### **Fortin Consulting**

#### 2018 Recommendations from Winter Maintenance Classes

These recommendations come from 39 trainings in 2018

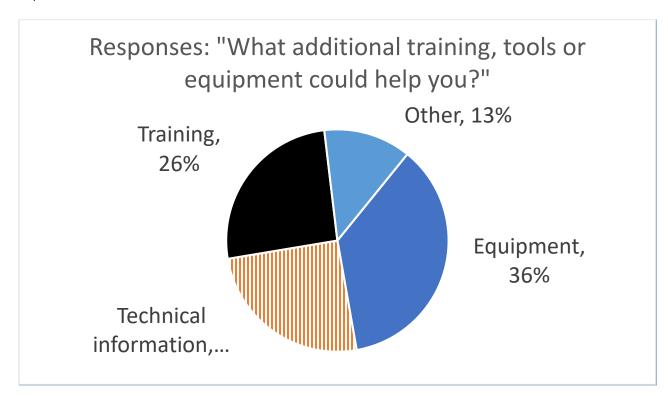
#### What additional training, tools or equipment could help you?

The answers can be categorized into 3 different categories: equipment, additional training, or technical info. 36% of the responses addressed improvements to equipment. Over one third of the responses were about equipment related to making brine or application of liquid or prewet products. Other popular answers regarding equipment included: ground speed controls, a pavement temperature tool, calibration equipment, and more storage. Several responders also had a general answer of better or newer equipment.

The next largest categories involved exchange of information: either more training or technical information. 26% of responses were about additional training. Most responses about training were requesting more hands-on training (about 40% requested hands-on calibration training or demonstrations) or training for others. Responses requesting training for others were mostly focused on management and supervisors or training for the public.

Technical information was mentioned by about 25% of responders. Responses regarded topics including liquids and a list of effective equipment. Several responders also asked for video or web-based resources.

Other ideas that did not fit into these categories included: increasing the use of liquids, more practice or experience and more workers.



#### **Equipment (123)**

- Liquid Equipment (53)
  - o Prewet (9)
  - o Brine mixing (9)
- General more/better/newer equipment (23)
- Pavement thermometer (14)
- Ground speed controls (8)
- More Storage (4)
- Calibration equipment (4)
- Brushes (3)
- Hand spreader.
- New tech for melting snow
- Barometer
- Dedicated equipment-no multiuse vehicles
- Vehicles
- More snow removal tools
- Treated salt
- Chutes
- Alternative products
- Snow hog
- Drop spreaders
- Spreaders
- Ultimate scrapers
- Deicing applicator
- Better radio in my skidsteer

# **Training (87)**

- Training for others (37)
  - Management/Supervisors (18)
  - Public (safe driving or effects of salt use) (13)
  - o Policy makers/ City council (5)
  - o Police department
- Hands-on training (26)
  - o Calibration demo (10)
- More training (22)
  - Level 2 training (6)
  - o Refresher training (3)
  - o Liquid training (2)
  - More training in non-metro for outstate
- Update training (2)
  - Work on developing the presentation in Spanish

# **Technical Information (85)**

- General More resources/facts/knowledge (22)
  - o Videos (6)
  - Websites/apps (3)
- More info on salt/application (9)
  - o It would be awesome to have a time-lapse video showing various materials/methods at work (2)
  - Go further into where the material should be placed-centerline, driving lane, and how much salt it would save
  - o How each product works and why they work better in certain situations
  - o Chemistry information
  - Cost for products
  - o Approaches for moderate temperatures = below 15 and above 0
- List of equipment/tools for mechanical removal (8)
- More liquid information (8)
  - A starter plan for anti-icing and direct liquid application
  - Anti-icing rates

- o How to make/mix brine
- o A how-to for on the fly brine application
- Using the charts (7)
  - o Laminate charts to give out at training
- More information on environmental impacts (5)
- More examples of successful companies/municipalities (5)
- More information on policies and laws (4)
  - o City code for snow removal
  - More about contracts for private applicators
- Copy of PowerPoint (3)
- More calibration information (3)
- Better tracking/forms (3)
- More information/tools for public outreach (2)
- More group discussions
- Comparing traffic volume, lane miles etc. (apples to apples)
- It would be awesome to have you evaluate certain locations, help make a plan
- Include sidewalk miles
- Example set-up: equipment needed, costs, capacity. This would help scale and apply to our uses.
- Information on snow reduction on roadways, living snow fences, salt effects on vegetation, salt tolerance etc.

# **Other (43)**

- Increase use of liquid (8)
- Practice/ experience (7)
- More workers (5)
- Calibrating spreaders more (5)
- Leadership/management involvement or support (4)
- Money (3)
- Heated pavement (3)
- Reduce liability (legislation) (2)
- More on what public has to have
- Pushing the cost of savings
- Trying new things
- Snow fence
- More deicing
- Need to start plowing roads before it is packed on