

# OTHER APPLICATION RATE MATERIALS

Will Isenberg – VA DEQ

# Salt Institute Thoughts on Application Rates

- Application rate is a function of 3 factors:
  - ▣ Pavement temperature (colder = more salt)
  - ▣ Cycle Time (how long before a spreader re-visits the same spot; longer time = more salt)
  - ▣ Moisture in the frozen precipitation (the wetter, the more dilution = more salt)
  
- Main advice:
  - ▣ Use application rates as a starting point to tailor practices too
  - ▣ Use other operations' application rate charts as a guide
  
- Two key things:
  - ▣ Close the loop and confirm:
    - ***Was the LOS achieved with the appropriate amount of salt?***
  - ▣ Every storm is different and so will be the application rate

# Sexton Thesis Summary

- Sustainable Salt Initiative (SSI) shows current rates are above guidelines
- Rates and frequencies of application increase when contracted LOS or perceived levels of quality for snow & ice controls are increased
- Led by:
  - #1 contract types that promote more material use
  - #2 profit potential
- Solution = industry lead rate guidelines, seasonal variance contract models, & liability reform

Table 6. Comparative analysis table for application rates of dry NaCl.

Pavement Temp. (°F) and Trend (↑ ↓)	Conditions	CONTROL (SICOPS Study)	Dry Salt (NaCl) Application Rate in Pounds per 1000 sq. ft.			
			SSI Case Study	Minnesota Guidelines	N. Hampshire Guidelines	SIMA Guidelines
15 - 20 ↑	Cleared snow from surface	18	14	3	10	14
15 - 20 ↓	Cleared snow from surface	18	13.5	2.75	10	14
20 - 25 ↑	Cleared snow from surface	9	13.25	2.75	9.5	13
20 - 25 ↓	Cleared snow from surface	9	12.75	2.25	8.25	13
25 - 30 ↑	Cleared snow from surface	3	12.5	1.5	8.25	12
25 - 30 ↓	Cleared snow from surface	3	11	1.5	6.5	12
30 ↑	Cleared snow from surface	3	11	1.5	6.5	11
>30 ↓	Cleared snow from surface	3	10	0.75	4.5	11

# Application Rate Next Steps

- Application Rate Questionnaire
  - ▣ Should we summarize the data and try to compare/contrast the various rates?
  - ▣ What sort of follow up is necessary?
  
- Salt Institute Thoughts
  - ▣ Are others implementing this approach?
  - ▣ Is there general support for this process as a recommendation?
  
- Sexton Thesis Summary
  - ▣ How can these insights inform our application rate recommendations?
  
- Other Thoughts...?