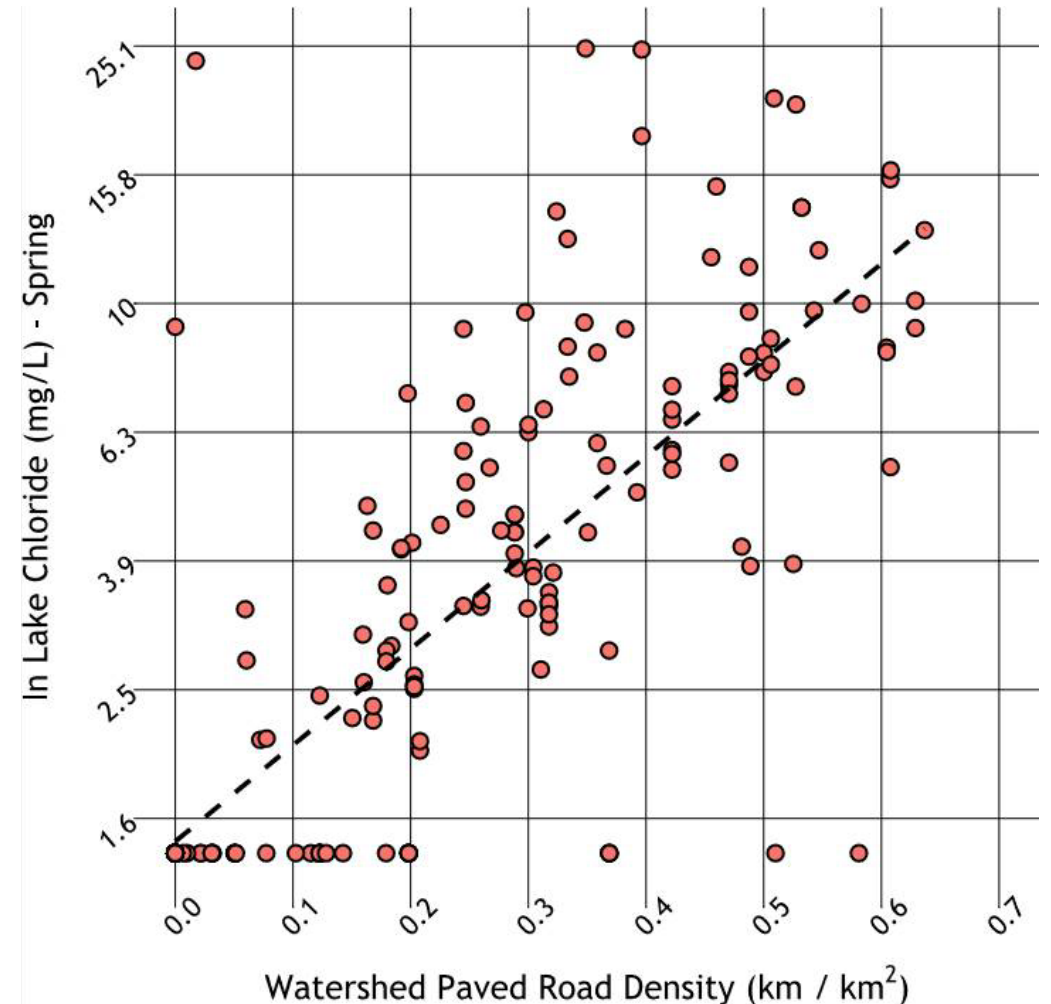


Chloride Contamination in Vermont Lakes and Streams

- VTDEC began regularly monitoring total chloride in Vermont's inland lakes in 2006.
- 2 mg/L is the lowest reading the instrument used can have, it's called the minimum detection level.
- Lakes without road salt impacts are expected to have readings near or below detection limit.
- Lakes with high road density typically have higher total chloride concentrations.

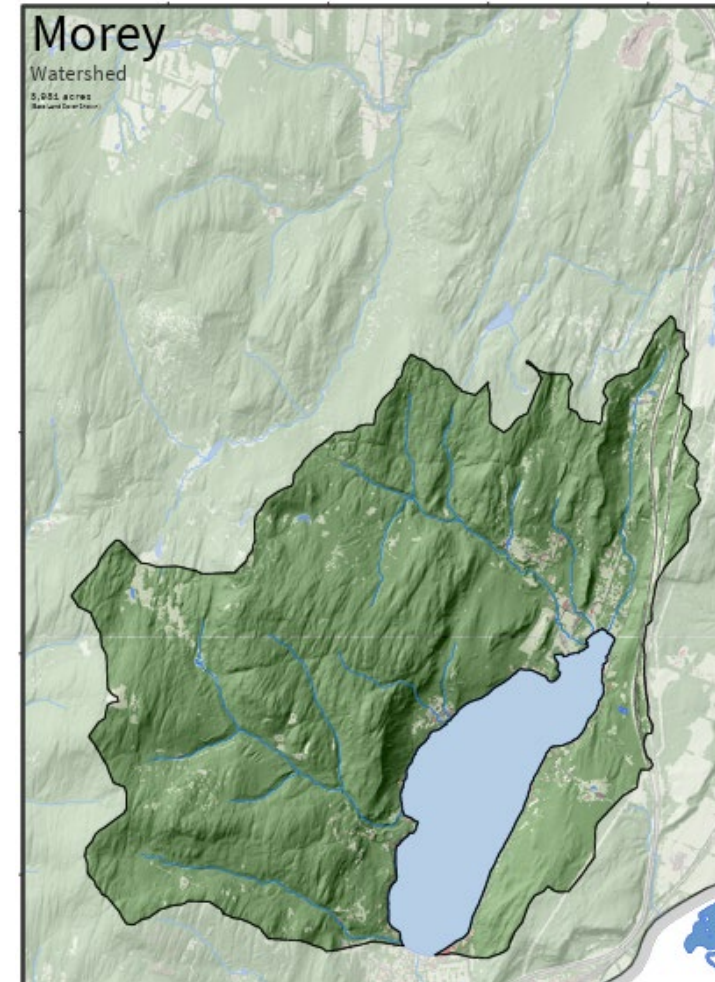


Chloride Contamination in Vermont Lakes and Streams

- VTDEC has spring total chloride concentrations for 397 lakes.
- 47% of inland lakes sampled have total chloride readings above the detection level.
- Only 16% of these lakes have enough years of data (n=5) to determine trend.
- There are statistically significantly increasing chloride trends on Lake Memphremagog, Lake Carmi, Lake Rescue, Caspian Lake, Little Lake in Wells, Lake Morey, Ticklenaked Pond, and Shelburne Pond.

Chloride Contamination in Vermont Lakes and Streams

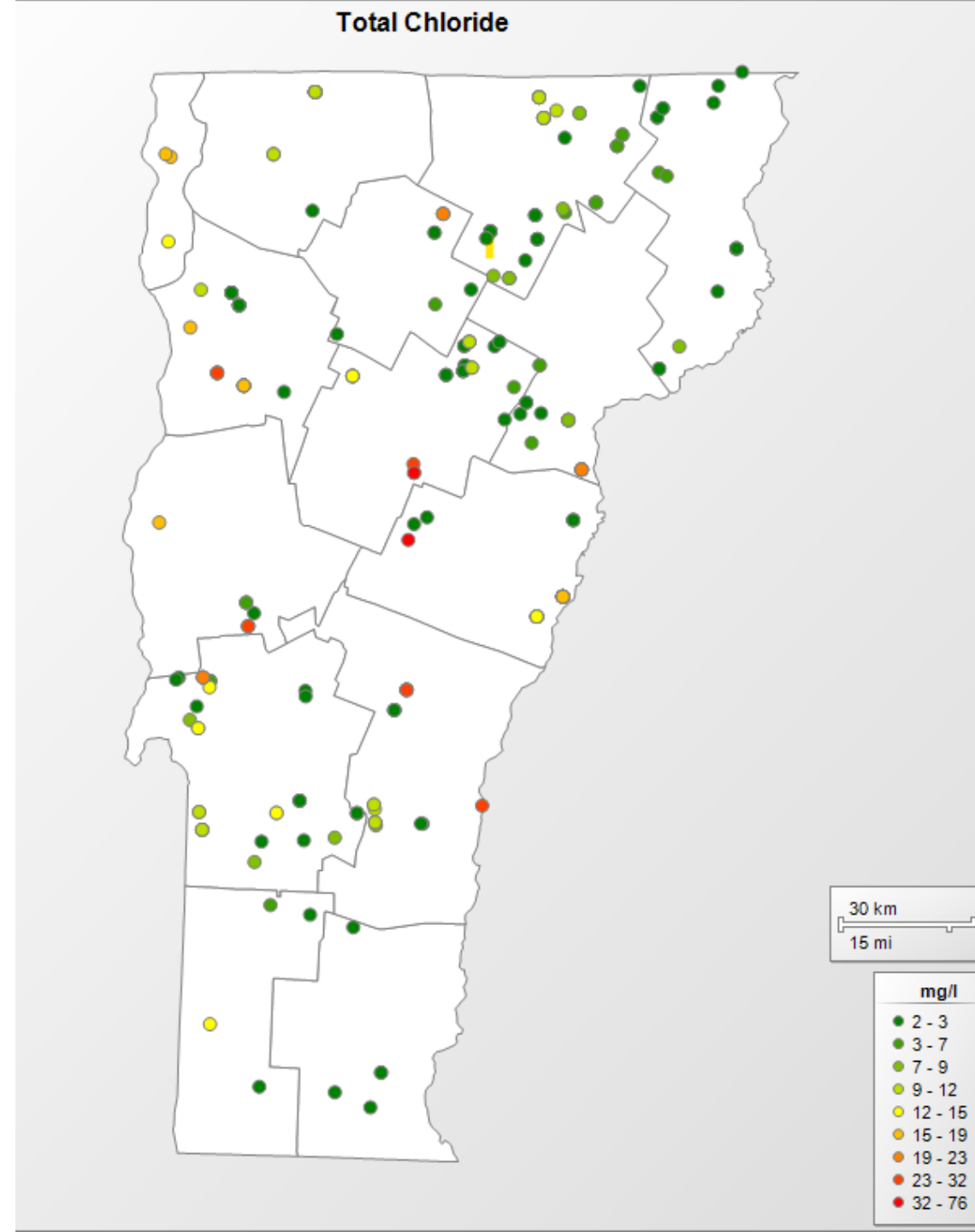
- Only 1% of Lake Morey's Watershed is made up of Roads, but over the last 20 years, the concentration of total chloride has doubled.
- Roughly 6% of the 100' buffer around Lake Morey is road.



Chloride Contamination in Vermont Lakes and Streams

- There are 96 lakes with only 3-4 years of chloride data, many of these have what look to be increasing trends.
- 2 lakes have statistically significantly decreasing total chloride trends (Lake Willoughby & Seymour Lake)
- Vermont's current chronic criteria for chloride is 230 mg/L, which EPA recommended in 1988; however, impacts may occur well below those concentrations.

- 105 inland lakes were sampled for total chloride in the summer.
- 66 inland lakes had chloride concentrations greater than the detection limit of 2 mg/l.
 - 28 inland lakes had chloride concentrations greater than 10 mg/l.
 - 9 inland lakes had chloride concentrations greater than 20 mg/l
 - 3 inland lakes had chloride concentrations greater than 30 mg/l
 - 1 inland lake had chloride concentrations greater than 50 mg/l



Chloride Contamination in Vermont Lakes and Streams

Stream	Impaired	TMDL Status
Sunnyside	Yes	TMDL complete
Muddy trib	Yes	TMDL dependent on flow record development
Potash	Yes	TMDL under development
Centennial	Yes	TMDL under development
Englesby	Yes	TMDL under development
Morehouse	Yes, 2024	TMDL under development
Munroe	Yes, 2024	TMDL under development
Bartlett	Yes, 2024	TMDL under development
Indian (Essex)	Anticipated	N/A
Hubbarton trib (Benson)	Anticipated	N/A
Deer Bk (Colchester)	Anticipated	N/A

Municipal Salt/Sand Storage in the Lake Champlain Basin

- Mapping conducted late Fall/Winter 2022-2023.
- 126 towns were contacted to request information about their deicing material storage locations.
- Data was collected for 118 towns (94%).
- Forty-three (43) towns reported that they are storing multiple material types at their facilities. Four (4) towns have multiple sites.
- Locations have not been field verified, nor have site conditions, infrastructure or other information provided by town staff.

Municipal Salt/Sand Storage in the Champlain Basin

- 122 materials storage sites in the Champlain basin.
- There are no uncovered salt-only piles.
- 47 of 122 (39%) storage sites are within 100 yards of surface waters.
- 27 of 122 sites have uncovered sand/salt piles.
- 14 of 27 sites are within 100 yards of surface water.