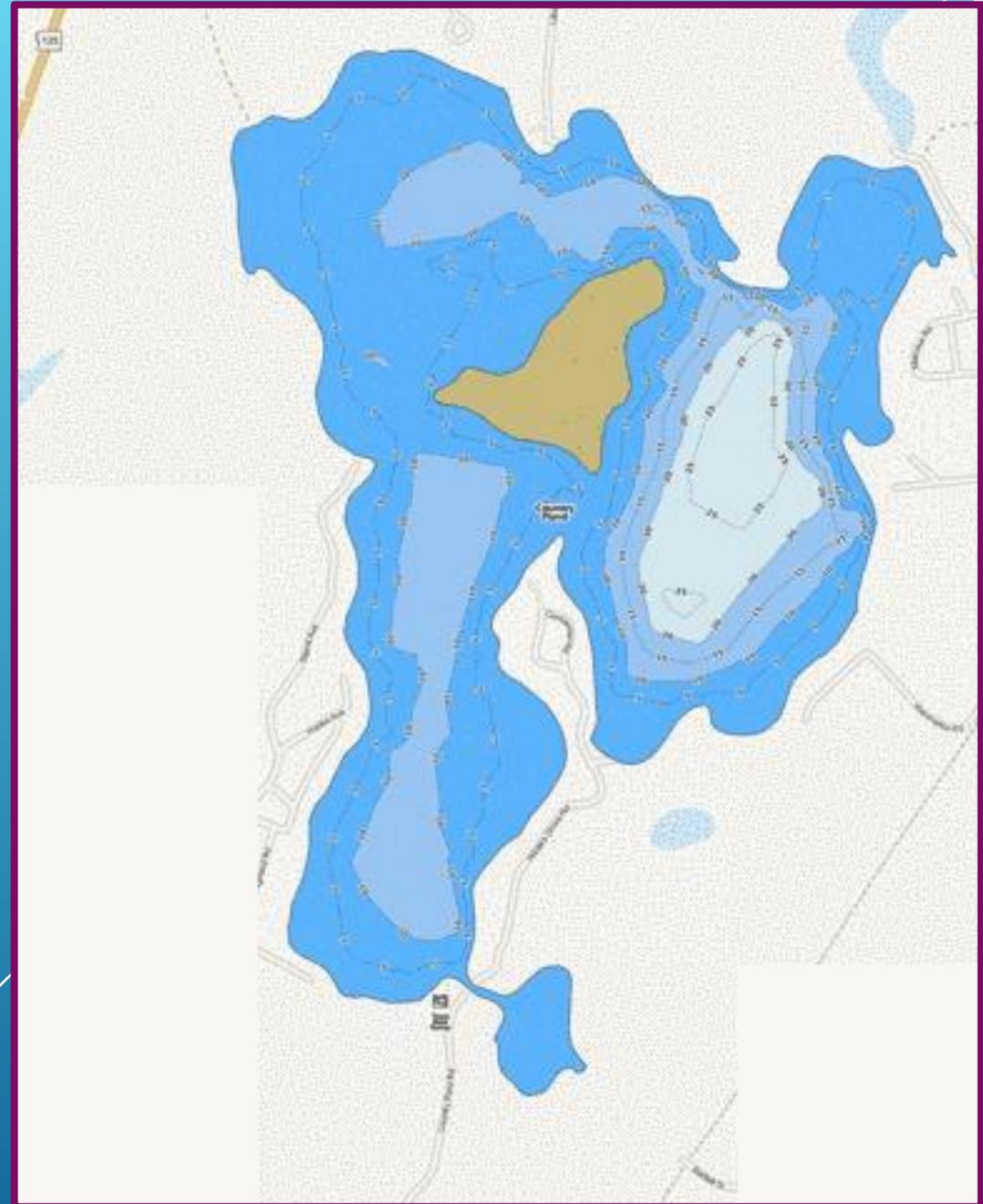# COUNTRY POND

*2020
VOLUNTARY LAKE
ASSESSMENT PROGRAM
(VLAP) SUMMARY*

Alicia Geilen

VLAP Coordinator
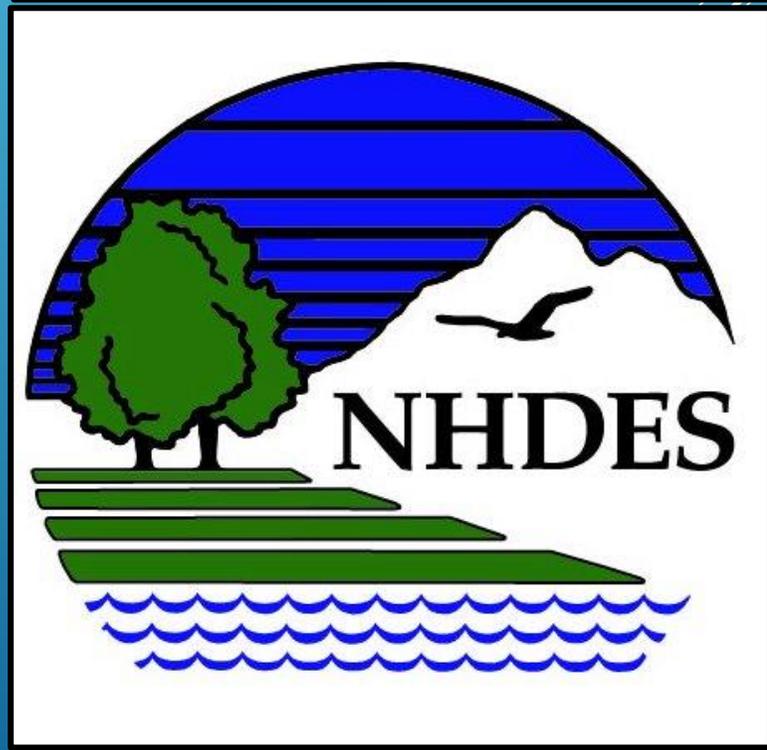
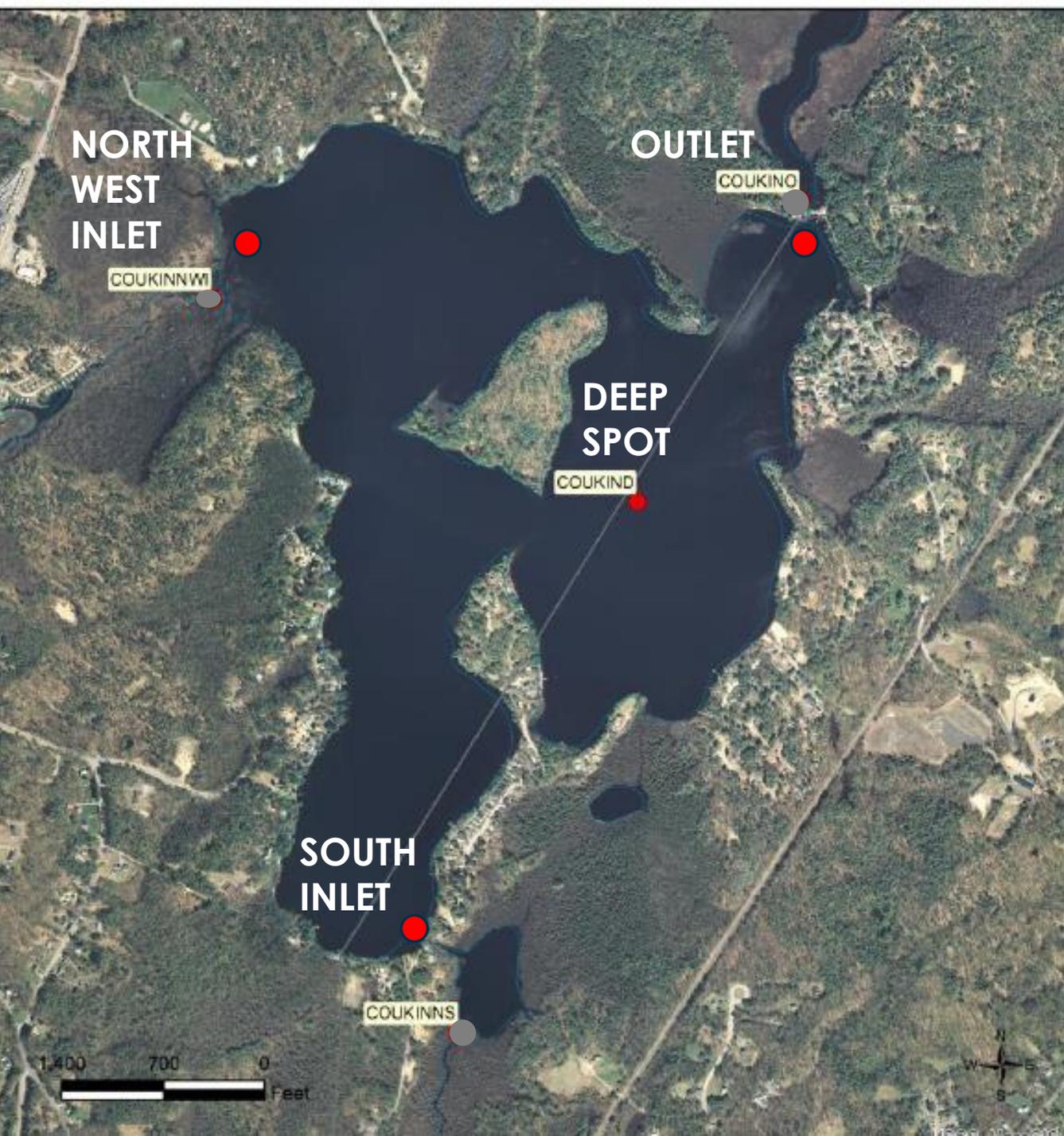# ABOUT THE DATA

➢ Summary Table is from the state annual report;
➢ Data are a "snapshot in time". **To understand a trend you need 10 years of data**.
➢ The first year (2018) we sampled four months (June – September).
➢ In 2019 and 2020 we sampled five months (May – September).
➢ For 2021, we will only sample June – September, due to COVID constraints at the DES Laboratory.

Special thanks to:

- **Kingston Conservation Commission** for their continued generous financial support.

- **NH Dept. of Environmental Services** for providing technical support;

- Most important – my fellow **VLAP volunteer, Bill Cashin,** for not only providing his boat for sampling, and sharing sample transportation duties to DES in Concord, but also for being my "COVID sampling buddy" in 2020.

    YOU ROCK CAPT. BILL!

NORTH WEST INLET
COUKINNWI

OUTLET
COUKINO

DEEP SPOT
COUKIND

SOUTH INLET
COUKINNS

1,400   700   0
Feet

Per NH DES, we sample at four locations: the Outlet, two inlets (North West and South), and the "Deep Spot".

The goal is to gather data over the years to get a better understanding of the water quality in Country Pond.

STATE'S 2020 SUMMARY TABLE

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Cautionary	Limited data for this parameter predicts exceedance of water quality standards or thresholds; however more data are necessary to fully assess the parameter.
	pH	Slightly Bad	Data periodically exceed water quality standards or thresholds for a given parameter by a small margin.
	Oxygen, Dissolved	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.
	Dissolved oxygen satura	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.
	Chlorophyll-a	Good	Sampling data is better than the water quality standards or thresholds for this parameter.
Primary Contact Recreation	Escherichia coli	No Data	No data for this parameter.
	Cyanobacteria hepatoto	Bad	Cyanobacteria bloom(s).
	Chlorophyll-a	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

COUNTRY POND - TASKER DAY CAMP BEACH	Escherichia coli	Encouraging	Limited data for this parameter predicts water quality standards or thresholds are being met; however more data are necessary to fully assess the parameter.
COUNTRY POND - LONE TREE SCOUT RESV. BEACH	Escherichia coli	Very Good	All sampling data meet water quality standards or thresholds for this parameter.
COUNTRY POND - TOWN BEACH	Escherichia coli	Very Good	All sampling data meet water quality standards or thresholds for this parameter.
COUNTRY POND - TASKER DAY CAMP BEACH	Cyanobacteria	Bad	Cyanobacteria bloom(s).
COUNTRY POND - LONE TREE SCOUT RESV. BEACH	Cyanobacteria	Bad	Cyanobacteria bloom(s).
COUNTRY POND - TOWN BEACH	Cyanobacteria	Bad	Cyanobacteria bloom(s).

TRANSPARENCY

This is a measure of water clarity, and is affected by the amount of algae, color, and particulate matter within a lake. In 2020 average we could see the Secchi-disk was 2.7 meters (~9'); slightly better than 2019. A depth of 2-4.5 meters is considered good.

Although levels were better than in previous years, they remain slightly worse than the state average.

CHLOROPHYLL-A

This is measured to estimate amount of algal growth in a lake system.

Chlorophyll levels were relatively stable all summer. Average chlorophyll level improved slightly from 2019 and was better than the state median for mesotrophic lakes.

CONDUCTIVITY/CHLORIDE

Conductivity measures the ability of water to carry an electrical current. Elevated conductivity and chloride may indicate pollution from such sources as road salting, septic systems, or lawn/agriculture runoff.

Conductivity and chloride levels remain elevated, and much higher than the state medians at all sampling locations.

DES has previously noted that epilimnetic (uppermost layer) conductivity levels have increased greatly since 2006, and are worse than the state average, but note that in 2020 they are improving since 2018.

TOTAL PHOSPHORUS (TP)

In lakes, TP determines the amount of algal growth that can occur. Too much phosphorus can lead to excessive algal and cyanobacteria populations. Sources around a lake typically include septic systems, animal waste, lawn fertilizer, erosion from roads and construction sites, and a small amount from wetlands.

*On average, 2020 phosphorus levels were slightly better (lower) than 2019, however, they exceeded the target of **0.012 mg/l (12 ug/l)** in most locations for most sampling events, with the exception of June, and still are worse than the state's average.*

DES Summary and Recommended Actions:

Overall conditions since 2018 are relatively stable. Phosphorus, chlorophyll, and transparency (clarity) levels were better than measured in the past. However, pH levels have gotten worse (more acidic) compared to the past. In addition, high phosphorus levels in deeper water may mean that phosphorus is being released from the pond bottom (sediment) to the water column of the pond. This can lead to excess algae/cyanobacteria growth. **If you see for any cyanobacteria surface scums or blooms, notify DES immediately**.

DES says to continue the great work to develop a watershed management plan to help identify and quantify nutrient (phosphorus) loads to the pond.

DES Summary and Recommended Actions - continued

Conductivity and chloride levels remain higher than in the past, likely from the increased use of road salt in the winter. CPLA encourages local road agents, private winter maintenance companies, and area residents to use less de-icers.

DES also suggests shorefront property owners become certified LakeSmart through NHLAKES' lake-friendly living program. To learn more and take the online self-assessment, *visit* www.nhlakes.org/lakesmart/.

VLAP MONITORING REPORTS & INFO ON LINE

https://www.des.nh.gov/water/rivers-and-lakes/volunteer-assessment-programs

https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-country-newton.pdf

NEW HAMPSHIRE HOMEOWNER'S GUIDE TO STORMWATER MANAGEMENT

DO-IT-YOURSELF STORMWATER SOLUTIONS FOR YOUR HOME

Thanks for listening!

Any questions?