

# Salt Management Plan



## Best Practices for Snow and Ice Control Operations

MARYLAND STATE HIGHWAY  
ADMINISTRATION  
SEPTEMBER 20, 2012

# Background



- In 2010, the MD State Legislature passed two bills requiring establishment of a Statewide Salt Management Plan (SMP)
- MD SHA tasked to coordinate with MDE to develop the best practices for salt management document
- Document developed, and posted in October 2011
- Goal: facilitate safety and mobility during winter storms in cost-effective and environmentally prudent manner

# Safety and Mobility



- **Highway agency's goal in winter operations**
  - Safety and mobility for motorists
  - Environmental stewardship
  - Fiscal responsibility
- **Reality of winter storms**
  - Desirable outcome of goal is difficult to achieve
  - Defined Level of Service (LOS) – driving force

# Establishment of Goals



- The SMP accepts the obvious: winter materials can have a negative impact on the environment
- The SMP aims to manage and lessen the impact
- Measurement of salt usage is desirable
- Annual % goals in salt reduction is not responsible
- Long term goal of reduction is both desirable and responsible

# Winter Materials



- **Salt**
- **Salt Brine**
- **Magnesium Chloride**
- **Specialty Products**
- **Abrasives**

# Material Storage and Handling



- **Salt domes or salt barns**
- **Good housekeeping limits environmental impact**
- **Spill Prevention, Control and Countermeasures Plan**

# Winter Equipment



- Well maintained dump trucks with wing plows
- Well maintained electronic salt spreaders
- Calibration
- Specialty equipment
- Hired contractors

# Winter Operations Training



- **Snow College or Snow Academy**
- **Specialized targeted training**
- **Hired Equipment Operator Training**



# Winter Storm Management



- **Weather and Pavement Condition Forecast**
- **Pre-Storm Planning**
- **Anti-icing Operations**
- **Winter Storm Operations**
- **Severe Winter Storms**
- **Stockpiling and Disposal of Removed Snow**
- **Operations in Sensitive Areas**

# Post-Storm Operations



- **Equipment Cleaning and Maintenance**
- **Material Cleanup at Storage Facilities**

# Data Analysis and OFI's



- **Recordkeeping and Annual Reports**
- **Post Storm Data Analysis**
- **Operations Review for Continual Improvement**
- **Annual Winter Wrap-Up Meeting**

# Continual Improvement



- **Testing and evaluation**
- **New concepts**
  - Tow plows
  - Left and right wing plows
- **Research at the national level**

# Summary



- **Best practices for salt management is a starting point**
- **For additional information on SHA operations, please contact:**

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