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**Highway Deicing™**

for the WINTER MAINTENANCE PROFESSIONAL

WRITTEN SNOW AND ICE CONTROL PLAN AND POLICY DOCUMENTS ARE ABSOLUTELY ESSENTIAL FOR WINTER MAINTENANCE AGENCIES

PART II ADMINISTRATIVE AND PLANNING

BY

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In Part I of this series we discussed the benefits of written plan and policy documents and a recommended process for creating a document that is likely to find broad based acceptance. Part II will discuss crafting the content of the plan so it can guide snowfighting operations.

GENERAL INTRODUCTORY SECTION

Each plan should create a roadmap for readers. A general introductory section should contain information that will guide the reader in terms of: content, purpose, how the document was created, sources of information that appear in the document, the general philosophy of agency snow and ice control operations and how the agency will use the document. It should also define many of the terms that appear in the document.

As an example:

**Shall and Must =
a required course of action**

**Should and Recommended =
a recommended course of action**

**May = an optional course of
action**

Consider a statement that alerts the reader that the resources available are finite and during and immediately after intense and unexpected weather events, despite heroic efforts by crews, it may be impossible to restore bare/wet pavement conditions.

COMMUNICATION AND COOPERATION

This section should contain how "customers" can contact the highway agency to request service or report bad road conditions. It might include telephone numbers, e-mail addresses and/or website URLs. Customers should be urged to use restraint in this area, particularly with telephone contacts, as there is

likely to be a large volume of calls during winter weather events. If the agency is able to provide weather, road condition and treatment progress information, how the public can access that information should be detailed here as well as listing other locations and sources of information about winter maintenance activities.

A section on how customers can help facilitate winter maintenance operations should appear in this section. Items like parking regulations, snow emergency routes, snow removal operations, tire/chain requirements, abandoned vehicles and generally not driving during events should appear here.

Another section on how customers can help by keeping trash cans, basketball devices, large obstacles, snow forts, and fencing away from the road, and removing snow from around hydrants can be helpful. A reminder that it is illegal to relocate snow into the road should also appear here (this applies to both residential and commercial

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snow plowing/blowing/shoveling operations). A copy of the applicable section of State or Provincial law should be placed in the Appendix. This is a good location for safety tips about removing and storing snow from driveways and walk ways, and general winter safety driving and preparedness information. A section on how the agency will deal with plow damage to mailboxes, turf and other features should also appear here.

This section is a good location for a multi agency organizational and communications directory as it relates to snow and ice control and other emergency situations.

A listing of the roads within the political subdivision that are NOT maintained by the agency is always helpful. Here contact information for the responsible maintenance agency should also be provided.

LEVEL OF SERVICE

This is where the agency describes what customers can expect in terms of snow and ice service. In addition to providing customer expectations, it will be the standard of accountability in the event of slippery roads and related litigation. Common descriptors include:

- when treatments are supposed to begin after a storm starts
- road conditions at various points in time, during and after a winter weather event
- the level of effort that will be provided for various storm conditions
- the priority classification of the entire road system (A, B, C; 1,2,3; Red, Yellow, Blue, etc.),
- treatment timing and sequence (priorities) for various storm conditions by time of day and day of week
- the time(s) service will be diminished or not provided
- when “clean up” operations will begin

It is important for the agency and its customers to realize that available resources dictate the level of service that can be provided. Although there may be political pressure to put a happy face on the service capabilities, it is wise to state only what can actually be provided. Candid statements about not being able to provide the goal level of service during unusually severe and long duration events, and other circumstances that may diminish the capability of the work force are a good idea.

Define how level of service is determined. A good way to do this is to establish a “design storm” intensity and duration that may be exceeded about 10% of the time in any given year (the 90th percentile storm) for your area. This will vary considerably depending on location, but 1 inch of snow per hour for a period of 12 hours may be a good starting point. Once this is established, use treatment cycle time capability (based on the availability of people and equipment), and the type of treatment capability (solid chemicals, abrasives/chemical mixtures, liquid chemicals, plow only, etc.) to determine how you will describe level of service. Here you can cite the other factors that interact to impact cycle time and routing decisions.

These include:

- higher volume/slow traffic moving roads
- critical locations
 - hills
 - curves
 - intersections
 - school bus routes
 - transit routes
 - emergency services considerations
 - high snow and ice accident locations and other problematic areas
 - business routes
 - snow emergency routes

- other situations unique to the local community

PLANNING

This section is primarily to provide a blueprint for the agency to conduct the year-around activities that relate to snow and ice control. A good approach is to use the seasons of the calendar year to describe agency activities that should be accomplished in a timely manner, in those time frames.

Spring activities may include:

- equipment breakdown and storage
- materials inventory
- review the effectiveness of operational procedures
- highway inspection
- analysis of winter data
- review the effectiveness of personnel and staffing policies
- review equipment performance and maintenance activities
- review contract, interagency and inter municipality cooperative performance
- clean-up of winter materials
- damage repair
- soliciting feedback from customers on the past winter service performance

Summer action items may include:

- ordering/bidding materials and equipment
- drainage improvements
- obstacle remediation
- drainage structure adjustments
- practical improvements to high snow and ice accident areas
- training for new operators and staff

Fall activity items may include:

- finalize all cooperative and contract agreements for snow and ice equipment and services
- make sure weather information and other information systems are fully functional

- start sequentially bringing snow and ice equipment on line
- make necessary changes to plan and policy document (see Part I of this series)
- commit necessary operational changes to writing
- refresher training for seasoned operators and staff and continuing training for new operators and staff
- snow and ice meetings with union(s)
- calibrate materials spreaders
- mark obstacles and do “dry runs”
- trim overhanging trees
- install snow fence
- mark drainage structures
- coordination meetings with all involved agencies
- establish and reestablish contact with media and other information outlets

Ongoing winter activities may include:

- getting psychologically, physically and operationally prepared for the first and succeeding storms (whenever they arrive),
 - review performance after each storm and make adjustments as necessary
 - maintain materials inventory control
 - timely performance of safety restoration and cleanup operations after each storm should include: achieving and maintaining satisfactory pavement surface conditions
clearing sight distance problems
pushing back
maintaining “problematic” areas
drainage restoration
clearing bridges safety appurtenances as necessary
clearing drifted areas
clearing sidewalks
clearing hydrants
clearing crosswalks
clearing signs and signals
- This is a good location to include the “continuous improvement” activities that occur throughout the year.

These would include: post storm meetings, post season meetings, pre season meetings, various training forums, various committee activities, and “living document” provisions for the plan and policy document.

RECORD KEEPING

A basic record keeping system for snow and ice control operations is a very valuable asset. It has a number of benefits including being a powerful tool for use in:

- defense against frivolous tort claims and other allegations
- development of budget request and defining impacts of budget reductions
- measurement of the efficiency and effectiveness of agency operations
- measurement of the success or failure of improvement efforts

Here the agency should define the essential content, or provide appended examples of: operator reports or trip tickets, supervisor reports, equipment operation and maintenance reports and management reports.

RISK MANAGEMENT

In this section the agency should describe activities and programs that relate to snow and ice risk management. These may include:

- insurance or self-insurance status
- safety training programs
- programs to identify and remediate high accident locations
- weather and road condition information systems (internal and for public distribution)
- accident investigation/documentation procedures
- training on agency policy and procedure
- training on how to create and maintain records
- environmental risk management (details will be covered in the next article in this series).

APPENDED INFORMATION

This section should contain a listing and location of the appended information that appears at the end of the document. These may include:

- beat or route maps
- personnel policy documents
- relevant portions of union agreements
- personnel and equipment rosters
- a listing and locations/maps of parking sites for use during storms and clean up operations
- snow storage/disposal locations
- maps showing emergency snow routes and level of service classifications
- locations of emergency shelters
- copies of any applicable local laws or ordinances
- copies of applicable portions of State or Provincial Highway Law, Insurance Law and Vehicle and traffic Law

CLOSING STATEMENT

The preceding is necessarily incomplete, as there are other items to consider on a local basis, but it should give a general idea of the more important items that should be included in a well crafted written snow and ice control plan and policy.

Do You Know Snow?

If you know snow, the 2007 APWA North American Snow Conference in Saint Paul, MN, April 22-25, 2007 is looking for you. You’ve spent a lot of time in the snow, so come share your knowledge and expertise with fellow snowfighters across North America. You don’t have to be a professional speaker. Fresh and innovative twists to snowfighting issues are encouraged. Call for presentations submission deadline is September 15, 2006.

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Don't hesitate, submit your idea today! For more information or to submit a proposal, go to www.apwa.net/speakatsnow or contact Ashley Scherzer at education@apwa.net or 800-848-APWA (2492).

2006 EXCELLENCE IN STORAGE WINNERS ANNOUNCED

Ten state and local government transportation facilities in the U.S. and Canada earned the 2006 Excellence in Storage Award from the Salt Institute. The award recognizes high standards of environmental consciousness and effective management of winter materials storage. Another thirty-seven facilities were cited for "continuing excellence" for

sustaining award-winning programs recognized in the first 19 years of the program.

"With more than 60 years operating experience in salting roads to maintain winter safety and mobility, we've learned that environmental problems are potentially severe, always local and entirely preventable," explained Salt Institute president Richard L. Hanneman, in announcing the award winners. "Over those years, we've learned that inadequate salt storage is the likeliest path to environmental contamination. These agencies are doing an outstanding job of environmental protection in salt storage, establishing a standard to which other agencies aspire. The investments represented here are paying rich dividends."

The Excellence in Storage Award is part of the Salt Institute's Sensible Salting Program – an educational program for salt customers on how to store and apply salt in an environmentally sound manner. Over the award competition's 19 years, just 125 excellent programs have been recognized. Among the 48 facilities cited for continuing excellence Buffalo Grove, IL, has won the excellence designation 18 times; Arlington Heights, IL has won 14 times. States with the greatest number of winners were Illinois (14), New Jersey (13) and Connecticut (10).

The Salt Institute website has more information about the Excellence in Storage Award (<http://www.saltinstitute.org/40.html>).

2006 CONTINUING EXCELLENCE IN STORAGE AWARDS

Village of Addison, IL
 Village of Arlington Heights, Arlington Heights, IL
 Beaver Township, Bloomsburg, PA
 City of Brampton Works and Transportation, Sandalwood Parkway facility, Brampton, ON
 Village of Buffalo Grove, Buffalo Grove, IL
 Town of Clifton Park, Clifton Park, NY
 Columbia County, Wyocena, WI
 Connecticut DOT, Glastonbury Maintenance Facility, Glastonbury, CT
 Connecticut DOT, Hebron Salt Shed, Bolton, CT
 Connecticut DOT, Middletown Salt Storage Facility, Middletown, CT
 Connecticut DOT, Miller Avenue, Meriden, CT
 Connecticut DOT, District II, New Preston Satellite Salt Storage Facility, New Preston, CT
 Connecticut DOT, Old Saybrook Facility, Old Saybrook, CT
 Connecticut DOT, Route 71A Salt Shed, Meriden, CT

Connecticut DOT, Willington Maintenance Facility, Willington, CT
 City of Elgin, IL
 City of Geneva Dept. of Public Works, Geneva, IL
 Village of Hanover Park, Hanover Park, IL
 City of Houghton, Houghton, MI
 Village of Lake Zurich, IL
 Lockport Township, IL
 City of Lynchburg, Lynchburg, VA
 City of Marquette, MI
 McHenry County, Woodstock, IL
 Mount Prospect Public Works, Mt. Prospect, IL
 Macomb County, MI (Warren facility)
 New Jersey DOT, Berlin Yard # 415 Salt Storage Facility, Berlin, NJ
 New Jersey DOT, Cherry Hill Yard #411 Salt Storage Facility, Cherry Hill, NJ
 New Jersey DOT, Cumberland County Complex, Bridgeton, NJ
 New Jersey DOT, Cumberland Yard - #426, Maurice River, NJ
 New Jersey DOT, Deepwater Yard #425 Salt Storage, Facility, Deepwater, NJ

New Jersey DOT, Elmer Yard #420, Pittgrove, NJ
 New Jersey DOT, Folsom Yard #451, Folsom, NJ
 New Jersey DOT, Glassboro Yard #417, Glassboro, NJ
 New Jersey DOT, Mount Laurel Yard #468, Mt. Laurel, NJ
 New Jersey DOT, Red Lion Yard #434, NJ
 New Jersey DOT, West Deptford Yard #413, West Deptford, NJ
 Village of Northbrook, IL
 Town of North Salem, NY
 Town of Orangetown, Orangeburg, NY
 Village of Orland Park, IL
 Region of Peel Copper Road Yard Facility, Brampton, ON
 Public Works Salt Facility of Roanoke PW, Roanoke, VA
 South Whitehall Township, Allentown, PA
 City of Springdale, Springdale, OH
 City of West Des Moines, IA
 Wright County, Buffalo, MN
 Town of Yorktown, NY
 City of Zion Public Works, Zion, IL

**2006
EXCELLENCE
IN STORAGE
WINNERS**

Village of Algonquin,
Algonquin, IL

Ashland County Salt Storage
Building , Ashland, OH

City of Bloomington,
Bloomington, MN

CT DOT, East Hampton Salt
Storage Facility,
East Hampton, CT

CT DOT, Pomfret Salt Storage
Facility, Pomfret, CT

Franklin County West Mainte-
nance Facility, Columbus, OH

Hamilton Township,
Hamilton, NJ

City of Mississauga
Mississauga, ON

PennDOT Pen Argyl Stockpile 07,
Easton, PA

Township of Randolph,
Randolph, NJ



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You just enjoyed another electronic **Salt and Highway Deicing** Newsletter! It helps you make better decisions in your winter maintenance responsibilities and gives even more information by active links to www.saltinstitute.org <http://www.saltinstitute.org> with specific pages to further snowfighter information. Feel free to forward this newsletter to other interested persons so they can also enjoy this informative free quarterly. Be aware Salt Institute never sells or distributes any of your contact information to any outside source. Please sign up at: <http://www.saltinstitute.org/subscribe/index.html>



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