



TECHNICAL BRIEF 2010-1

WINTER OPERATIONS SURVIVAL LESSONS



10 procedures to follow in establishing efficient, effective and safe winter operations

Being prepared to handle a winter storm is essential. But how do you get prepared? Let's look at some survival lessons for a successful snow-fighting program.

SURVIVAL LESSON 1:

Establish a local advisory committee.

You need to get the community involved in the decision-making for snow-fighting policies. A local advisory committee is a good way to obtain input on major policies such as service levels and expectations. Having a part in the process, the group will buy into the program and be educated about the winter operations program. Members of the committee also can help disseminate information and provide valuable evaluation and feedback.

SURVIVAL LESSON 2:

Develop a policy statement.

Policies regarding scope and level of winter services should be developed. Your local advisory committee should offer advice and expectations. To accomplish this task, you must first define your municipality's responsibilities, then evaluate resources, determine priorities and establish levels of service. Let's look at these items individually.

Identify responsibilities. Your roads and streets are, of course, your responsibility. But you also need to address parking areas and, specifically, metered areas. Do you have other public facilities? What about sidewalks and crosswalks? Are there fire hydrants to be cleared? What about drainage facilities, and where is the snow to be discharged or piled? You need to inventory all facilities to properly plan for the right resources to do the job.

Evaluate resources. What kind of dollars are allocated to winter operations? How many people are available? What equipment is available? In evaluation of available resources, there are alternatives to consider, such as utilizing local contractors or developing a cooperative agreement with your neighboring municipality. You need to explore numerous alternatives to determine what will work best for your community.

Set priorities and establish levels of service. You need to link priorities and levels of service to responsibilities and resources and evaluate the results. You may have to adjust your thinking and either cut back on service levels or budget additional dollars for more personnel and equipment. What will be the impact on your residents?

In setting street and road priorities, it helps to define your roadways with respect to traffic and major routes of ingress/egress, but you need to consider other factors such as schools and school bus routes, public transit routes, emergency services and so on. Meet with other agencies (school, transit, police, fire, medical and so on) to help establish a priority list. You then move into establishing levels of service, making sure you can deliver. Levels of service should establish the maintenance goal after the storm. Because storms come in all magnitudes, and you need time to fight whatever hits, the goal cannot be met during the storm. Often, the level of service is stated in time after the storm, such as “complete all plowing and spreading of materials within 12 hours after the storm”.

The level of service must be doable and practical. It has to be based on funding available to support the required resources in personnel, materials and equipment. This can have liability implications. It is much better to promise the minimum and do better most of the time than to fail on a regular basis. The optimum level of service is bare pavement maintenance. This is optimum not only for safety but for mobility. Different levels of service, however, may be adopted for different priority routes. Common levels of service can range from bare pavement maintenance, to center bare only, to plowing roadways and salting intersections only. Combinations of operations can be many, with options in just how you are going to do this and within what time factor.

One of the variables in operations is materials. You need to decide what materials may be best to use for the desired level of service, keeping in mind the required time to accomplish the task. Use your public works technical personnel to provide information and guidance. Evaluation of materials as to cost and effectiveness can be time consuming and complex. Discussions with people experienced in using the various materials can help.

You also need to address plowing. When do you plow? It is common to establish a policy based on amount of snow accumulation such as 2 inches to 3 inches. Along with *when* is *where* to plow the snow. In urban areas, a common policy is to push the snow back to the curb to open the gutter line for good drainage. Pushing the snow back in rural areas also makes for good drainage, makes roads safer and provides a place to plow the snow from the next storm. Parking is a concern in which you need to establish policy. Is this a permanent parking restriction for street cleaning or only seasonal? Parking meter areas pose specific problems of where to put the snow.



SURVIVAL LESSON 3:

Adopt a comprehensive winter operations plan.

The plan is more than just a snow route map; it is a comprehensive plan covering all aspects of your winter operations. Your public works personnel should prepare a draft plan in accordance with the adopted policy statement. The plan should be presented to your local advisory committee for its review and comments and then finalized accordingly.



SURVIVAL LESSON 4:

Adopt sensible-salting practices.

Adopting specific practices for plowing and spreading salt will be a great benefit in a variety of areas. Sensible salting increases safety, protects the environment, reduces costs and reduces liability. Sensible-salting practices should be part of your comprehensive winter operations plan.

Just what does sensible salting mean? It means that you:

- Know the salt you are using, that you have good material specifications.
- Know the importance of good storage facilities and proper storage and handling practices for all materials.
- Know what equipment is needed for deicing, for pre-wetting and for anti-icing and are knowledgeable about proper application rates depending on storm and road conditions.
- Know about other chemicals and how they can be used effectively in conjunction with salt.



SURVIVAL LESSON 5:

Implement an employee training program.

Everyone needs training. It is maintaining personnel at an optimum level. Shouldn't you maintain your personnel the same as you maintain your vehicles and equipment? Don't you have a major investment in your employees? Don't you want them to be as effective and efficient as possible?

Training is an investment in proper knowledge, cost reduction, work efficiency, morale boosting, safety, liability reduction and your municipality's future. Training improves your workforce, and you and your municipality can reap the benefits.



SURVIVAL LESSON 6:

Implement an employee safety program.

Remember, the crews are out there because the roads are unsafe for the traveling public. If there was ever a need for a formal employee safety program, it is for winter operations. A formal program means policies and procedures and their enforcement. If enforcement is lacking, safety will suffer, which means everyone will suffer.

A designated safety committee or a designated safety person can be a real asset in keeping safety alive. Training is essential in all aspects of crew safety with personal protective equipment, materials handling, vehicles and equipment operations, and entire winter operations. Use your workers' compensation insurance carrier as a resource for safety program development.



SURVIVAL LESSON 7:

Establish a formal risk-management program.

Risk-management should be addressed as two areas — risk prevention and risk control. A good program will start with risk prevention, identifying potential problems or high risk areas, identifying high-accident sites through accident investigation, and implementing proper policies and improvements.

Risk control involves purchasing insurance to control costs. But a good program will go beyond just insurance. It will minimize potential lawsuits through risk identification and improvements, minimize the number of lawsuits lost through proper preparation and policy adoption, and minimize the damages of lost lawsuits by being knowledgeable and prepared through the legal process.

Standards and record keeping are essential to good risk management and defending your liability in court. Your policy statement, along with your comprehensive plan, sets the standards for your operations. Following the established policy and plan is essential. In addition, a record keeping system should be established by which the agency can document how well it complied with its level of service and each component of the comprehensive plan. Document special practices and take photos of roadway conditions after any accidents.



SURVIVAL LESSON 8:

Establish an effective public relations program.

Local governments can use pre-prepared news releases. These allow you to highlight any new equipment or procedures adopted for the winter; review policies, plans, priority routing and available resources; and solicit the help of your residents to do their part in winter operations.

Use the media - don't let the media use you. And don't forget to use your local advisory committee to enhance your public relations. The computer age with all the new technology can help in several ways regarding public relations. You can establish a Web site that is easily accessible for the public. You can develop newsletters in-house to outline town specific winter operations education for the public.



SURVIVAL LESSON 9:

Evaluate and update your program.

Every good plan needs to be evaluated and updated on a routine basis. A comprehensive winter operations plan lends itself to annual review, evaluation and update. One of the best methods is to have a post-winter meeting involving all winter personnel. Don't wait until fall when things can be forgotten. Spring is when winter operations are still fresh in everyone's mind along with all the problems and concerns.

Assign someone to take minutes and make to-do lists. You can discuss route problems, review winter accident data, discuss material and equipment problems, discuss personnel problems, cover operations effectiveness, and talk about media and public relations. All these items need to be discussed and problems and concerns need to be recorded, along with suggested remedies and solutions.



SURVIVAL LESSON 10:

Lead the team and get involved.

You have to lead the team. You have to ensure that interdepartmental cooperation takes place.

What goes into a plan? Here's a suggested list of items that need to be addressed:

- Level of service
- Areas of responsibility
- Winter organization chart
- Public policies
- Storm-warning system
- Snow route map
- Personnel policies
- Material policies
- Equipment policies
- Operations policies
- Intergovernmental agreements
- Public/media relations



As you can see, winter operations are no simple task. Comprehensive planning and organizing is essential for success. Your plan needs to fit your agency's needs, resources and roadway environment.

Reprinted with permission from the Nevada Technology Transfer Center's Streetwise series.

For information about the Connecticut Technology Transfer Center, please visit us at: www.T2center.uconn.edu