

Performance Measures

**Hard to Manage What You Don't
Measure**

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Symposium**

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Key Items For Performance Measures

- What Can You Measure?
- How Do You Measure?
- Why Do You Want To Measure?
- What Will You Report And How?
- Are The Results Accurate, Repeatable and Understandable?

Does Your Agency Have Performance Measures?

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Extremely likely “Yes”,

and you just don't know that they actually
are performance measures

Performance Measures Types

- Inputs
- Outputs
- Outcomes

Inputs

- # of employees
- # of trucks operational
- Quantity of material on hand
- % of spreaders calibrated
- % of staff winter maintenance trained
- **Weather Severity** (external)

Outputs

- Lane miles plowed
- Quantity of material used
- Amount of fuel usage
- Manpower hours (Regular time/ OT)
- Overall storm cost
- Equipment breakdowns

Outcomes

- % of wheel path clear
- Time to regain normal speed after storm ends/ Speed during a storm
- % increase in travel time
- Roadway grip during storm
- # of accidents during a storm
- Customer feedback

Measurement Tools

- Inputs/Outputs
 - Crew Reports
 - Administrative Data (i.e. training records)
- Outcomes
 - Visual determination
 - Speed data (i.e. TomTom, Inrix, etc)
 - Automated friction (RWIS)
 - Safety reports
 - Motorist surveys

Evaluation Criteria

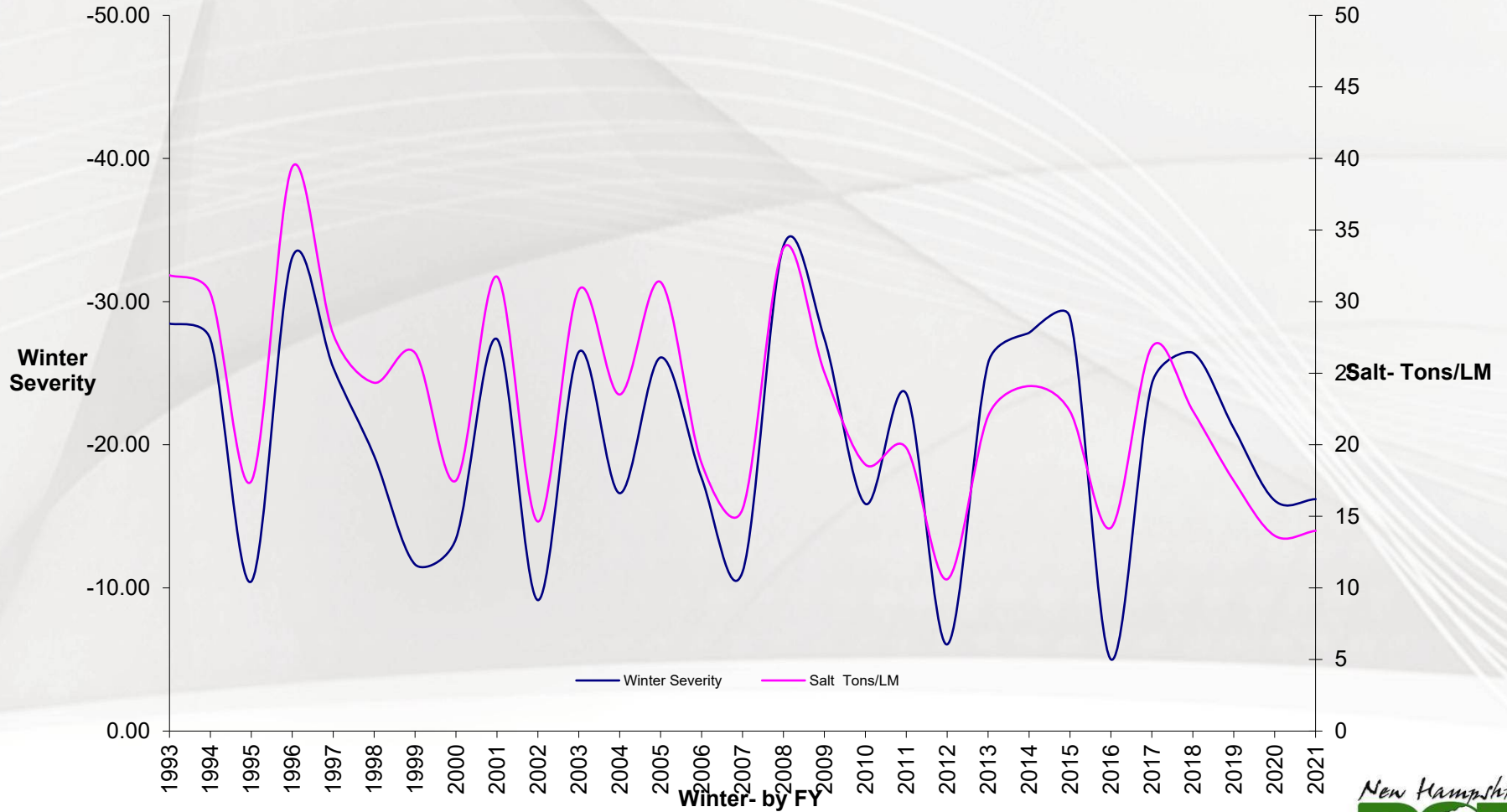
- Measurable/Consistent- Visual observations?
- Controllable- Accidents?
- Robust/Timely- Customer surveys
- Useful- Supports agency benchmarking
- Understandable- Friction sensors
- Comparable- Can you relate your measure to your neighbors?

Benefits of Performance Measures

- PM's can show that your agency is not just underachieving but maybe overachieving
- Document how changes in Inputs/Outputs affect Outcomes
- Provide repeatable reporting on your operations
- Consistent measures between agencies allows for comparison, with ability to set varying LOS's

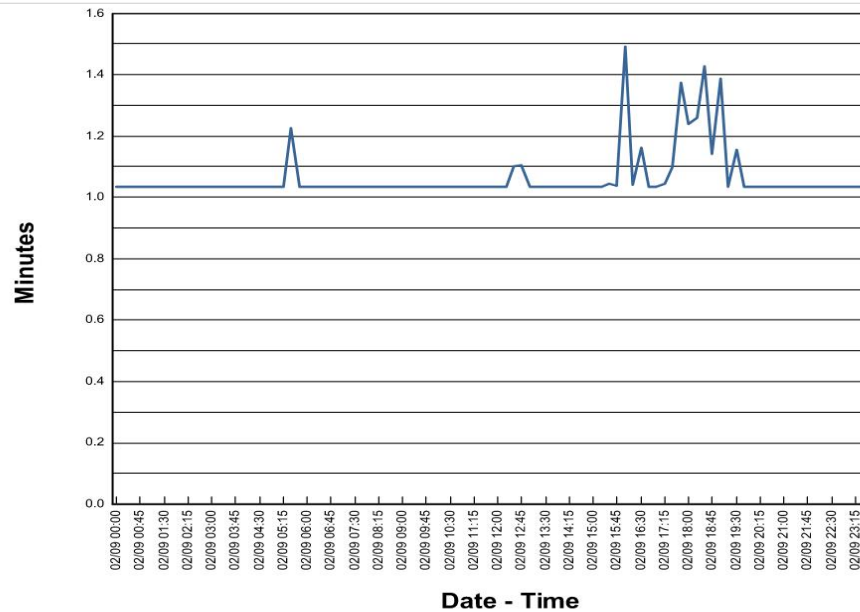
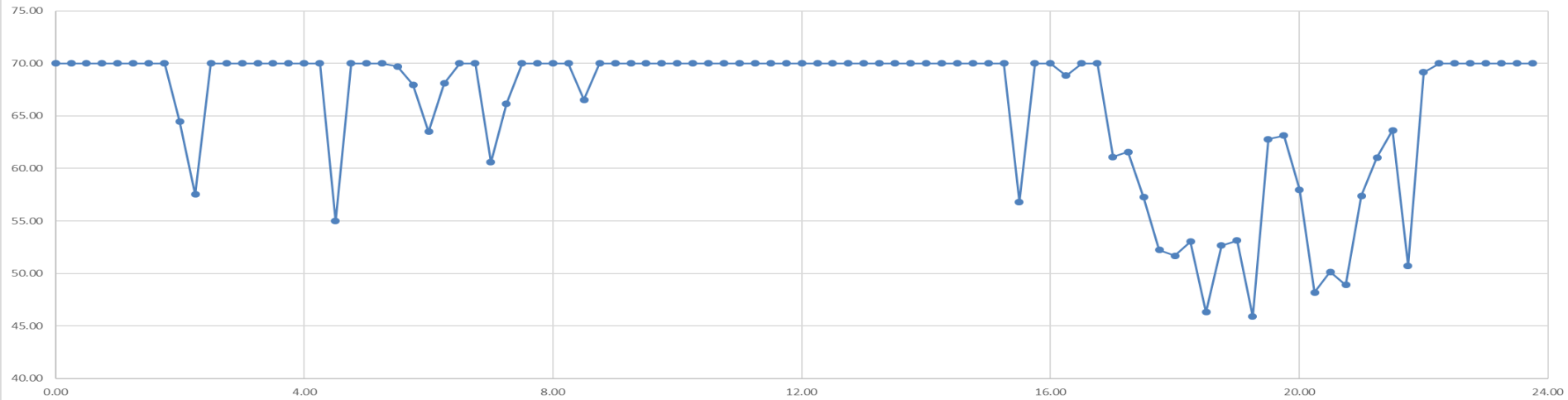
Winter Severity vs. Salt Usage

Derry- PS 528
Winter Severity and Salt Use



Speed Data

Travel Speed



RWIS System



The Good Old Days



- 1941-First direct application of salt in US was on NH roads- Usage tracked since 1942

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<http://www.trb.org/Main/Blurbs/178901.aspx>

Or Google:

NCHRP Winter Performance Measures