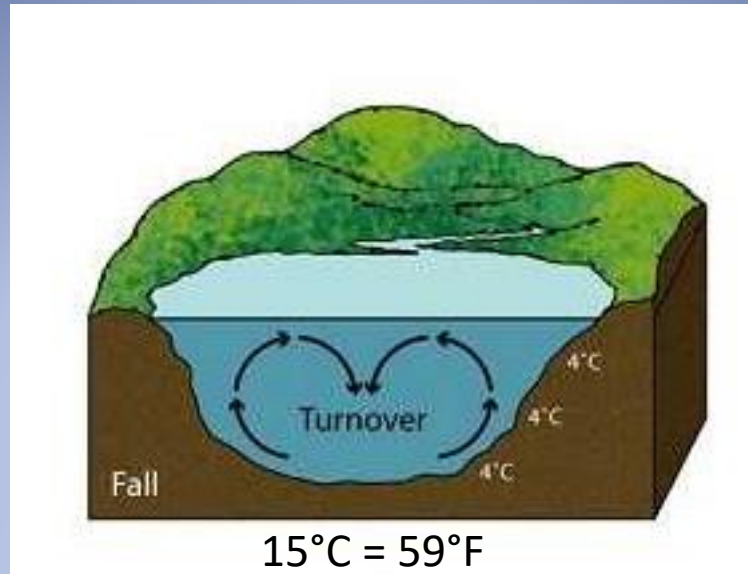
Anasagunticook Temp and DO Profile

September 1, 2020

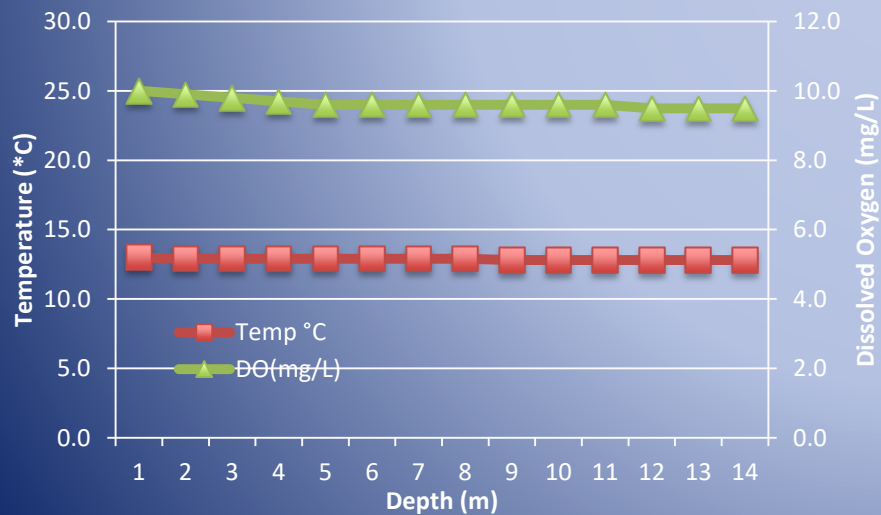


Cold water is more dense than warm water.

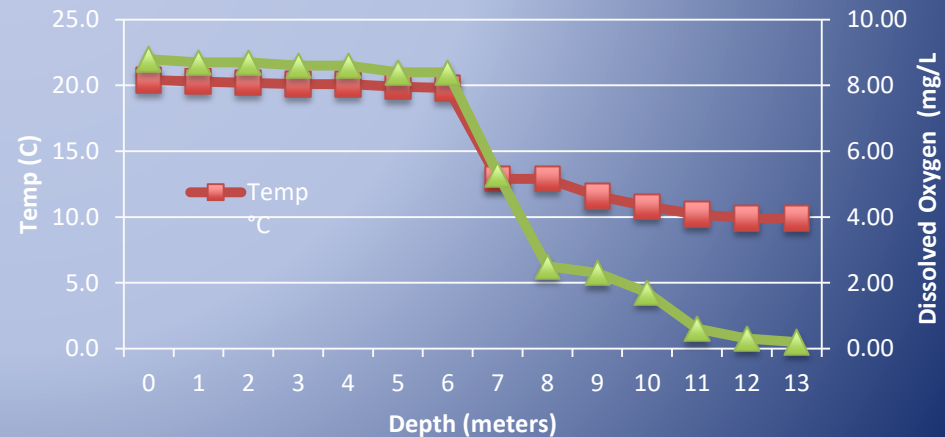
Lake Dynamics - Fall



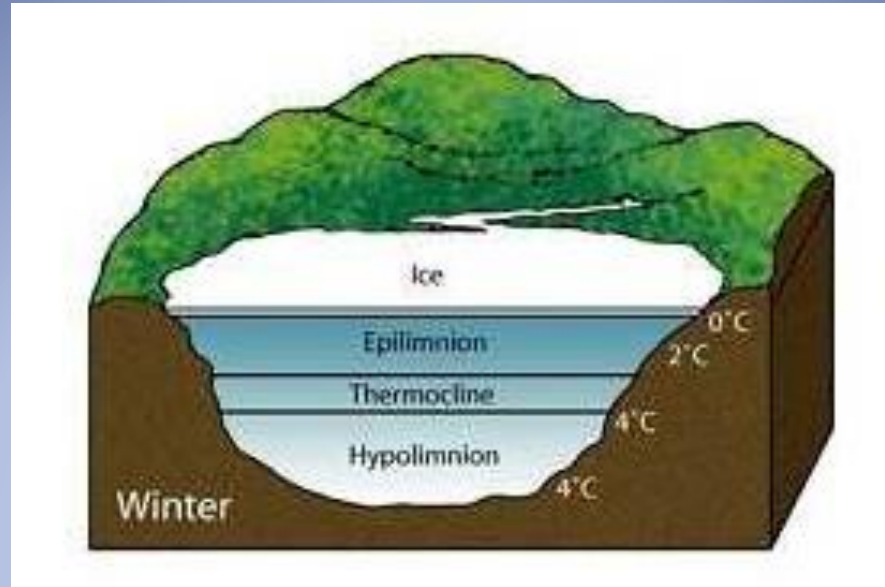
Anasagunticook Temp and D.O. Profile
Oct. 19, 2019



Anasagunticook Temp and DO Profile
September 1, 2020

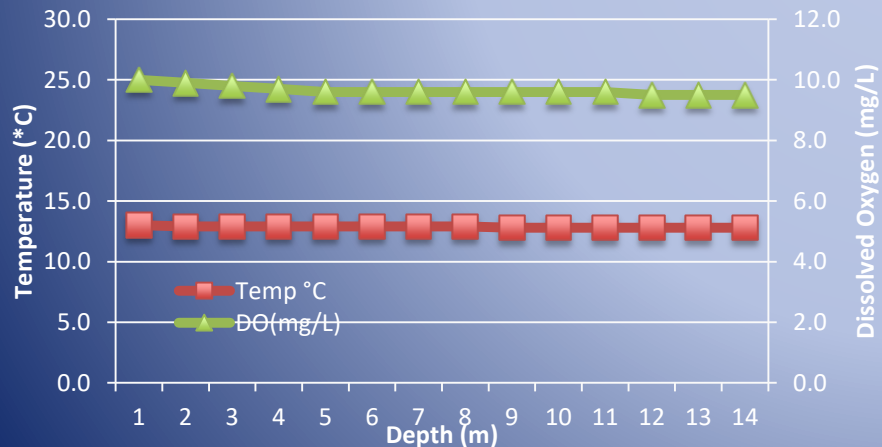


Lake Dynamics - Winter

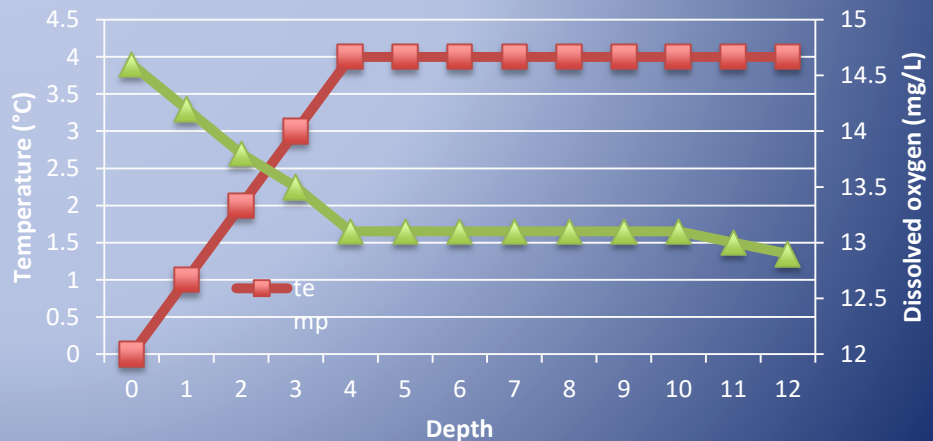


0°C = 32°F
4°C = 39°F

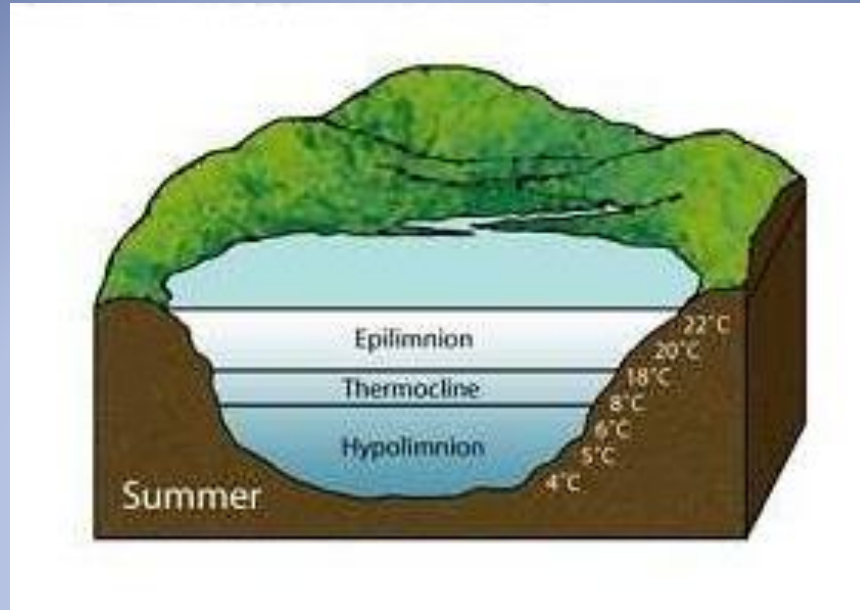
Anasagunticook Temp and D.O. Profile
Oct. 19, 2019



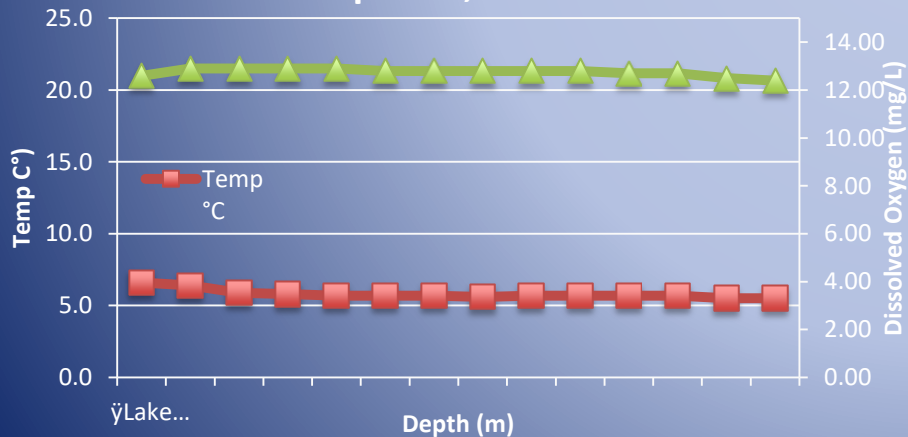
Lake Anasagunticook February
Hypothetical Temp. and DO Profile



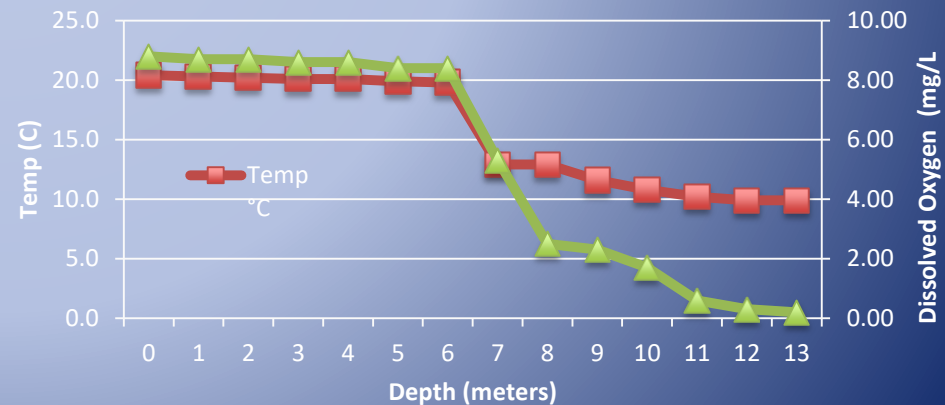
Lake Dynamics - Spring



Anasagunticook Temp and DO Profile
April 19, 2020



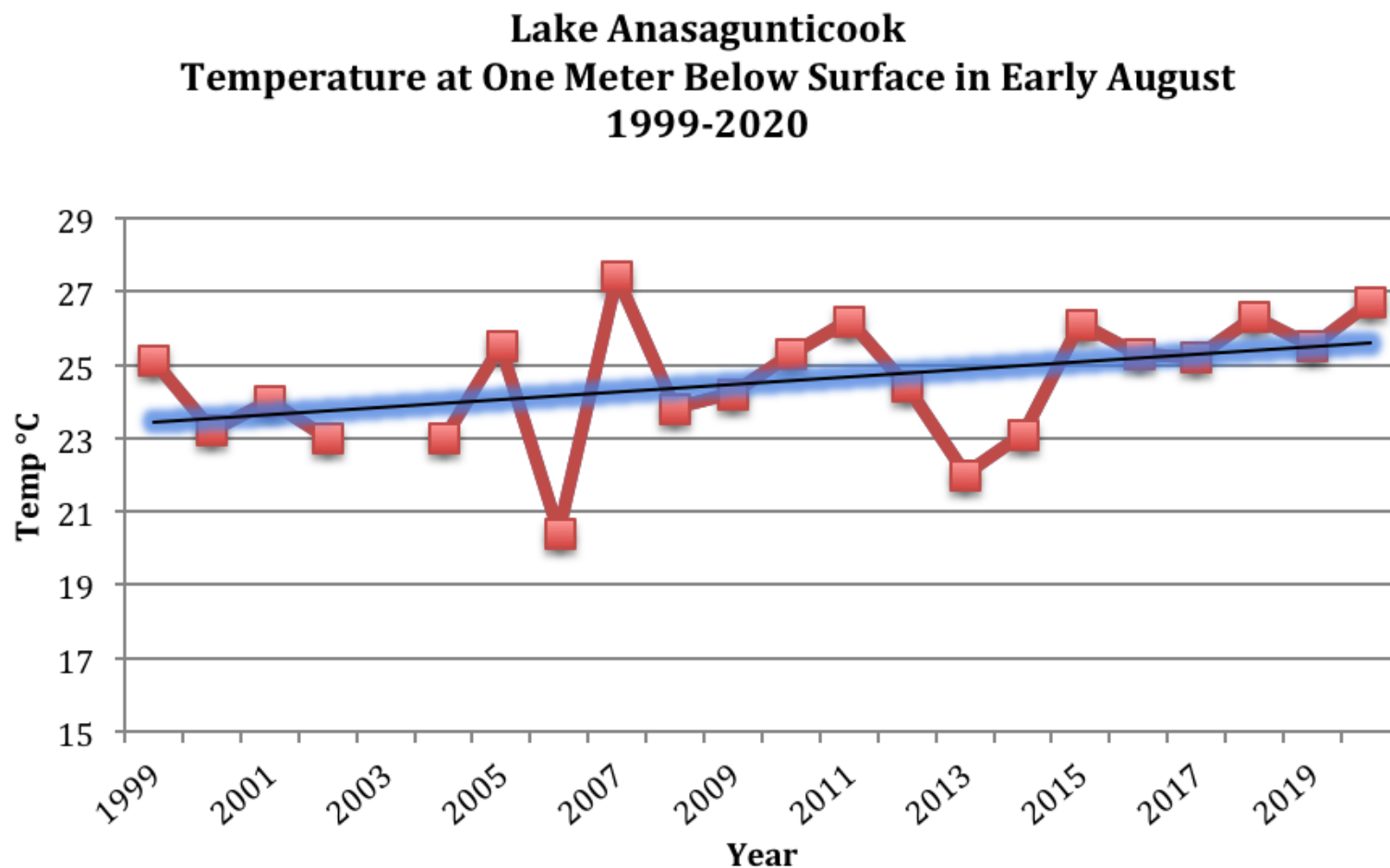
Anasagunticook Temp and DO Profile
September 1, 2020



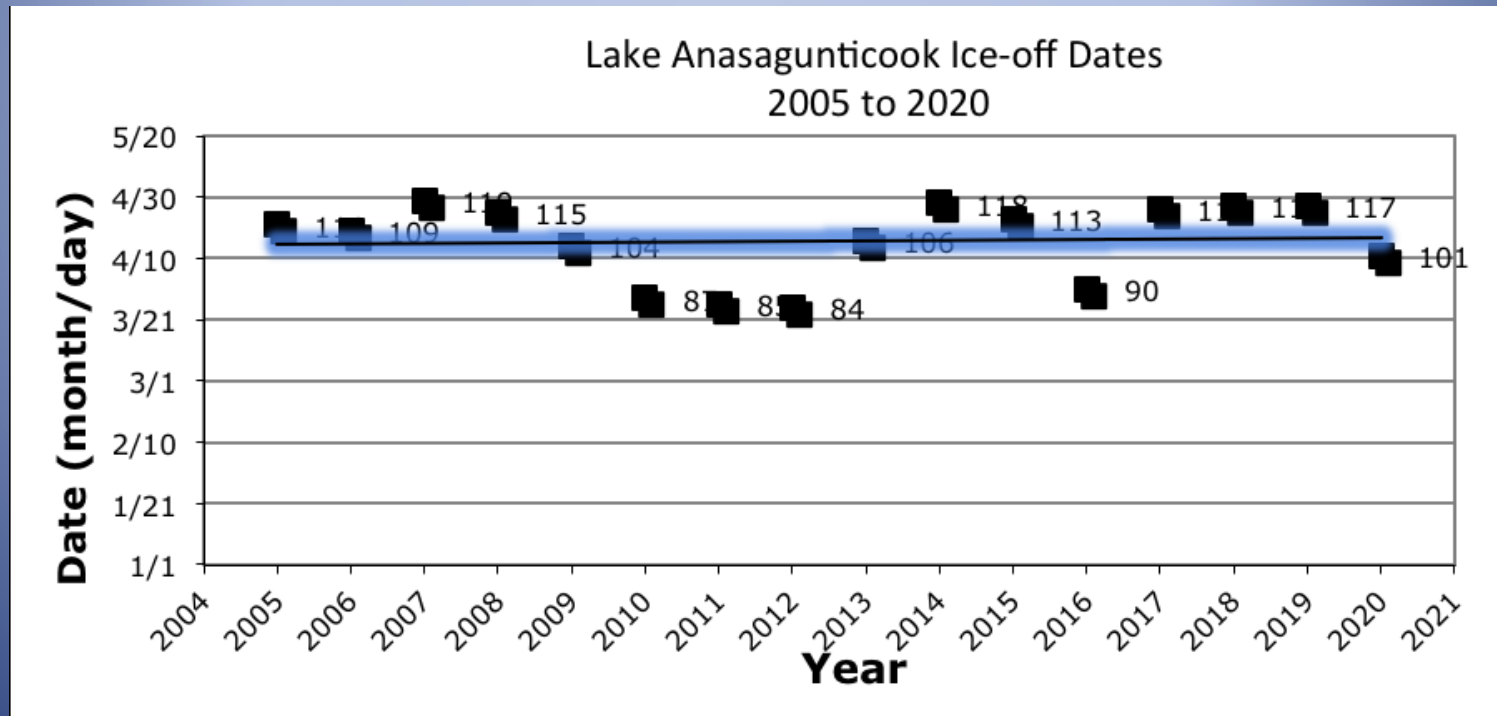


The Trend is the lake's water is warming

About 3.6°F over twenty years.



Ice-off Trend



T. Hamilton

Lake Anasagunticook Mystery Snail Survey

June 2020

Oregon Department of Fish & Wildlife CC BY-SA2.0



USGS Public Domain



The infested area does not seem to have increased in the last three years, though there is anecdotal data of sightings near the Hartford beach



Google Map

Crown Jewel Lakes of Central Maine

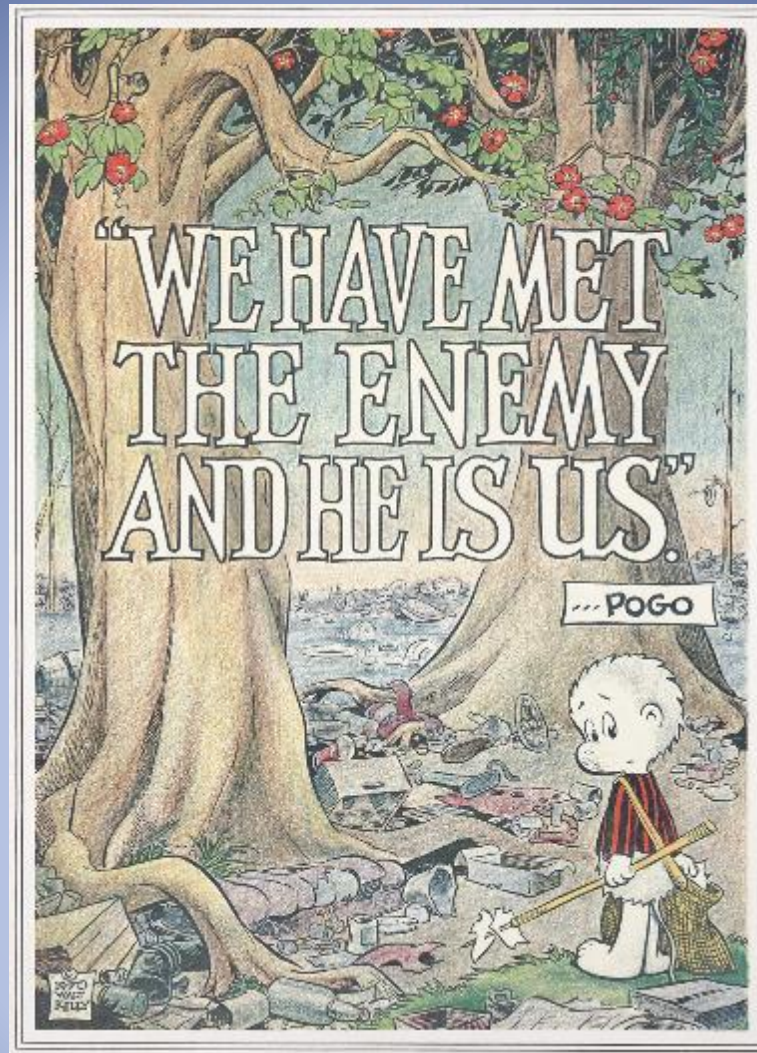
Lake Steward Workshop

Lloyd Ireland

Matt Scott

<https://vimeo.com/427841734/d4220d04de>

Start at 19.30 for best viewing



Walt Kelly

“We Have Met the Enemy...”

1980 reprint of 1970 poster

Toni Mendez Collection

Directors Proposed for 2020 – 2021

Name	EXP.
Tim Kirwan*	2020
Mike McCluskey	2022
Biff Atwater*	2020
Diane Ray	2021
Bill Gray	2021

Name	EXP.
Elaine Gammon*	2021
Mary Ellen Baron	2021
Christine Carrigan	2022
Carolyn Gray*	2021

*Agreed to extend one additional year

- Nominations accepted from the floor....

Officers Proposed for 2020-2021

Tim Kirwin – Pres.

Mike McCluskey - VP

Diane Ray – Sec.

Biff Atwater – Treas.

President's Direction for 2021





Lake Anasagunticook Association RAFFLE RESULTS 2020

Specialty Cut Flower Certificate	Bill Gray
Kid's Gift Basket	Joanne Bartlett
Hannaford Gift Cert.	Mary Ellen Kirwan
35\$ Gift Card	Jim Sanders
PEMF Magnawave	Diane Ray
Pet Lover's Basket	Diane Lavoie

Wine/Cheese Basket	Mel Baron
Succulent Planter	Bill Gray
Shelf/Key Hook	Barbie Dolloff
Braided Rug	Liz & Jerry Rothrock
Guild's Hardware Gift Certificate	Caroline Rothrock
Pitcher & Glasses	Joanne Bartlett

In addition to Dues that were collected the Raffle
raised \$321

Upcoming Meeting Dates



Event	Date
Fall Board Meeting	Oct 13 th , 2020 4pm
Fall Newsletter	November
Winter Board Meeting	Dec 15 th , 2020 4pm
Early Spring Board Meeting	Feb 12 th , 2021, 4pm
Spring Newsletter	March
Early Summer Board Meeting	April 13 th , 2021 4 pm
Summer Board Meeting	June 15 th , 2021, 4pm
Summer Newsletter	August
Dog Days of Summer Board Mtg.	Aug 3 rd , 2021 4pm
Lake Days	August 14, 2021
Annual Meeting	August 15, 2021