

Going **Green** SnowPro in New Hampshire



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New Hampshire's Salty History

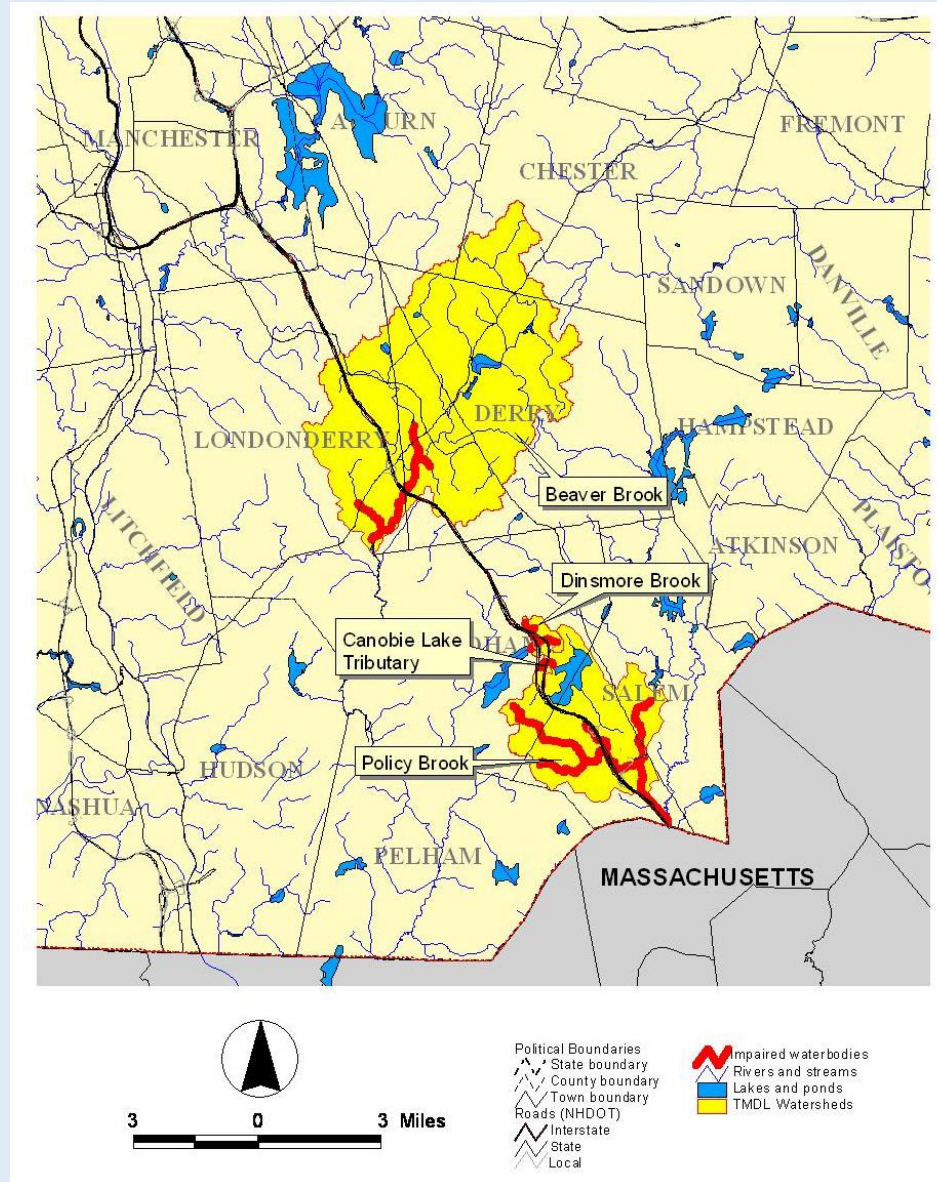


- The first state to use salt for regular winter road maintenance (1941-42)
- Salt use has nearly doubled in the past 40 years
- NH Chloride impairments are on the rise (18 in 2008, 40 in 2010, over 50 in 2020)

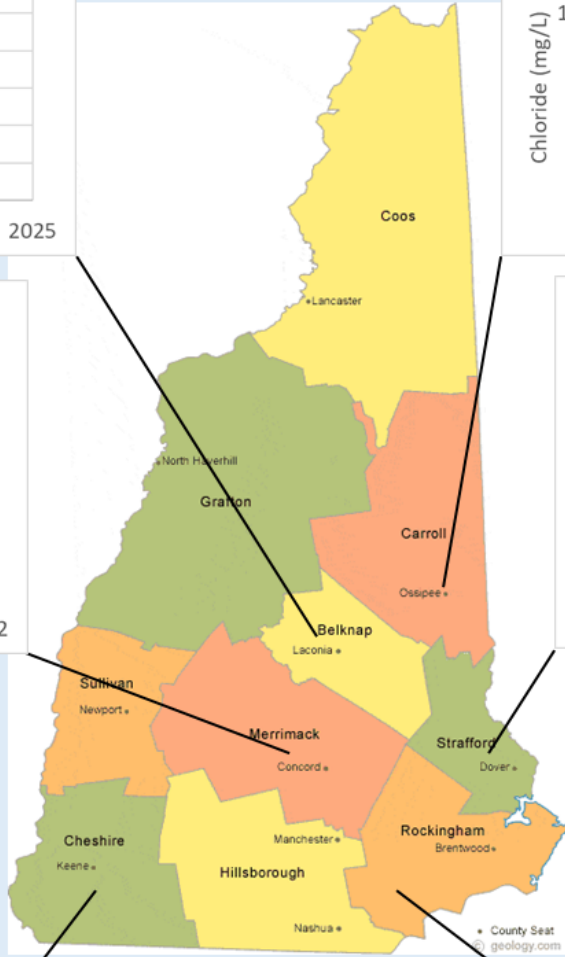
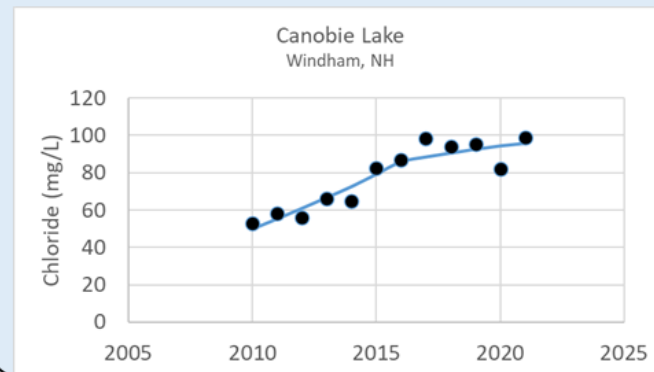
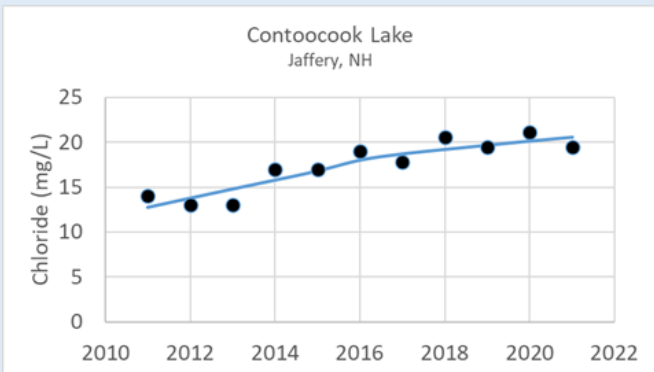
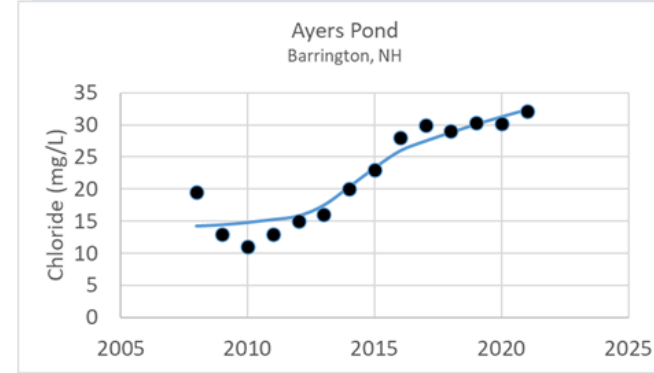
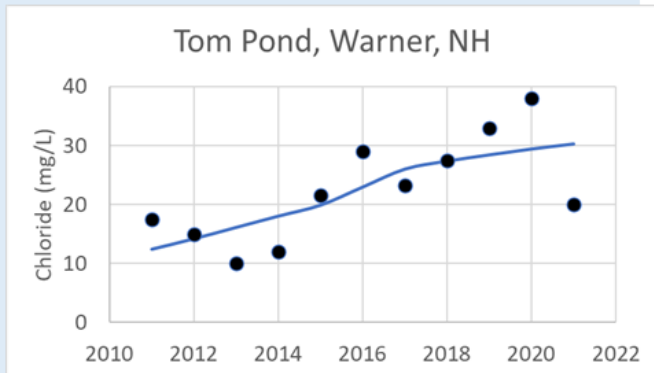
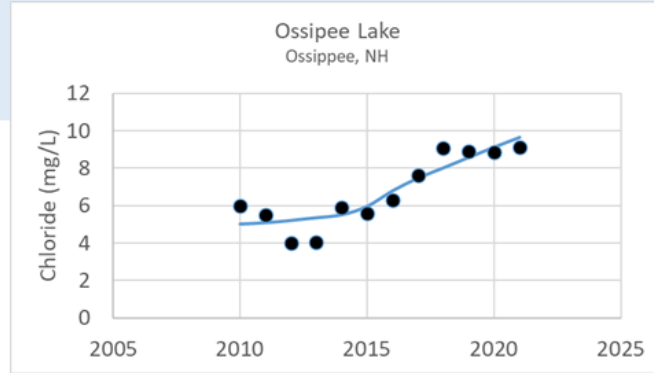
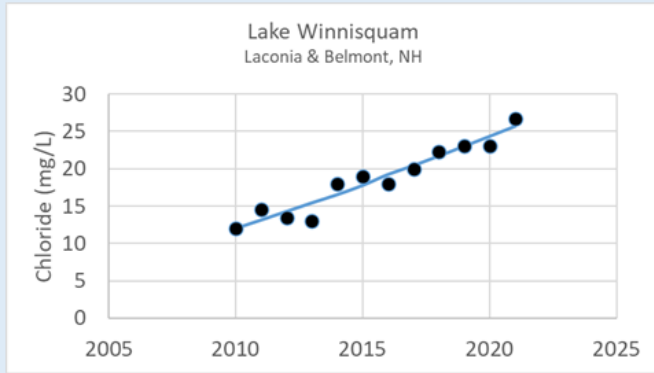


I-93 Expansion

- 2002-2006: monitoring by DES, DOT, and EPA detected violations of the water quality standard for chlorides in:
 - Policy-Porcupine Brook
 - Beaver Brook
 - Dinsmore Brook
 - Canobie Lake Tributary
- 2006-2007: DES collected data on and prepared TMDLs for road salt for each watershed.

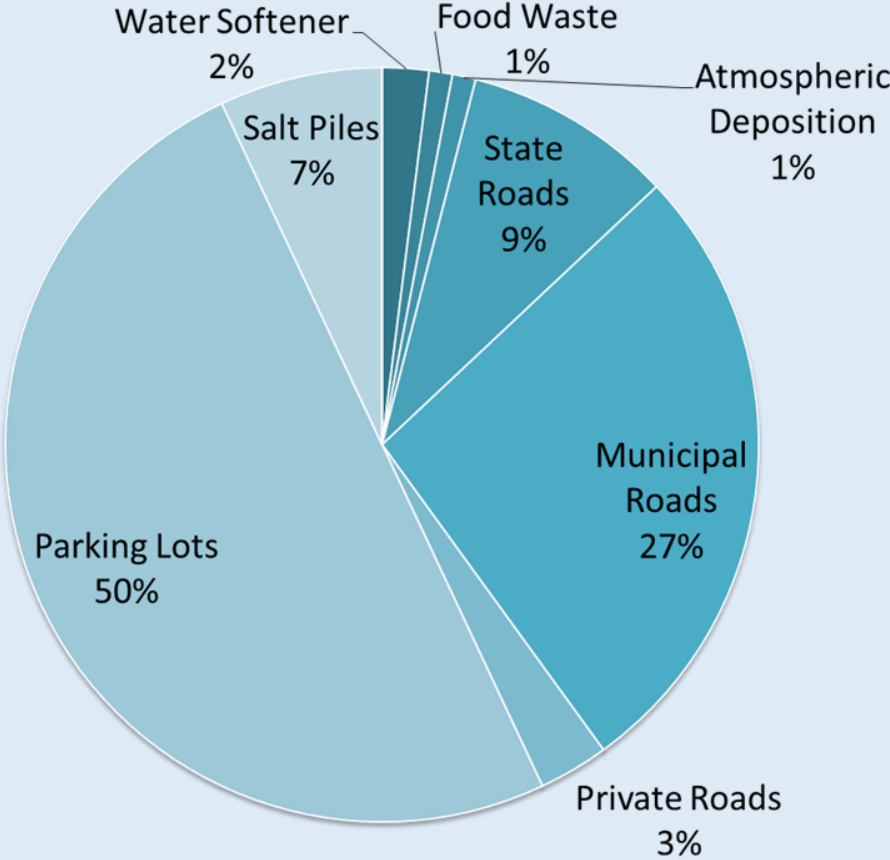


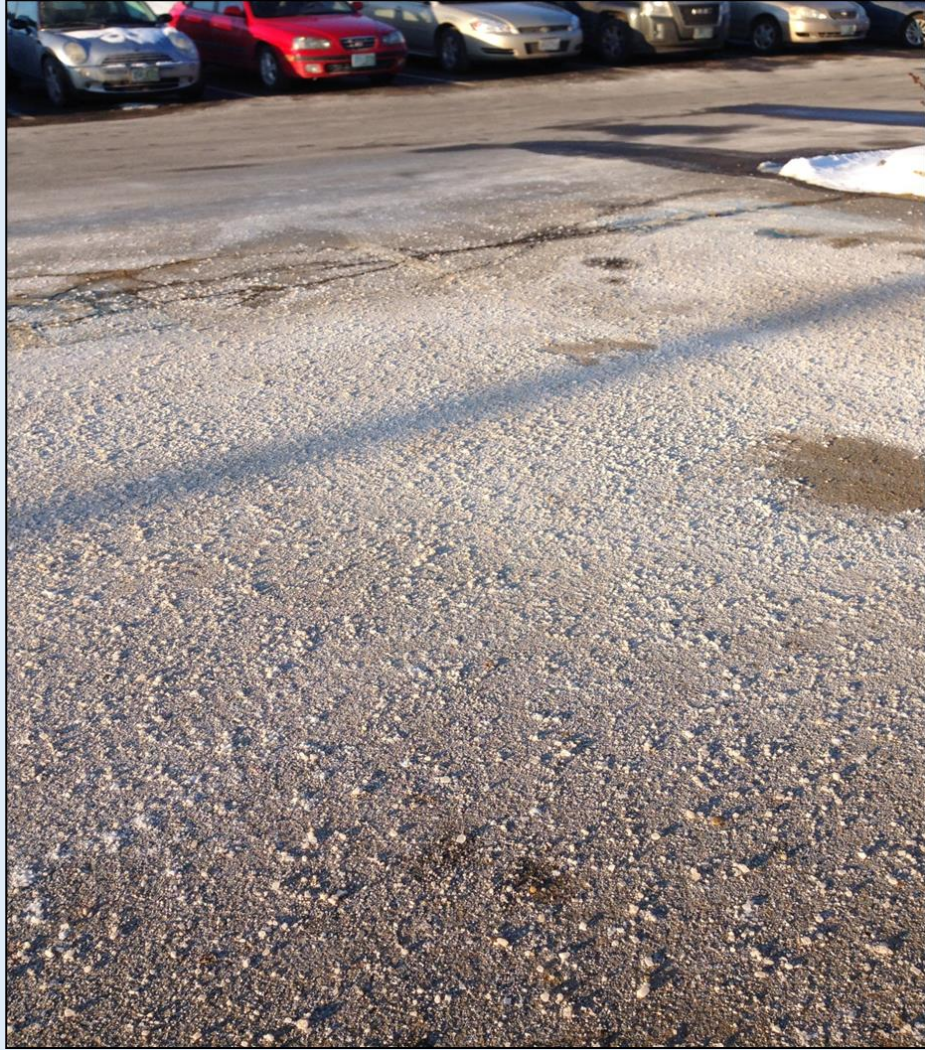
A State-Wide Issue



Sources of Salt in New Hampshire

In urban and suburban areas, most of the salt comes from private parking lots, sidewalks and driveways.





Private Sector Salt Use





In 2013, House Bill 523 was passed that included the creation of a Voluntary Commercial Salt Reduction Certification Program: Green SnowPro.



1. Train



2. Certify



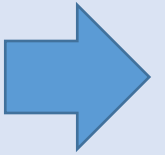
Salt Applicator Certification Program



efficiency



costs



public safety



documentation



environmental quality



LIABILITY



Limited Liability Protection

Commercial Salt Applicators certified by NHDES Green SnowPro under RSA 489-C, and property owners or managers who hire them, are granted limited liability protection against damages arising from snow and ice conditions under RSA 508:22

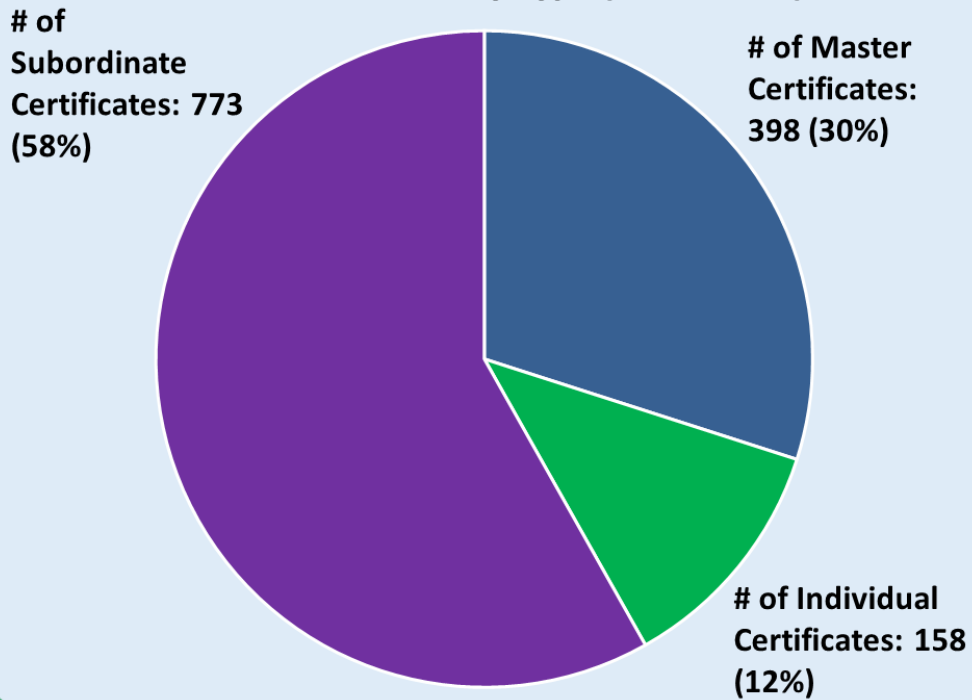


Walking on snow and ice is inherently dangerous

Green SnowPro: By the Numbers

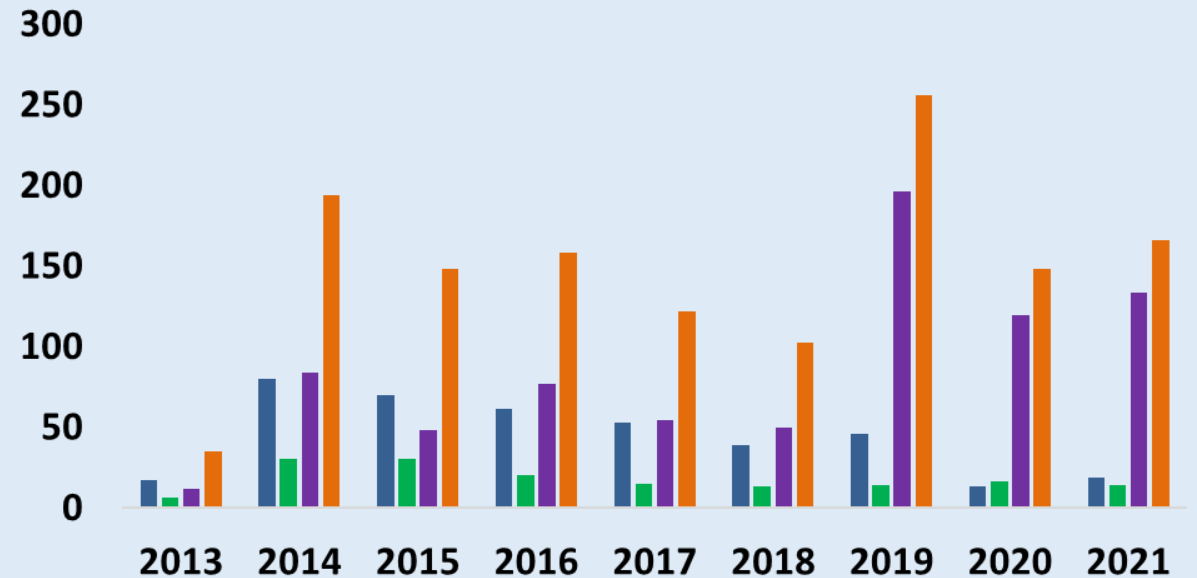
- The program has grown substantially since 2013.
- New Subordinate certifications remain consistently high, likely due to high turnover rates within companies.

Certificates Issued By Type (Total=1329)



Total number and percentages of each type of certificate (Master, Individual, and Subordinate) issued throughout the program (2013-2021)

New Certificates Issued Each Year



■ # Master Certificates ■ # Individual Certificates
■ # Subordinate Certificates ■ Total



Length of membership	# Companies	Percentage
1 Year	159	37%
2 Years	50	12%
3 Years	48	11%
4 Years	36	8%
5 Years	34	8%
6 Years	38	9%
7 Years	30	7%
8 Years	24	6%
9 Years	7	2%
Total:	426	
Average Length:	3.29	

The Green SnowPro program retains a significant number of companies and expands by adding new companies each year.

Table 1. Number of companies and length of membership in the program (2013-2021)





“The Green SnowPro Program helps bring us together in the State and provides eye opening knowledge to the benefits of embracing such change while protecting the environment, ourselves and our customers.”

- Justin Gamester, Piscataqua Landscaping

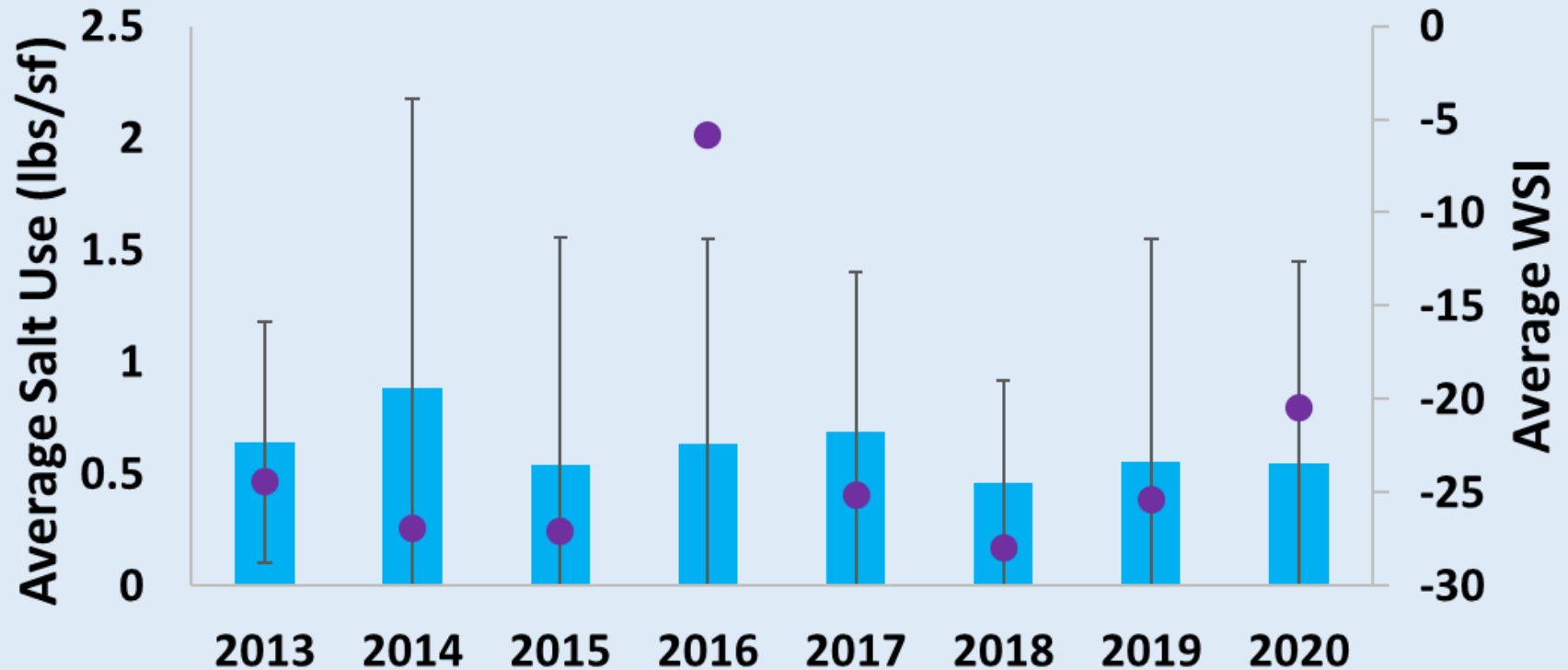


Is Salt Reduction being Achieved?

Answer: It's Complicated



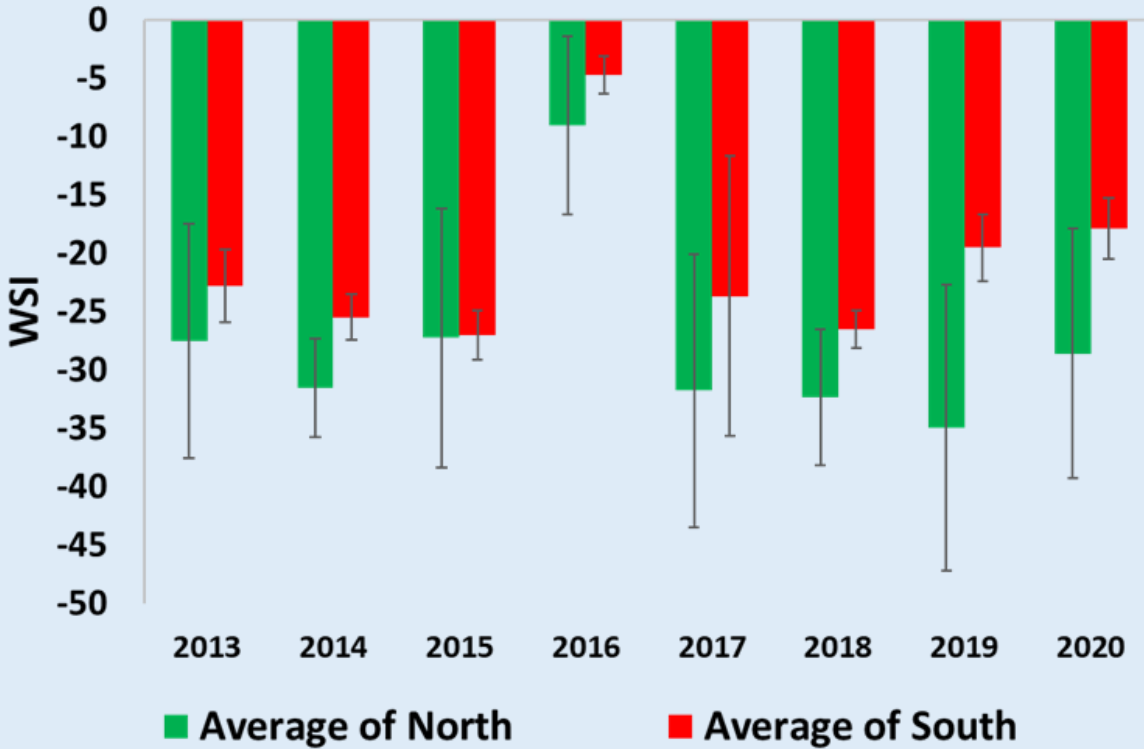
Average Salt Use (lbs/sf) and Winter Severity Index (WSI) from 2013-2020



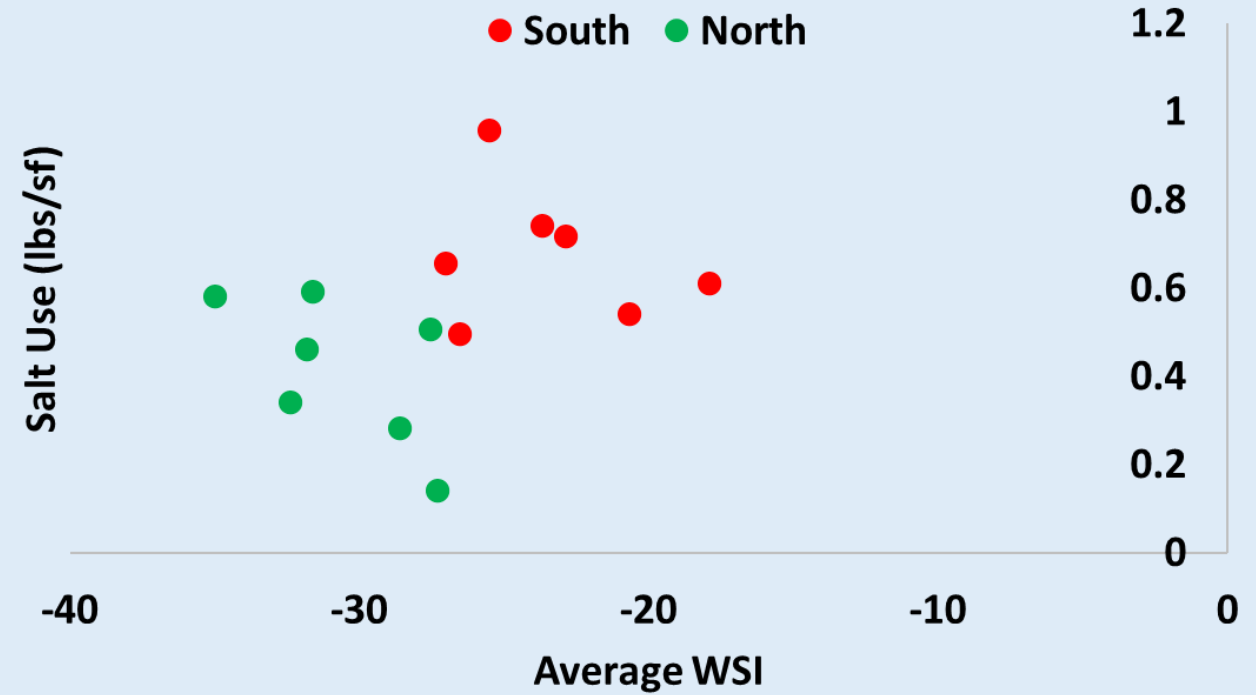
Winter severity is not the only factor influencing salt application rates:

- Colder sustained temperatures and snowier conditions require less salt use than wet, icy conditions and increased cycles of freezing and thawing
- Public expectations and cultural differences in levels of service expectations between northern and southern NH

Average WSI for North and South Regions



Average Winter Severity Index (WSI) for north (north of Lakes Region) and south (south of Lakes Region) from 2013-2020



Average salt use (lbs/sf) and Winter Severity Index (WSI) for north (north of Lakes Region) and south (south of Lakes Region) 2013-2020.

Despite less severe winters in the south, salt use was consistently higher.

- More development in southern NH (hospitals, schools, etc.)
- Level of service expectations higher in south??

Future of Green SnowPro

Municipalities

- Senate Bill 131 was approved in 2021 allowing for municipalities to be recognized as eligible for Green SnowPro certification. Rules are currently in the process of being written and approved.

Coursework

- Additional Refresher Course options for Green SnowPro certificate holders
- Smart About Salt Council soon offering their online courses in Spanish

Outreach

- A need to alter public perception and expectations
 - Education on how salt works
 - Do you need to go to Walmart at 10pm during a blizzard?



2023 Annual Salt Symposium

Wednesday, September 13, 2023

NH Motor Speedway in Londonderry



Green SnowPro Certification

For information about getting certified or recertified in the Green SnowPro Program along with the different training courses offered, please visit the Green SnowPro Certification webpage.

[GREEN SNOWPRO CERTIFICATION WEBPAGE >](#)

Road Salt Reduction-Related Resources

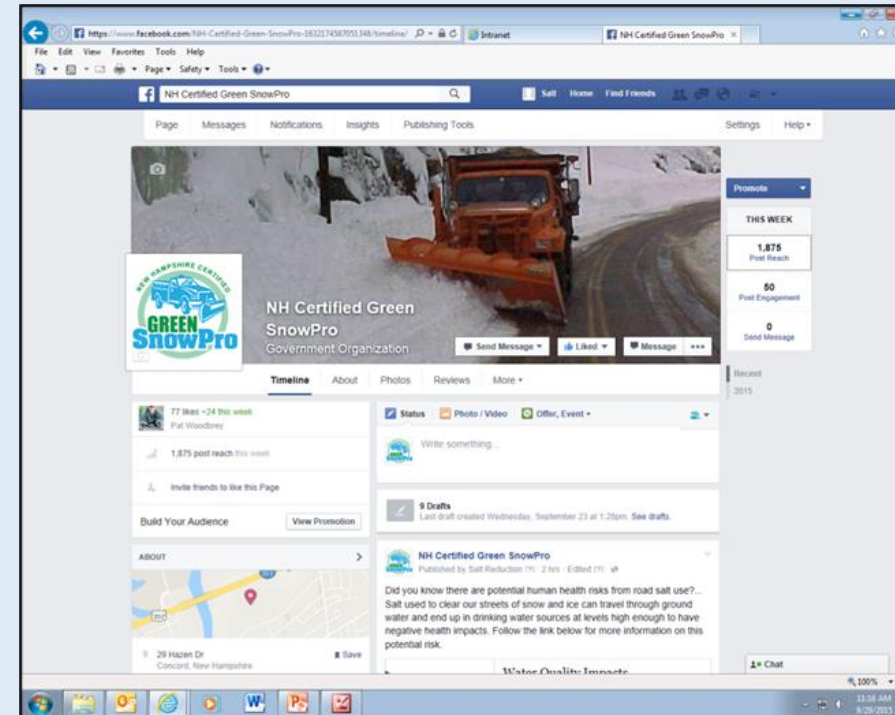
- [Technologies and Best Management Practices for Salt Reduction](#)

These documents include technologies and best management practices (BMPs) for Salt Reduction: how salt works, calibration, pre-wetting, brine making, anti-icing and good housekeeping. These BMPs were developed by the University of New Hampshire Technology Transfer Center for New Hampshire snow and ice management professionals, NHDES, NHDOT, Federal Highway Administration, EPA, several private snow and ice management companies and several New Hampshire communities have reviewed these BMPs. Please feel free to reproduce and distribute.

- [NHDES Snow & Salt Resources](#)



www.des.nh.gov and search for “Road Salt Reduction”



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[@NHGreenSnowPro](#)



Questions?

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