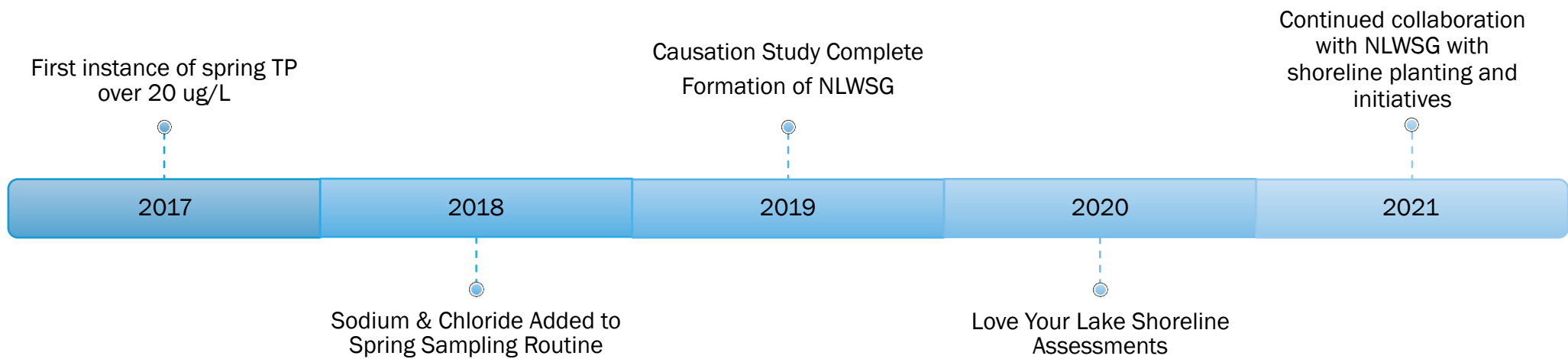

NEPAHWIN LAKE 2021 FIELD SUMMARY

TAYLOR MENARD

LAKE WATER QUALITY PROGRAM COORDINATOR

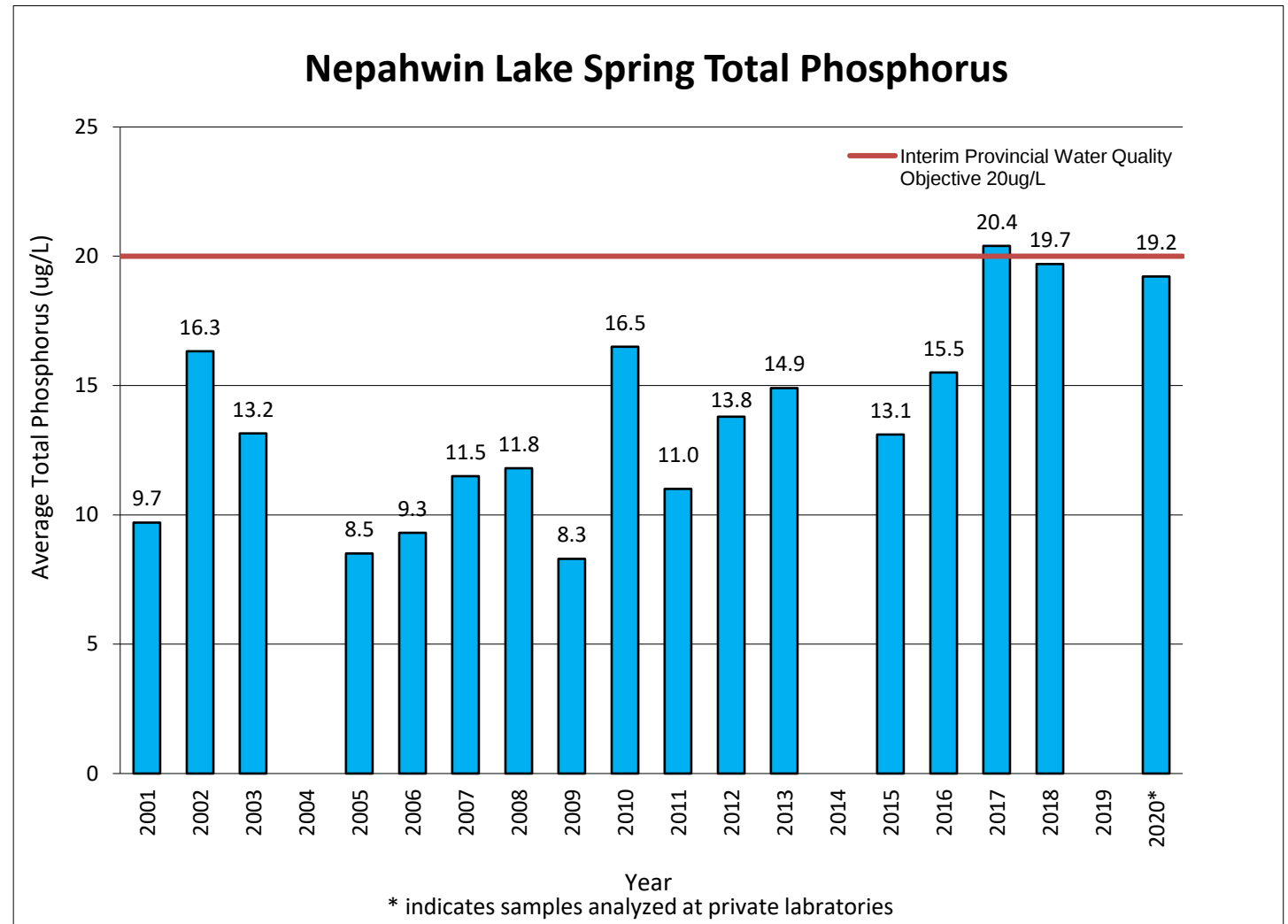
CITY OF GREATER SUDBURY





SPRING PHOSPHORUS

- 2021 spring phosphorus samples sent to Dorset through Lake Partner Program
- Still awaiting results from LPP
- Sodium, chloride and D.O.C samples taken alongside TP samples
- Na, Cl and D.O.C analyzed at Testmark



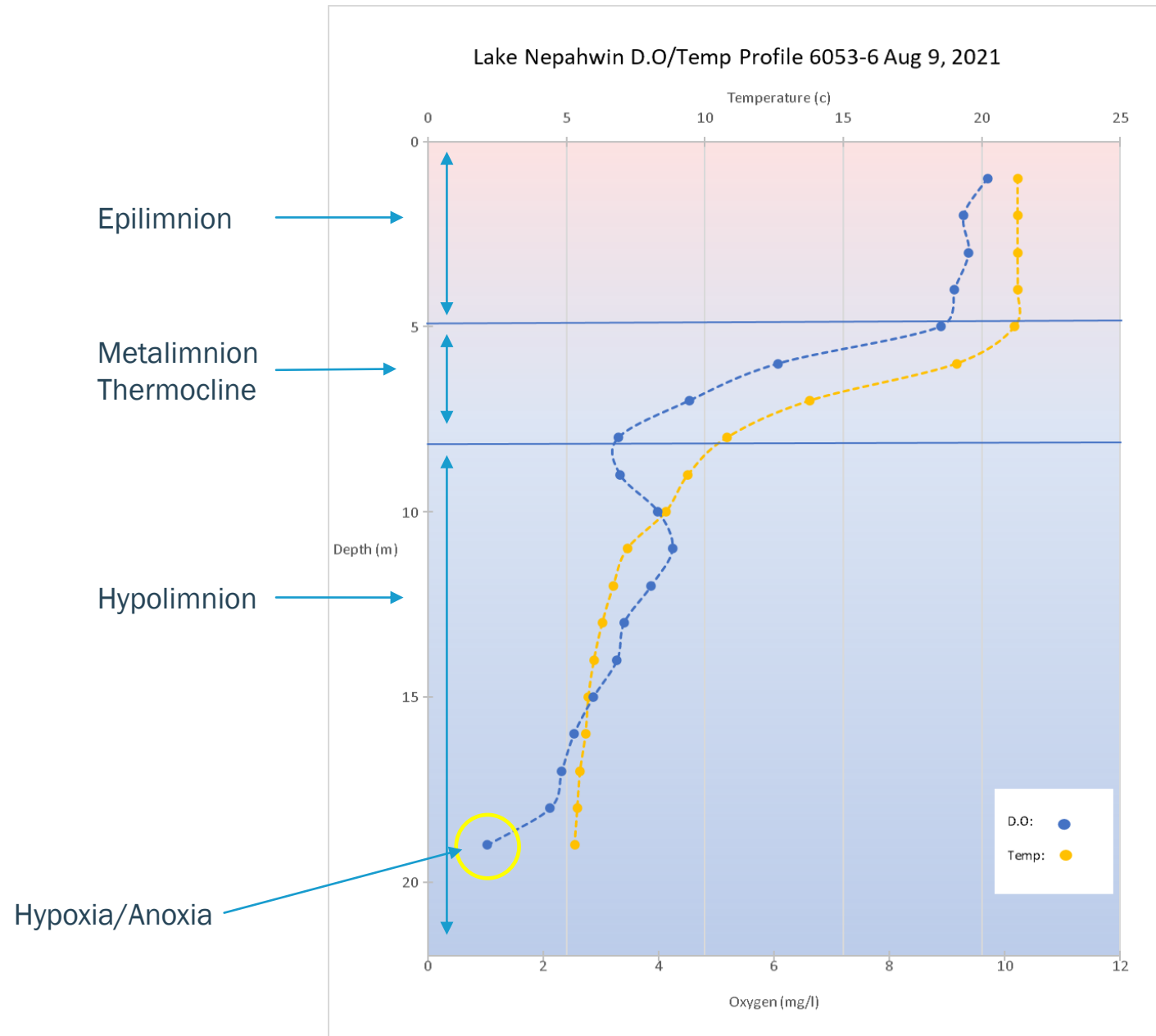
ICE FREE SAMPLING

- Secchi depth TP ranges from 2.0 – 31.0 µg/L at individual sites
- 1m off bottom TP ranged between 20.0 – 105.0 µg/L during hypoxic/anoxic conditions at individual sites
- Hypoxic/Anoxic conditions occurring between July-September with elevated TP values indicating internal loading

2021 Nepahwin Lake Average Ice Free Total Phosphorus (µg/l)

Date	Surface Avg (µg/L)	1m Off Bottom Avg (µg/L)
7/23/2021	12.3	52.0
8/9/2021	16.0	40.5
8/26/2021	16.8	56.2
9/1/2021	19.5	62.5

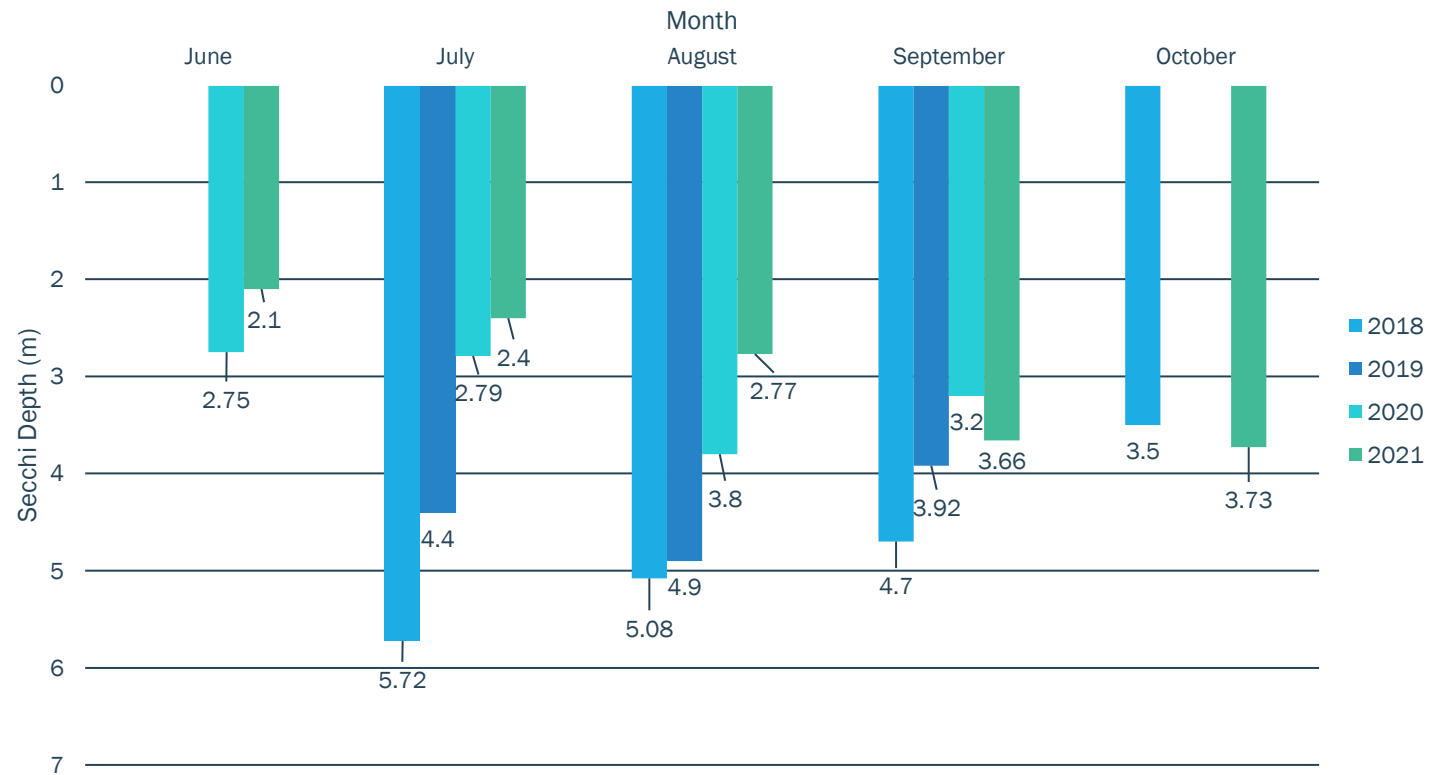
* All samples analyzed at Testmark Laboratories

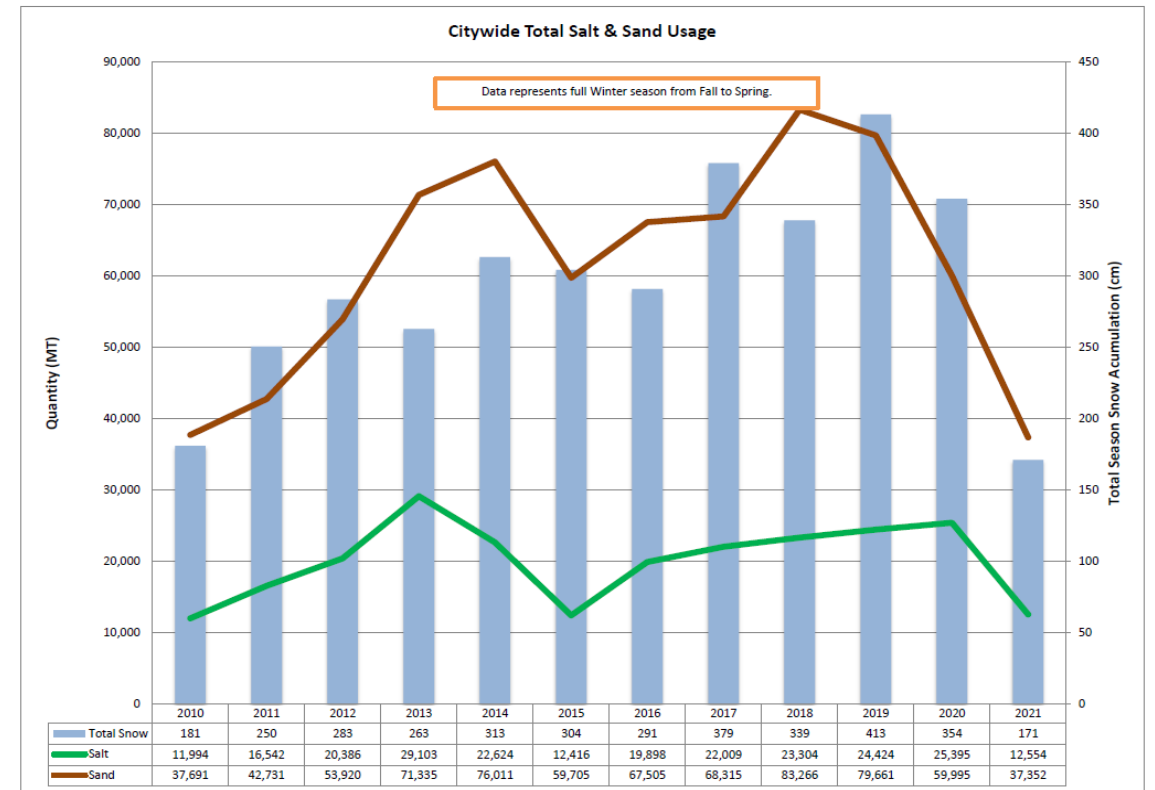
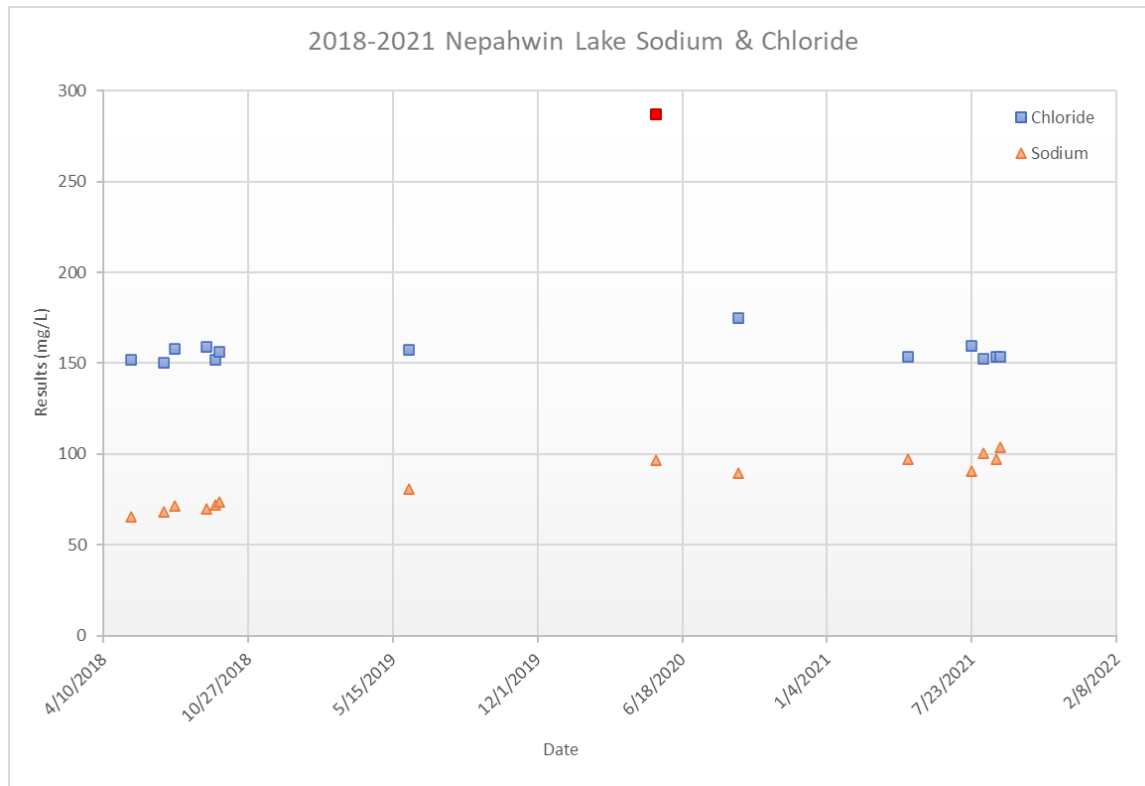


SECCHI DEPTH

- Bi-weekly secchi reading through LWQP
- Combined results with stewardship activities
- Lower water clarity in July/August with average water clarity in September/October
- CGS to continue to monitor for trends

Nepahwin Lake Secchi Depth Averages by Month (CGS & NLWSG Values)

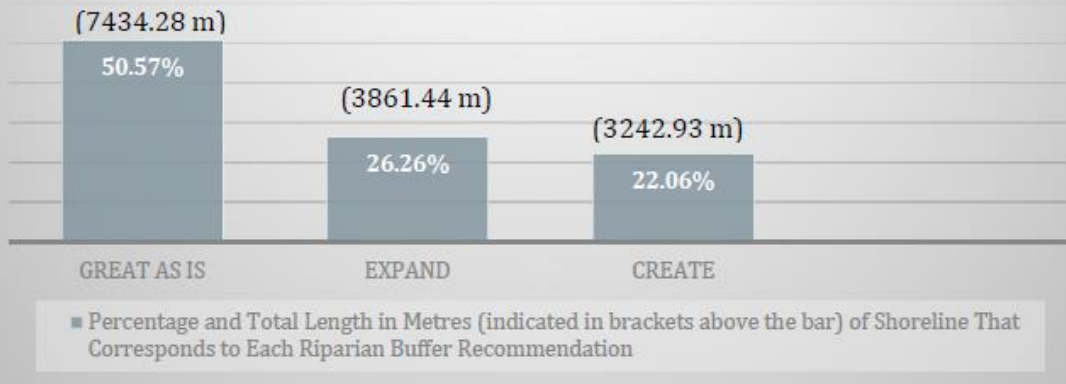




SODIUM & CHLORIDE

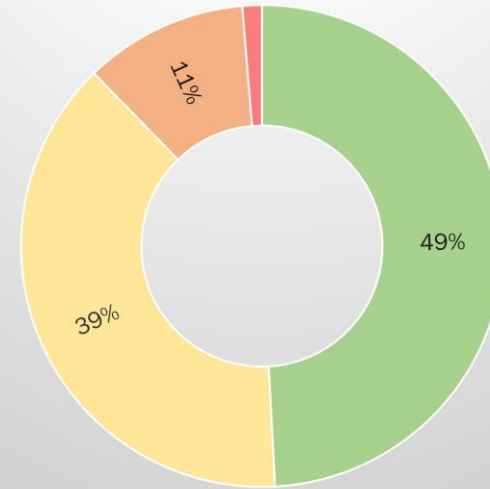
- Chloride values between 2018-2021 remain stable * $R^2=0.004$, $P>0.05$
- Sodium increasing between 2018-2021 *statistically significant $R^2=0.91$, $P<0.05$
- Ice-free samples include surface and 1m off bottom samples – representing full water column
- No evident difference in surface vs bottom results
- No significant increase in salt usage on roads in this time period

Percentage and Total Length in Metres (indicated in brackets above the bar) of Shoreline That Corresponds to Each Riparian Buffer Recommendation



Nepahwin Lake Setbacks

0-5m 5-10m 10-30m 30+m



LOVE YOUR LAKE

- Interim lake summary report now available
- Values surveys still in progress
- Combined report will be made available once received from CWF

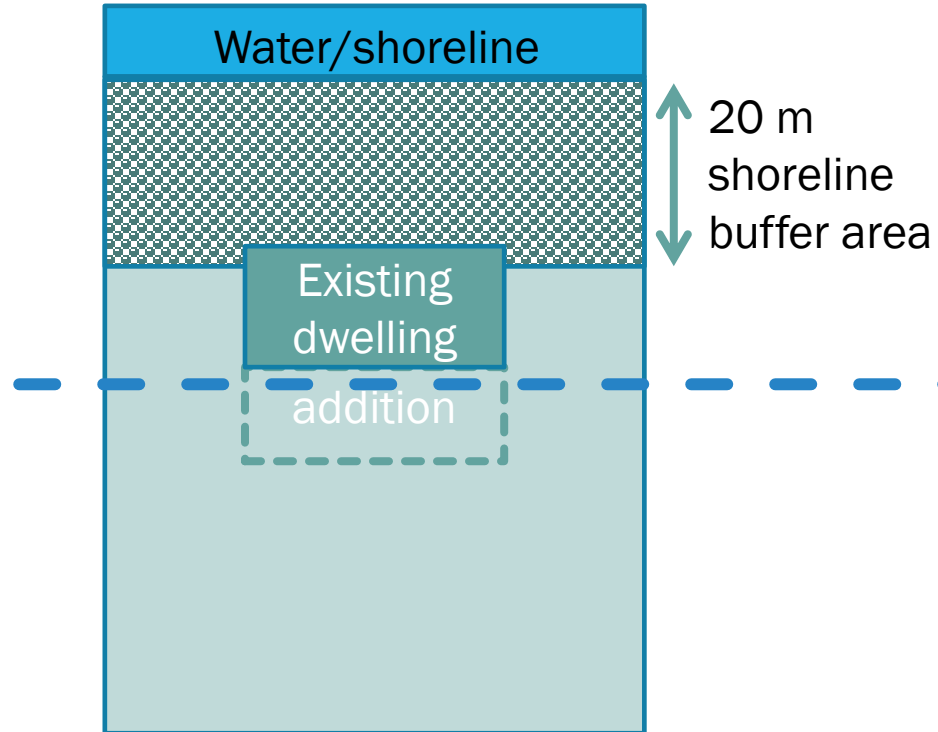


SHORELINE DEVELOPMENT PROVISIONS

- Setback from lake or river for new development (excluding shoreline structures) of 30 m
- Setback for leaching beds of 30 m adjacent to lakes, rivers and streams
- Shoreline buffer area increased to 20 m abutting lakes and rivers.
- Site plan control to be implemented to ensure shoreline buffers are maintained or created

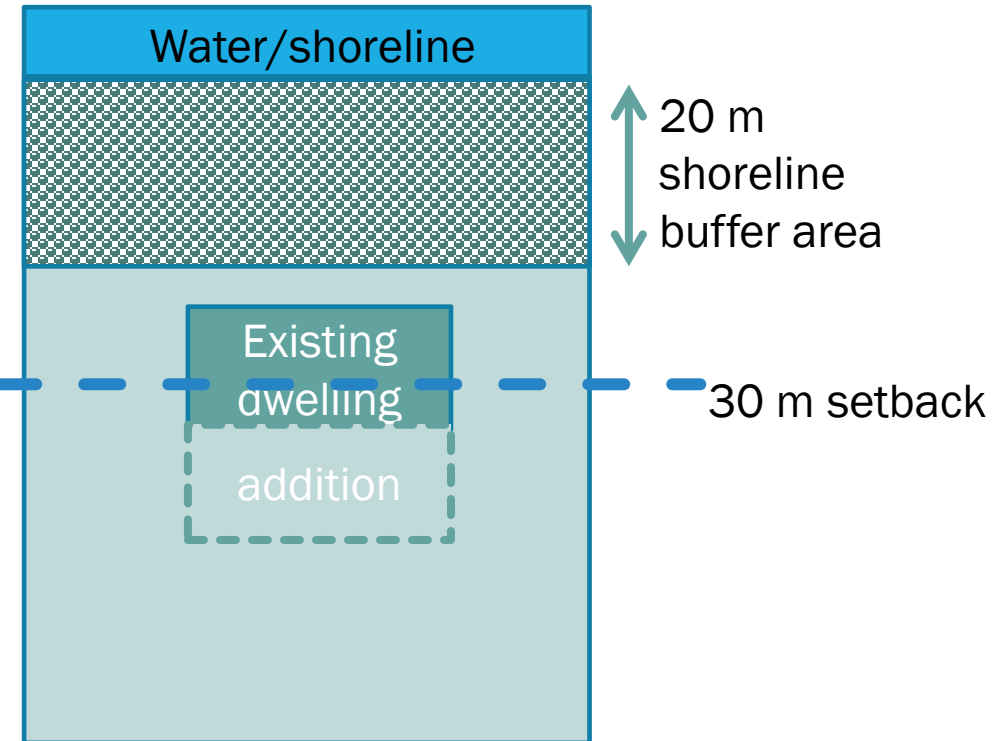


SCENARIO A



Variance to section 4.25.1 required

SCENARIO B



Variance to section 4.25.1 not required



QUESTIONS?

Contact Information

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