

## Idaho Winter Performance Measures



Idaho deployed the Winter Performance Measures (WPM) statewide in fall of 2011 utilizing RWIS data. The intent was to have a measurable system in place to evaluate if the Department was improving in operations.

The WPM included two measures

- How effective we were at ice/snow floor reduction (WPI)
- How effective we were at preventing ice/snow floor (Mobility)





Idaho improved upon the existing RWIS infrastructure of 57 RWIS sites in 2011, to a total of 125 by fall of 2014. This effort required a total RWIS network investment of approximately \$16 million since 2006.

ITD anticipated the investment into the RWIS network would lead to more effective and cost efficient practices.



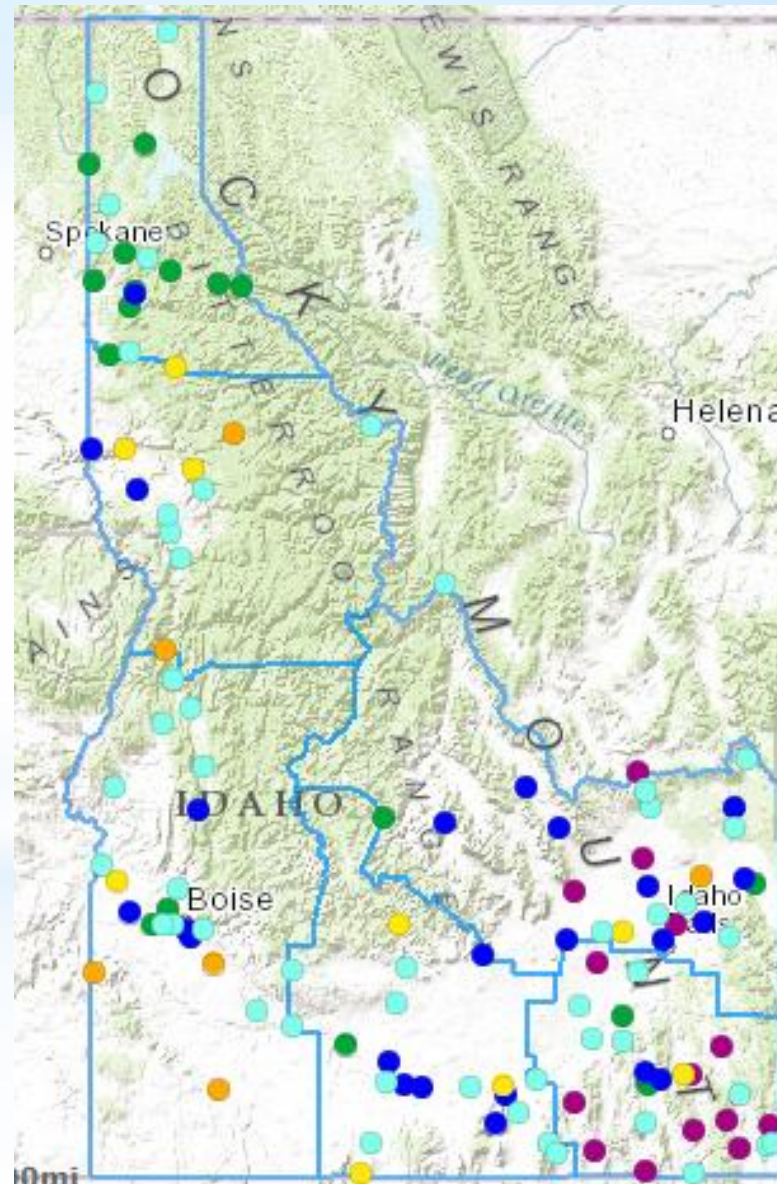
ITD's winter operational budget in 2011 was \$30 million. The department challenged crews to be innovative and adjust their Best Management Practices (BMP) to focus on better customer service. The target was the prevention of adverse conditions instead of managing snow packed roadways. A mobility goal of 55% was set.



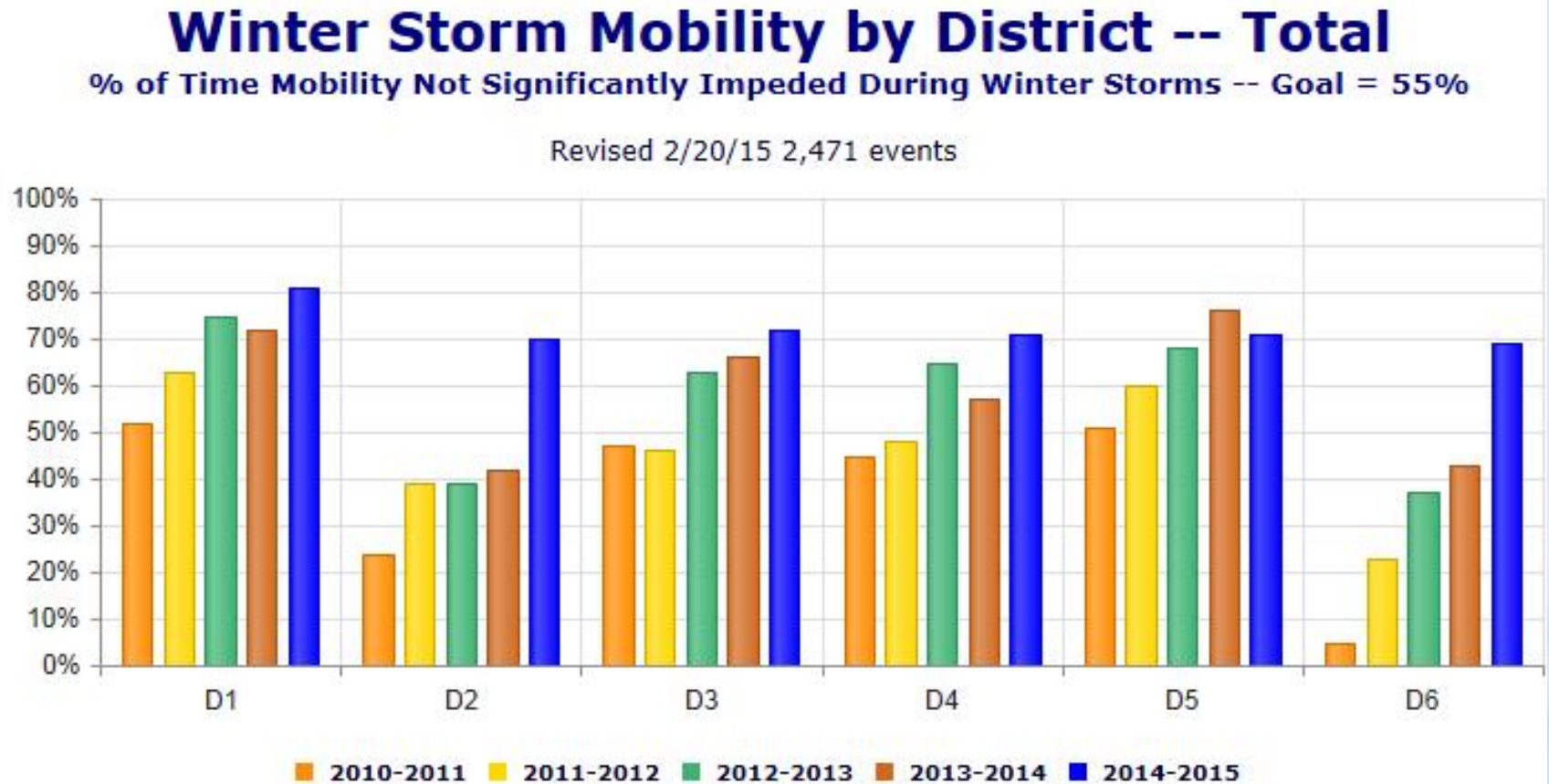
Idaho is comprised of six ITD districts with each district managing winter maintenance differently in 2011. The WPM was also built to create continuity in roadway conditions between borders.



Evaluating the WPM occurs through a series of 125 RWIS locations placed in severe climatic locations throughout ITD's roadway network.



Spring of 2015 ITD has continued to grow in operation saving and better customer services . Mobility (prevention of ice/snow floor) has improved considerably over the past four years, as seen below.



The societal cost of accident reduction was very significant. As Mobility improved, the accident rates dropped proportionately. ITD reduced the 3 year average of accidents on adverse conditions by 27% or 342 accidents between the compared time frames. The cost per accident was identified at \$72,000 for a estimated savings of \$24,624,000.



ITD's operational cost savings also were noticeable. The annual \$30 million budget for winter operations cost began to reduce as ITD forces became more effective and cost efficient in winter operations.

Tracking from Sept-April annual break out.

- 2011/12 season \$30.0 million
- 2012/13 Season \$25.5 million
- 2013/14 Season \$21.5 million
- 2014/15 Season in process

## So how did the cost savings occur while improving service ?

- Using technology for decision making
  - RWIS
  - Forecasting
  - Closed loop controllers
  - AVL/GPS
  - Graphical Critiques



### The results!

- Improved response timing
- Fewer laps required
- Matching the product to the storm event
- Understanding lap time effectiveness
- Better understanding of chloride dilution
- Able to reinvest in new technologies
- Improved safety and mobility



## Summary

- Idaho winter operating costs are lower than four years ago
- Winter accident safety has improved 27%
- Money saved is being reinvested into newer technologies
- ITD's culture is evolving into customer services orientation
- No borders is a reality
- Data collections are better
- ITD is shaping its own destiny



# Winter Automated Reporting System