

# USING CHEESE SALT BRINE

Moe Norby, Technical Support Manager  
Polk County Highway Department

# Salt brine is a by-product from cheese making

- Polk County does not have it's own salt brine maker
- Starting working with F & A Dairy in September of 2008
- F & A Dairy could supply 5000 gallons per week

- Dairy salt brine is 24 to 25.5% salinity  
– normal to optimum is 23.3%
- Salt brine from a dairy is a waste product
- Requires a special exemption permit from DNR
- Polk County received their permit in January of 2009 to start testing

# Test One

- Showed a reduction of 32% of salt sand usage
- Top Photo – 600 lbs. per lane mile without salt brine
- Bottom Photo – 400 lbs. per lane mile with salt brine



# Test Two

- Showed a reduction of 40% in material usage
- Top Photo – 500 lbs. per lane mile without salt brine
- Bottom Photo – 300 lbs. per lane mile with salt brine



# Conclusion

- Hauling costs averaged \$.08 to \$.09 per gallon
- Win/win situation for both Polk County and F & A Dairy
- 30% - 40% material usage reduction
- Savings of \$40,000 in 2009-2010 using salt brine compared to Mag Chloride

Thank You