

Green SnowPro

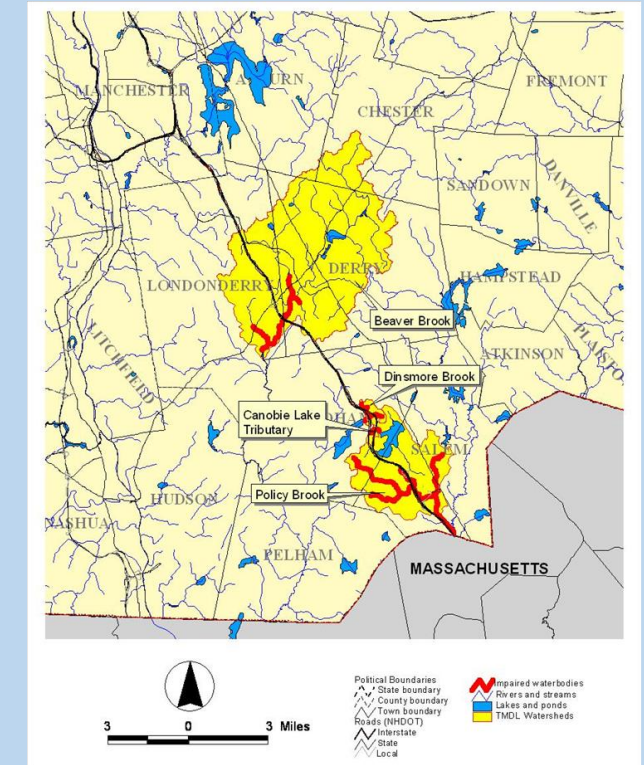
The New Hampshire Experience

Ted Diers, Aubrey Voelker, and Steve Landry



Green SnowPro: How it Started

Ted Diers



New Hampshire's Salty History



- First in the nation to use salt for regular winter road maintenance
- Salt use has doubled in past 40 years
- Chloride impairment trend is not good (18 in 2008, 40 in 2010, over 50 in 2023)
- Chloride contamination of water supply wells has increased by 150 percent over last 30 years



I-93 Expansion

Double the size of the highway

Bigger off and on-ramps.

Park-n-rides.

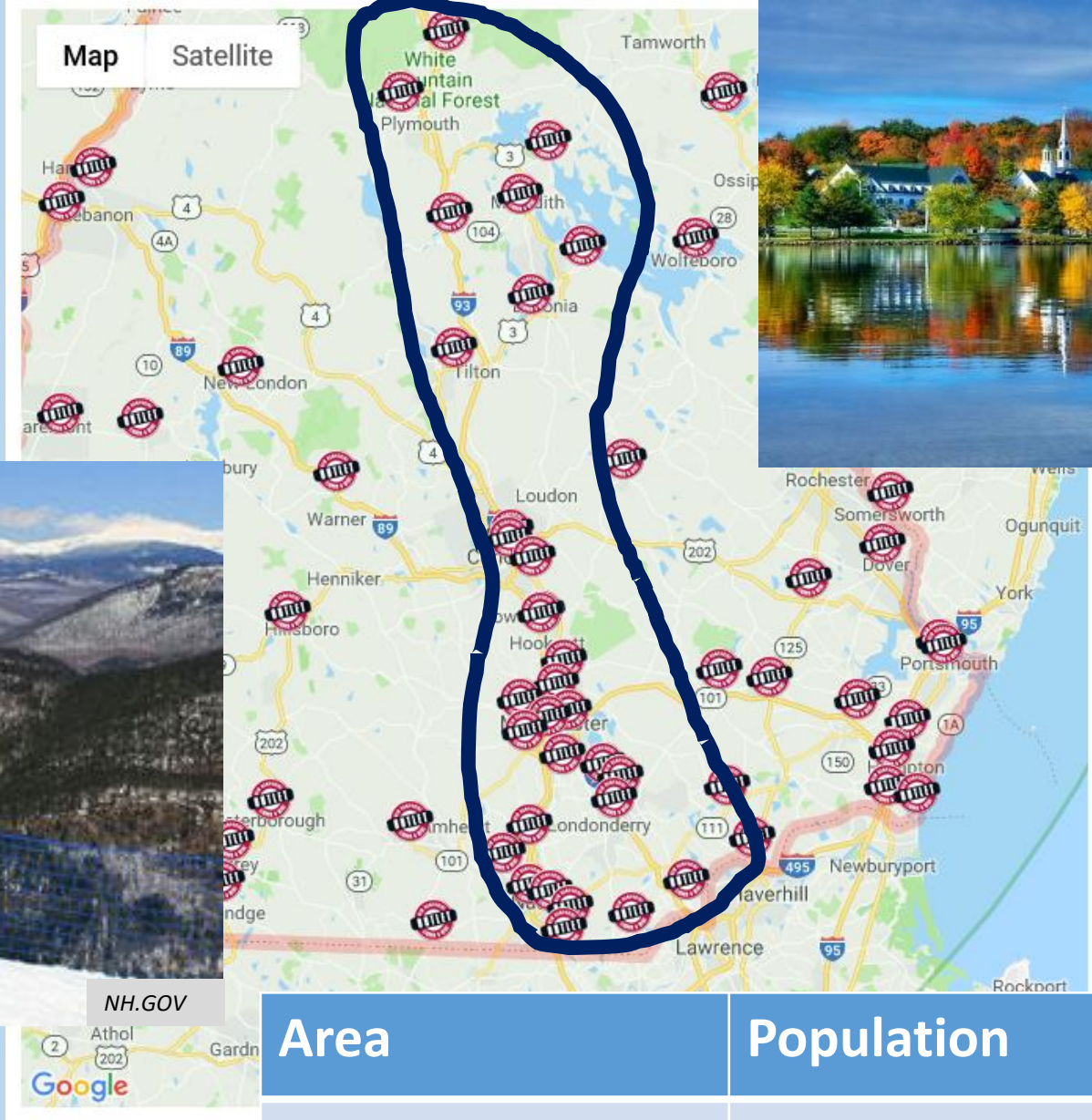
Drainage -- open to closed system.

More plowing = more salt.



NHDOT

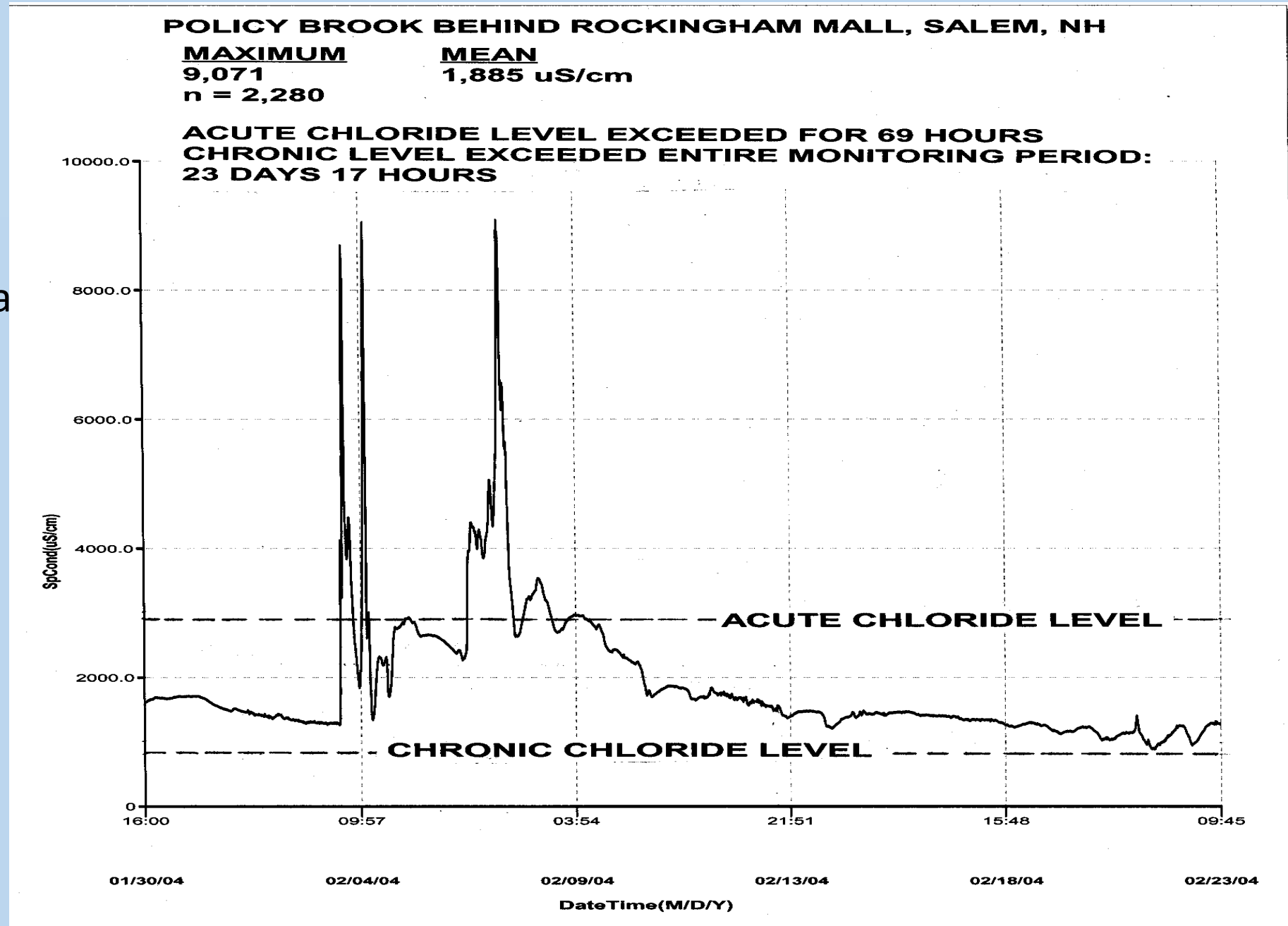
I-93 Expansion



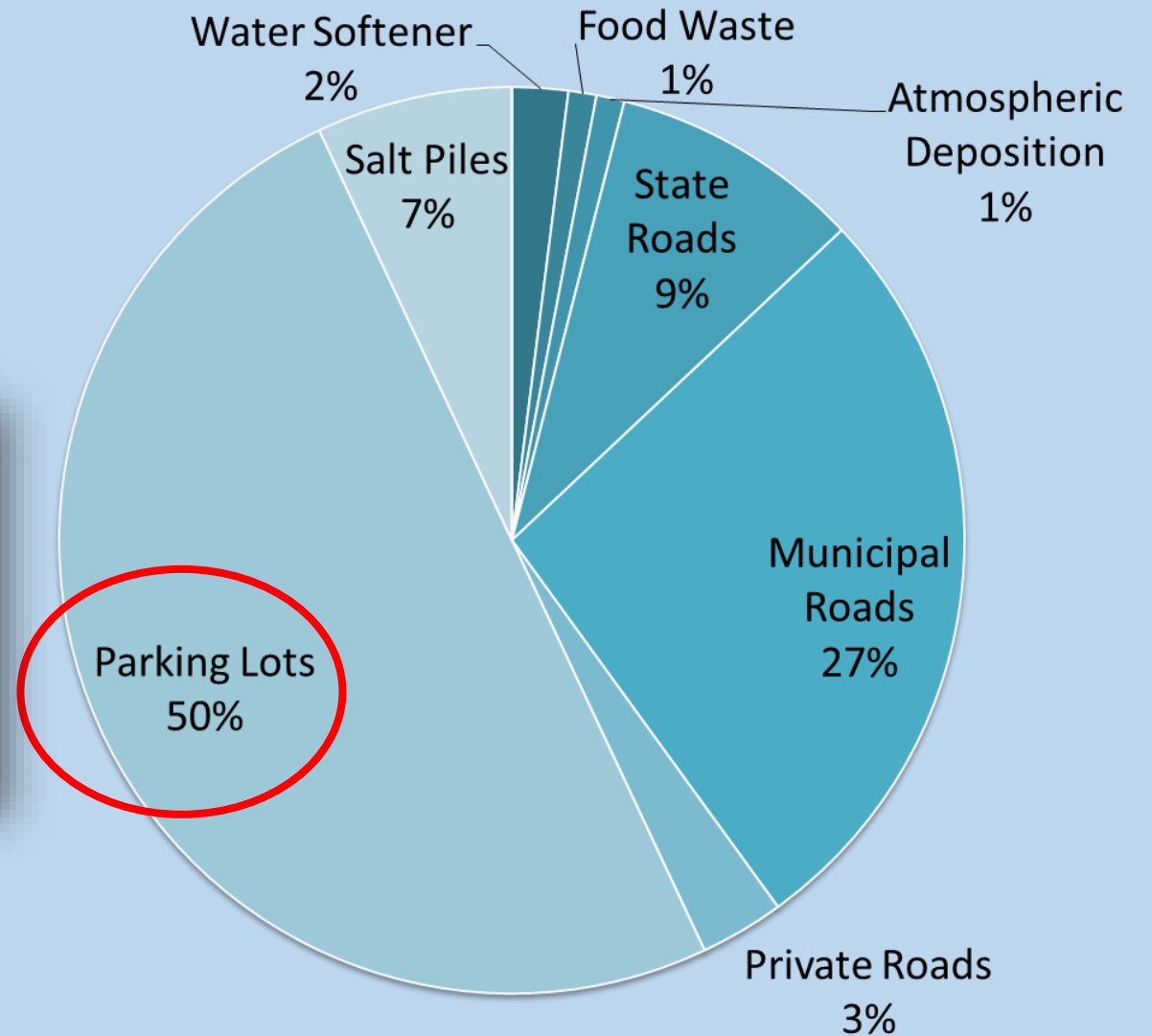
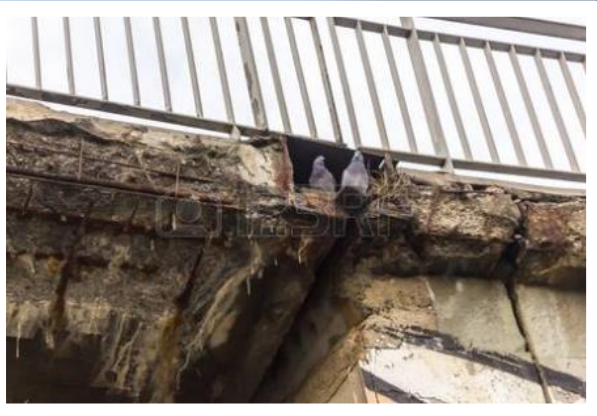
Area	Population
Boston Metro	4,628,910
Entire state of NH	1,343,000

The graph that started it all

- DES collected more data
- Created TMDL
- Sector load analysis
- Implementation plans



Policy Brook Sectors	Average use 2008-2015 Tons/year	Allocation tons/year	Reduction needed
DOT – 2 Lanes	635	900	0
Municipal roads	1768	1044	41%
Private	2976	1505	50%
TOTAL *	5567	3635	35%
DOT - 4 lanes	1018	900	12%





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

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



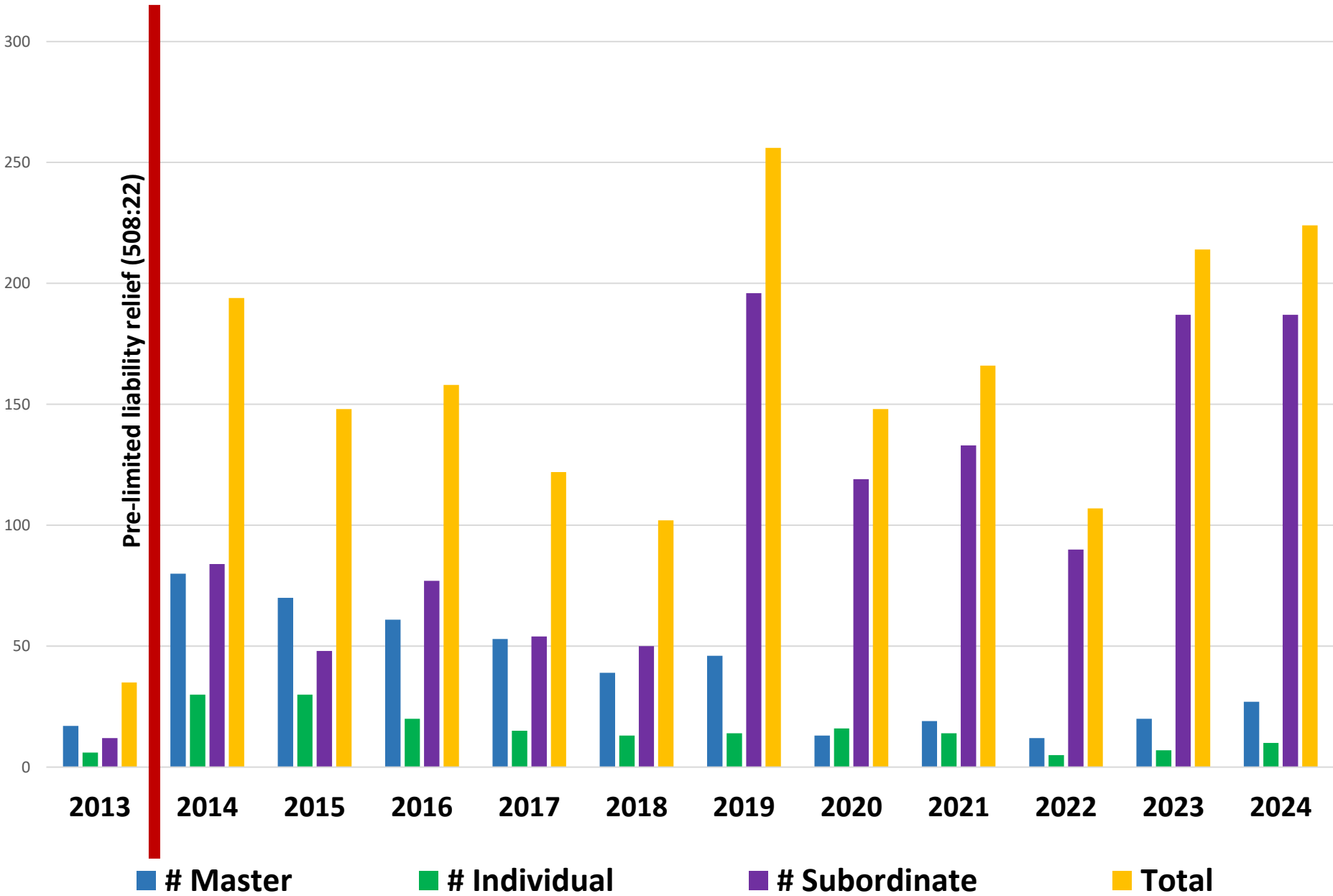
Walking on snow and ice is inherently dangerous

508:22 Liability Limited for Winter Maintenance. –

II. In order to receive the liability protection provided in paragraph I, a commercial applicator as defined in RSA 489-C:1, II, or an owner, occupant, or lessee of land shall keep a **written record describing its winter road, parking lot and property maintenance practices. The written record shall include the type of de-icing materials used, the rate or quantity of deicing materials used, the dates of treatment, and the weather conditions for each event requiring de-icing.** Such records shall be kept for a period of 3 years (soon to be 6 years).



of New Certificates Issued Each Year



Green SnowPro Today

Aubrey Voelker



NH Salt Symposium



SnowPro Tip:
Hire a Green SnowPro
certified professional.



[#GoGreenSnowPro](#)





NH Salt Symposium

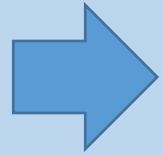
Voluntary Salt Applicator Certification Program



efficiency



costs



public safety



documentation



environmental quality



LIABILITY



1. Coursework



Snowfighters' Seminar



2. Apply & Certify



Commercial Salt Applicator Certification
Application for Initial or Renewal Certification
Watershed Management Bureau

RSA 489-C; Env-Wq 2200

NHDES Use Only
Cert #: _____
Processed Date: _____

I. Applicant Information

FIRST NAME: _____	MIDDLE: _____	LAST: _____
DAYTIME PHONE NO. (include area code): _____		EMAIL: _____

Address

STREET: _____	TOWN/CITY: _____	STATE: _____	ZIP CODE: _____
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Mailing Address (if different)

STREET: _____	TOWN/CITY: _____	STATE: _____	ZIP CODE: _____
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II. Information for Affiliated Business (if none, enter "none" after Business Name.)

BUSINESS NAME: _____	EMAIL: _____
DAYTIME PHONE NO. (include area code): _____	

Address

STREET: _____	TOWN/CITY: _____	STATE: _____	ZIP CODE: _____
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Mailing Address (if different)

STREET: _____	TOWN/CITY: _____	STATE: _____	ZIP CODE: _____
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If the applicant or affiliated business address is not located in New Hampshire, provide the name and mailing address of a person whose domicile is in the state and who is authorized to receive and accept service of summons and legal notices of all kinds for the applicant as required by RSA 489-C:4, II.

FIRST NAME: _____	LAST NAME: _____
STREET: _____	
TOWN/CITY: _____	
STATE: _____	ZIP CODE: _____

Annual Renewal

Certification must be renewed annually

- Renewal Application
- Annual Salt Use Report
- Continuing Education

Pumpkin spice is here today,
but snow and ice are on the way.

It's time to start the preparations,
and ease the winter trepidations.


Reduce your winter salt application,
by performing salt spreader calibration.


Prewet the salt and mix the brine,
reducing chlorides is divine.

Be prepared for the winter snow,
and make sure you're a certified Green SnowPro.



NHDES-W-07-071

 **ANNUAL SALT ACCOUNTING REPORT**
Voluntary Certified Salt Applicator Program
Watershed Management Bureau
Watershed Assistance Section



RSA/Rule: RSA 489-C, Env-Wq 2204

Name: _____ Date: _____
Certificate Number: _____ Type of Certificate: Select One
Affiliated Business Name: (if none, enter "none") _____

Below are the three reporting elements necessary for recertification under the Voluntary Certified Salt Applicator Program (aka. Green SnowPro) per Env-Wq 2200.

1) **Deicer type and amount.**
Complete the table below for each type of deicer used last winter including the unit reported. If you do not know the amount of deicer used by type please report the total amount of all deicers used in the TOTAL row at the end of the table.

TYPE OF DEICER USED	SOLID MATERIAL AMOUNT: (indicate tons, pounds or yards)	LIQUID VOLUME: (in gallons)
SALT, DRY		
SALT, PREWETTED IN THE SPREADER		
SALT, PREWETTED IN THE PILE		
CALCIUM CHLORIDE, DRY		
CALCIUM CHLORIDE, LIQUID		
CALCIUM MAGNESIUM ACETATE, DRY		
CALCIUM MAGNESIUM ACETATE, LIQUID		
POTASSIUM ACETATE, DRY		
POTASSIUM ACETATE, LIQUID		
SAND		
SAND/SALT MIX		
LIQUID BRINE		
OTHER:		
TOTAL DEICER USED LAST WINTER		

Form Continued on Next Page →



UNH T2 Liquids Field Day



UNH T2 Liquids Field Day

Continuing Education



NH Salt Symposium

NHDES Green SnowPro Program 2025



NH Salt Symposium



The State of New Hampshire
Department of Environmental Services

certifies that

Shawn O'Keefe

having submitted satisfactory evidence of knowledge and
training in accordance with the provisions of RSA 489-C
has been awarded this certificate as a

Certified Salt Applicator -- Master

Certificate Number: 358

Date of issue: 07/01/2024

Date of Expiration: 06/30/2025

Erin L. Holmes

Administrator, Watershed Management Bureau

2013/2014 Winter Season

- 35 Green SnowPro certificates issued
- 22 companies



10 years later

2023/2024 Winter Season

- 712 Green SnowPro certificates issued
- 177 companies

Voluntary Municipal Green SnowPro Certification 2024

The Voluntary Municipal Winter Maintenance Certification Program (Municipal Green SnowPro) administrative rules were adopted by NHDES on May 23, 2024.

- **Cost savings** – Getting crews trained and calibrating equipment saves Department of Public Works (DPWs) and Road Agents money (salt, time, and equipment).
- **Public pressure** – Communities urged by lake associations and owners of contaminated drinking water wells to have their cities or towns use less salt.
- **Regulatory** – MS4 permit requires communities with chloride impairments to get training in snow and ice management and to implement BMPs.
- **Pride, status, and accomplishment** – DPW directors tell us that Green SnowPro training builds staff motivation and satisfaction with their salt reduction efforts.



♡♡ You age like ♡♡
fine salt brine.



Be My Valentine

To:
From:

Roses are red, salt is white,
please stop over salting and
learn to apply it right.



To:
From:



Outreach Efforts

Commercial Green SnowPro

A ghostly guide to getting certified.
Renewing Voluntary Commercial Salt Applicator Certification.



1. Complete required
coursework for renewal of your
Green SnowPro certification.



2. Complete an application &
annual salt use report.
Submit both along with the
annual fee to NHDES.

3. Receive your Commercial
Green SnowPro certificate
from NHDES.





DID YOU KNOW?

It only takes 1 teaspoon of winter salt
to pollute up to 5 gallons of water.





Oversalting is an International Issue



Cliffs of Moher



Limerick, Ireland

Green SnowPro Limited Liability Protection Case Study

Steve Landry



Until 2022, slip and fall claims involving Green SnowPro contractors were withdrawn or settled for two reasons:

1. Avoiding lengthy, expensive trials

2. Lapses in contractor training or record keeping in line with RSA 508:22

Defendants appear to argue that they are entitled to immunity solely due to the fact that they hired a certified salt applicator, regardless of whether the applicator's records meet the statutory requirements. The Court disagrees. RSA 508:22, II explicitly states that "[i]n order to receive the liability protection provided in paragraph I, a commercial applicator as defined in RSA 489-C:1, II, or an owner, occupant, or lessee of land shall keep a written record describing its winter road, parking lot and property maintenance practices." (emphasis added). Because Alliance has failed to meet this requirement, the burden is on defendants to produce such records in order to preserve their claim of immunity. As they have failed to do so, defendants are not entitled to immunity under the statute.

NHDES Green SnowPro Program 2025

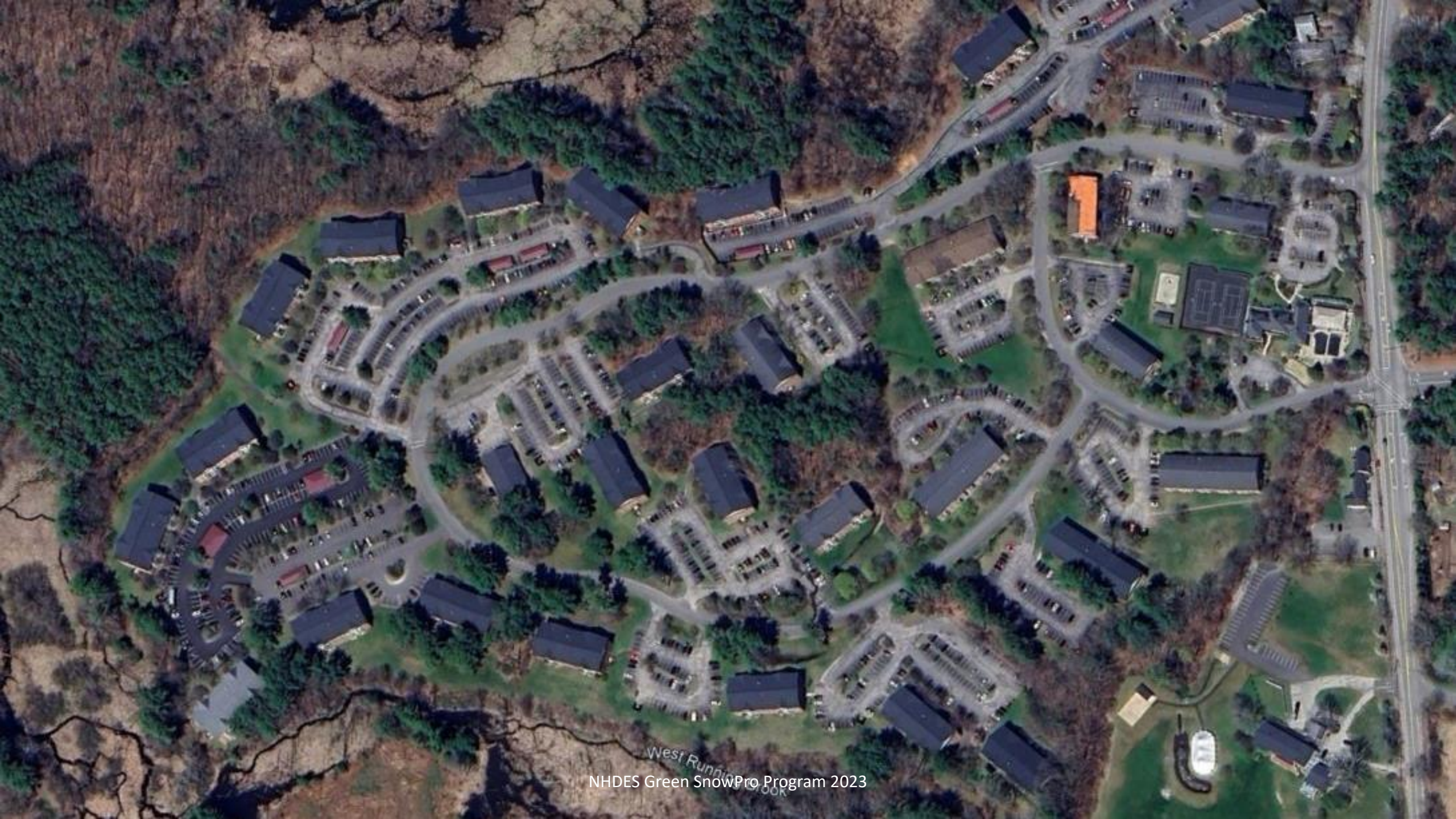


New Hampshire Green SnowPro Limited Liability Case 2022

This is a premises liability action stemming from an incident that occurred on February 21, 2019, in which the plaintiff, Amy Rogers, was severely injured after slipping and falling on unmaintained snow and ice in a parking space at the Fairways Apartment complex in Derry, New Hampshire. The plaintiff's claims were based on theories of negligence against the plaintiff's landlord, Chartwell New Hampshire Associates, LLC ("Chartwell"), and the winter maintenance contractor hired to remove snow and ice from the paved areas of the Fairways, North Point Holdings, Inc. D/B/A North Point Outdoors ("North Point").

The trial for the above-captioned matter was held from October 31, 2022 until November 7, 2022. During the trial, the defendants asserted a statutory defense pursuant to R.S.A. 508:22,





New Hampshire Green SnowPro Limited Liability Case 2022

- **Defendant:** North Point Outdoors
- 140 employees during peak winter operations
- Fleet
 - 80 trucks and heavy equipment
 - 40 sidewalk machines
- **Ten-year contract** with Chartwell Management for the Fairways
- **Zero** prior claims during ten-year contract period
- **Ten years** as New Hampshire Green SnowPro



New Hampshire Green SnowPro Limited Liability Case 2022

- **Defendant:** North Point Outdoors
- Northpoint Outdoors Three-tier Training
 - **Pre-season**
 - Full-day sessions before winter arrives
 - Green SnowPro trainings and exams
 - Hands-on training at NPO HQ and off-site
 - **In-season**
 - Continuous on application rates, plowing techniques, and site map reviews
 - Regular updates and adaptations for site-specific challenges
 - **Post-season**
 - Evaluate contract performance, successes and areas needing improvement



New Hampshire Green SnowPro Limited Liability Case 2022

- **Defendant:** North Point Outdoors
- **Northpoint Outdoors commitment to excellence**
 - Hands-on and technical training
 - Fleet maintenance training and support
 - Multiple on-road technicians for real-time support
 - Meticulous record keeping and retention
- **Headquarters Technology**
 - Live weather updates from two meteorologists
 - Daily plans set and organized via Crew Hero displayed on HQ screens and team phones
 - Crew planning and dispatching via mobile apps



New Hampshire Green SnowPro Limited Liability Case 2022

Plaintiff Claim to Expose Negligence	North Point Outdoors Defense
Find holes in scope of contract compared to services rendered.	Contract represents best practices which are strictly followed. GPS and ASPIRE software tracking proved that our crews time on site for each snow event were appropriate.
Failure to use best practices for snow removal.	North Point site management processes were thorough and supported by evidence by multiple parties.
Failure to follow ALL Green SnowPro Guidance Manual practices.	Green SnowPro is guidance and snow events present thousands of variables that require adaptive decision-making. No one-size-fits-all game plan for any property.



New Hampshire Green SnowPro Limited Liability Case 2022

Plaintiff Claim to Expose Negligence	North Point Outdoors Defense
Alleged failure to clear pathways between parked cars.	Logistically impossible during active snow event due to plow widths and resident behaviors (or lack thereof). Some vehicles have not been moved for months.
Counsel presented photos of uncleared areas.	Timing of photos was crucial to consider as they were taken before cleanups occurred.
Alleged slip and fall occurred on parking lot where snow had not been removed.	A witness testified that they saw the plaintiff fall off a grass island curb as she was getting into her car.

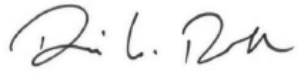


“After thorough questioning, it became evident that our focus on best practices and our highly trained team executed the storm response to perfection, eliminating any allegations against us”. – Robert Fairburn, North Point Outdoors

New Hampshire Green SnowPro Limited Liability Case 2022

ORDER ON VERDICT

The jury having found the defendants not liable in this case, judgment is entered in favor of the defendants. The plaintiff is granted 10 days to file any post-verdict pleadings.



Date: November 8, 2022

Hon. David W. Ruoff

3. On November 16, 2022, Plaintiff filed her Motion for Judgment Notwithstanding the Verdict. On December 9, 2022, the Plaintiff's Motion for Judgment Notwithstanding the Verdict was denied.

Motion Denied. The jury's verdict is soundly supported by the evidence concerning the defendant's defense under RSA 508:22. There were factual disputes concerning whether the defendants complied with RSA 508:22, and the jury was free to credit the evidence in favor of that defense. This is not a case in which the evidence was overwhelmingly in favor of the Plaintiff with respect to that particular defense. Thus, judgment as a matter of law, notwithstanding the verdict, is not appropriate in this case.

The verdict was reasonable in light the evidence produced at the trial.



Honorable David W. Ruoff

December 9, 2022

4. On January 9, 2023, Ms. Rogers filed a Rule 7 Notice of Mandatory Appeal. This appeal is currently pending.



New Hampshire Green SnowPro Limited Liability Case 2022

13. Given the fundamental disagreement between Amy Rogers and her current counsel regarding the merits of the pending appeal, representation of Ms. Rogers by her current counsel has been rendered unreasonably difficult. Therefore, counsel requests to withdraw from representation of Ms. Rogers. Counsel further requests that Ms. Rogers be afforded additional time to retain new counsel prior to incurring the costs associated the compilation of the trial court transcript, or the issuance of a scheduling order for this appeal.



THE STATE OF NEW HAMPSHIRE

SUPREME COURT

In Case No. 2023-0016, Amy Rogers v. Chartwell Management, LLC & a., the court on May 17, 2023, issued the following order:

Amy Rogers has not responded to the March 22, 2023 and May 2, 2023 orders concerning her (or her new counsel's) need to register in the court's electronic filing (e-filing) system, nor has she filed a motion to be exempt from e-filing. Accordingly, the appeal is dismissed.

Appeal dismissed.

This order is entered by a single justice (Donovan, J.). See Rule 21(7).



Green SnowPro Program Plows Ahead!

- State of the science and industry BMP manual, curriculum, and exams
- Outreach to the legal and insurance communities
- Improve salt accounting system and online certification system
- Education on how to handle slip and fall claims, and contracts
- Add accountability procedures for all Green SnowPros and implement
- Provide marketing materials to existing Green SnowPros
- Loan and grant opportunities for brine and other equipment via
 - A \$2 surcharge on every ton of salt sold in NH (~400,000 tons per year)



Questions?

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Steve Landry

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