



PACIFIC NORTHWEST SNOWFIGHTERS

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CLEAR ROADS

Winter Maintenance Scenario Based Roundtable Exercise

Extraordinary Winter Storms



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Today's Agenda

- Snow storm scenarios
- Forecasting challenges
- Dealing with the extremely challenging issues
- What would you have done in your agency?
- Sharing the results after discussion
- Changes - proposed/implemented



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“Typical” snow storm

- Starts as freezing rain or snow
- Pavement temps – usually 20+ degrees
- Average 1-4 inches
- Timing of storm can create issue – major roads
- Wrap up 12-24 hours after storm ends



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Dealing with the “issues”





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So How do You Adjust to an Extraordinary Snow Event?

- What materials will you use – what do you always have on hand?
- How will you adjust your crew?
- What warnings do you give the crews?
- What are the biggest priorities?
- What about low priority streets?



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Case Study

West Des Moines, IA – “Snow Storm From Hell”





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Storm from Hell

- “Waffling forecast”
- Cold Pavement Temperatures (19 degrees) then rapidly warming air temperature
- Started out as rain – 1:00PM
- Turned to heavy snow – 2:00PM
- Regional traffic nightmare



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“More”

- 8-10 inches of heavy/wet snow
- Crews focused on major streets
- Residential streets got packed down
- Weather then turned very cold
- The storm was over – the “fun” started!



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Packed Snow and Ice





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Case Study

Denver – Residential Street Nightmare

“Blizzardpalooza”



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“Nightmare” Events

- Heavy Snowfall Event; 20”+ Dec 20, 20”+ Dec 28
- Followed up my more events
- Cold air/pavement temperatures
- Typically did not plow residential streets
- Streets became extremely rutted





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Nightmare “Cont.”

- Massive outcry from the public
- Media feeding frenzy
- Forced staff to improvise
- Started cutting snow and ice
- Normal winter expenditure ~\$5M, this event ~\$13M
- 4 years damage to pavements





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What would you have done?

- Break into small groups
- Put yourself in a similar situation
- Discuss how it would affect your agency
- Record some of the ideas
- Choose a spokesperson
- Share your ideas with the room



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Changes You Might Implement

- Lets hear what you might recommend your agency changes from current practices with an extraordinary event in your area.
- Do you think if you took this recommendation back it might be implemented?
- If not, why do you think your recommendation might be resisted?



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Things to Consider!

- Your typical level of service expectations
- Your current plan for extraordinary events
- Non-typical storm event – stayed very cold for days
- More than one storm – close together
- How would you handle the negative press and citizen complaints
- How will you elected officials react?



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Operational and Policy Changes

- No pre-treatment due to rain – deicer products would not really have helped
- Utilize sand for areas that need traction when deicers are ineffective
- Pre-position equipment for faster response time
- Looked at ice breakers – not really feasible for our agency?
- Try and move to lower volume streets to plow since major roads were highly congested
- Get contact agreements in place to have availability for motor graders to cut packed snow/ice
- Be more pro-active with public relations. Partner with our County Emergency Manager and other regional agencies to send out a uniform message. More of an emergency management approach.



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Sand





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Ice Breaking Technology





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Last Resort!





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THANK YOU!

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