

Calibration: It's not just for salt

It can also benefit snow operations, team management



In winter management operations, calibration typically refers to application rates for road salt output (a critically important process snow and ice management operations should integrate into their standard operations procedures). But it is just one of several service/operational areas of your business that may need calibrated. Utilizing SWiM guidelines, here are the top five to consider in the continuous improvement process:

1 Salt output calibration is necessary for applying responsible salt application rates, saving money and reducing material waste. Furthermore, the reduction of road salt runoff from entering the environment is an urgent issue for us as an industry to understand and buy into. Chloride-based salts are clearly defined as a pollutant by the Environmental Protection Agency. As an industry, we need to prevent as much of this pollutant as possible from entering soil and freshwater sources.

2 Workforce development and recruiting includes implementing a succession process for upwardly mobile, talented people who are ready for increased responsibilities,

EDITOR'S NOTE: This article is the third in a series that will discuss policy, methodologies and environmental stewardship through the lens of sustainability as it applies to winter management operations. In each issue, we will explain in more detail the six categories of SWiM policy standards:

- Measure what you want to improve
- Calibrate equipment capacity, manpower, response times, salt and other materials
- Prevent bonding of snow and ice, waste, re-work and safety incidents
- Analyze Level of Service, data and variances



- Improve safety, Level of Service, productivity
- Optimize equipment, materials, time and data

knowledge and leadership. Likewise, there needs to be a thoughtful plan that is constantly reviewed and revised that takes into account the natural attrition of employees, business growth and the occasional parting of ways with people who aren't a healthy fit in your organization's culture.

3 Resource procurement and allocation primarily includes calibrating equipment and materials acquisition needs for each client and their corresponding scopes of work (SOW) and level of service (LOS) expectations. Calibrating the timing of purchases and rentals with historical weather timing is a critical first step to preventing beginning or end-of-season service failures in case of early or late winter storms. Keep in mind over the past 10 years, there have been at least 3 years

when significant plowable snow events have occurred at the end of October for many states throughout the Great Lakes, Northeast and New England.

4 Storm response timing and dispatching should include the integration of a weather forecasting service or technology. Having the ability to reasonably anticipate storm event timing that can be calibrated with timing crew dispatching, and mobilization of equipment, is an important SWiM guideline to integrate. If you are relying on TV weather stations as your only source of forecasting, then it is time elevate your operation to the next level by engaging with historical and real time weather forecast resources that are now more reasonably affordable to the industry at large.

Other SWiM calibration guidelines for salt use to consider:

- **Establish reduction targets** for calibrating salt waste and cost savings. Before you can reduce, you must first establish a target you and your teams can shoot for. The target you choose is always more reliable and realistic once you've invested the time and equipment to measure (SWiM policy #1) what you are applying.
- **Benchmarking the salt application rates** you calibrate with the Sustainable Salt Initiative (SSI) research. For the past 3 seasons, WIT Advisers, Viaesys and SIMA have partnered to measure salt application rates being applied throughout several Great Lakes regions. Application rates for more than 500,000 tons of sodium chloride applied on more than 2,000 properties and greater than 1,000 lane miles have been validated by measuring solid salt output with a consistent and automated salt tracking technology.
<https://witadvisers.com/sustainable-salt-initiative/>

5 **A service verification process** calibrates categories of information and data to document, collection methods and technology that enables efficient documentation and data collection. Although traditional paper methods for documenting and verifying services performed are still widely practiced and accepted, SWiM guidelines encourage advanced processes and technology that calibrate a) the acquisition of real time site/road conditions including air and surface temperatures, b) GPS-enabled production and material tracking, and c) pictures/video of conditions that are available as both real time and historical recall.

Calibration is a methodology to follow for standardizing consistency in your results and for enabling continuous improvement. When you integrate the calibrate policy and other SWiM guidelines into your operations, you will surely standardize success in your business or operation. **SB***

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