Vol. 38 No. 4
Spring 2003

SALT & Highway Deicing™
Published by SALT INSTITUTE
for the WINTER MAINTENANCE PROFESSIONAL

Snowfighter Certification

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There is no dispute when it comes to the positive value of Snowfighter training. Most agencies provide some form of internal training and acquire external training from a variety of sources including:

- Local Technical Assistance Programs (LTAPs)
- National Trade and Professional Associations (American Public Works Association, Transportation Association of Canada, Salt Institute, etc.)
- Associations of Highway Professionals (City, Town, County & State)
- Federal Highway Administration
- Consultants

The major areas of benefit associated with comprehensive snowfighter training programs include:

- Efficiency and effectiveness
- Safety
- Environmental
- Customer perception
- Cost
- Equipment
- Legal/Litigation

Insurers of municipalities are often willing to provide financial and professional support for snowfighter training. Snow and ice safety training grants from State Labor Departments are generally available for snowfighter training. Environmental grants are available in some areas for snow and ice training. These usually focus on the proper application, storage, and disposal of snow and ice control materials.

As indicated above, there is a wide variety of snowfighter training available. The problem is to be sure that training satisfies the individual requirements of an agency or organization. An increasingly popular method to accomplish this is to have a standardized snowfighter certification program that may draw from internal and external training resources. Certification programs rigidly prescribe classroom subject matter, shop activities, operational training time and testing requirements. The usual end result is a highly trained snow and ice workforce that serves the organization and community well.

The certification process and requirements vary considerably among agencies. Most agencies certification programs require that new employees undergo significant classroom and hands-on training in basic safety and operational tasks associated with snow fighting. This is typically done by some combination of external training forums, internal "academies" and local trainers. After the required training is accomplished, written and/or operational tests are administered. The subject matter usually includes:

- Safe truck driving
- Use of the various plow configurations
- Use of material spreaders
- Calibration of material spreaders
- Pre and post equipment operation checks
- Use of communication equipment
- Equipment, yard, facility and personnel safety issues
- Agency level of service policy
- Personnel policies
- Record keeping
- Environmental awareness
- Legal rights and responsibilities

—*see* **SNOWFIGHTER,** *continued on page 2*

Snowfighter Certification *(continued from page 1)*

Most agencies having certification programs require snowfighter re-certification based on a number of factors including:

- Elapsed time since initial certification
- Recent hours of experience
- Operator accident and other performance history
- Operator request

Beyond snowfighter certification, many agencies require training/performance certifications be obtained by personnel before they operate any piece of equipment and before they are eligible for promotion. This is resulting in more highly trained work forces with many attendant benefits.

Here's how four organizations have approached snowfighter training/certification.

City of Edmonton, Alberta, Canada

Edmonton has a comprehensive snowfighter certification program that is part an overall certification program for all equipment operation and career ladder opportunity. All employees must possess a provincial commercial drivers license as a condition of employment. Beyond that, they must obtain a city driver's permit (CDP) in order to operate any city equipment. This is accomplished through a combination of classroom training and hands-on application. After that, 40-hours of equipment operation under the supervision of a trainer is required. Final certification is achieved after a road test under actual snow and ice conditions.

An accident review committee reviews accidents and other incidents and appropriate points or demerits are assigned. Eight demerits are required to have the CDP suspended. This could result in assignment to non-driving duties or eventually, termination of employment. The CDP must be renewed after 5 years by successfully completing an 8-hour refresher course.

Part of the initial CDP certification is the successful completion of a comprehensive training program that consists of 14-hours of "theory" (classroom) and 6-hours of "practical" (shop) application. The "theory" portion includes:

- Administrative procedures
- Safety program and requirements
- Equipment operation and inspection
- Materials application guidelines
- Materials spreader control systems
- Spreader calibration
- Communication system

The "practical" portion includes:

- Pre-operational inspection
- Tailgate removal and replacement
- Material loading (including liquids)
- Materials spreader installation and removal

Comprehensive refresher training and materials spreader calibration are performed annually in September.

Barry Belcourt, Director of Roadway Maintenance for Edmonton, feels that this emphasis on training and certification has been beneficial to the city. In addition to everyone "being on the same page", he sees benefits in the areas of equipment, safety and the environment.

SIMA (Snow and Ice Management Association, Inc.)

SIMA is a trade organization comprised of private sector people and businesses engaged in surface snow and ice control. SIMA administers a voluntary Certified Snow Professional (CSP) Program for its members. The main objectives of the program include:

- Raise the standards of the profession
- Encourage self-assessment by offering guidelines for achievement
- Identify persons with acceptable knowledge of principles and practices of the profession
- Award recognition to those who have demonstrated a high level of competence in the profession
- Improve the performance within the profession by requiring participation in a continuing program of professional and educational development.

In order to be a certified snow professional, individuals must:

- Possess minimum qualifications in terms of education and experience in the industry
- Pass a 6-hour written examination
- Retain certification through continuing education
- Adhere to a high standard of ethics

The subject matter of the examination includes:

- Risk, law and contracts
- Business planning, accounting, and management
- Technical aspects of snow and ice management
- Mechanics of snow and ice management
- Sales, marketing, communications and public relations
- Health, safety and human resources

The following subjects are among those that fall within the technical and mechanical aspects above:

- Plow speeds
- Blades
- Chemicals
- Calibration
- Operational safety

Tammy Higham, Executive Director of SIMA, indicated that in addition to normal training benefits, businesses having CSP personnel often receive "bid points" or "qualification points" when bidding on snow and ice control contracts with governmental and other agencies.

New York State Department of Transportation (NYSDOT)

NYSDOT has a skill based career ladder for its highway maintenance workers. Certifications based on training, experience and skill demonstration are required to operate each type of equipment used by the Department. Career advancement is keyed to acquiring certifications on certain types of equipment and the total number of certifications acquired among other things.

For the past ten years, NYSDOT has had a policy that requires all

maintenance workers have a certification to perform one person plowing (OPP) with a heavy dump truck (> 37,500 GVWR) having front plow, wing plow(s) and material spreader. The steps in acquiring the certification are:

- Classroom training
- Shop session (truck, front plow, wing plow(s), and material spreader)
- In-yard skills demonstration
- Over-the-road skills demonstration (dry – no snow or ice)
- Over-the road skills demonstration (actual snow and ice conditions)

Re-certification using the same steps is required for the next two years. Beyond three years, annual re-certification requirements are less, with only classroom training, shop session, and satisfactory performance (absence of preventable accidents and other "incidents") being required.

The subject matter of the training generally falls within the list of topics that appears early in this article. Terry Vennard manages the Maintenance Training Program for NYSDOT. He indicated that during the first year of this program there was a 50 percent reduction in accidents/incidents involving NYDOT snowplows. Thereafter, accidents and incidents have remained at a low level.

Province of New Brunswick, Canada Department of Transportation (NBDOT)

As with NYSDOT, NBDOT has had a snowfighter certification program in effect for about ten years. All snowfighters must be certified before they perform snow and ice control operations.

The certification process includes:

- Two days of classroom training
- Written test
- Road training
- Road test

The subject matter discussed in the classroom training, among other subjects includes:

- Safety

- Selecting plow equipment
- Plowing techniques
- Snow and ice materials
- Spreader calibration
- Ground speed spreader controls
- Environmental measures

Road training is accomplished by a trainer and a coach working with the candidate until he/she is judged ready to take the snowfighter road test. After successfully passing the road test, the candidate will receive a snowfighter certification.

Retaining certification involves maintaining a satisfactory performance record (absence of accidents or incidents) and having a minimum number of operational (snow and ice) hours during the past three years.

Dave MacFarlane, with the NBDOT Central Office, feels that the snowfighter certification program has provided significant benefit in terms of skill development, safety, efficiency, effectiveness and environmental awareness.

Effective winter maintenance is essential in preserving safe winter driving conditions and essential personal and commercial mobility. The experience of these four organizations supports the notion that a highly trained snow and ice workforce delivers these benefits to the organization and its customers, the driving public. The training structure afforded by formal certification programs results in snow and ice workforces that provide a consistent level of service in an effective, efficient and safe manor. ■

***Salt and Highway Deicing* newsletter going electronic!**
You receive a free subscription to *Salt and Highway Deicing* newsletter semi-annually.
We hope it helps you make better decisions in your winter maintenance responsibilities. Plans to improve our service…and still keep it **free** for you – are in progress.
We are converting the current semi-annual printed newsletter to a quarterly e-mailed newsletter – doubling the publication frequency. The content will remain the same. Your action is needed to make the transition.
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Thank you for helping us serve you better!

Q **The Salt Institute provides advice on calibrating our spreader and also on the application rate for various storm conditions. But the calibration advice is based on "pounds discharged per mile" while the application rates are based on "pounds per two-lane mile." I've also seen references to "road miles" and "centerline miles." Can you straighten this out for me?**

A Our calibration chart will help you understand how many pounds of salt are coming out of the spreader. Usually, the spreader is adjusted to cover a single lane of roadway, but the spread of the salt can be adjusted from a windrow to two lanes. The application rates, in North America, are generally expressed in terms of quantity per two-lane mile. That is, literally, the amount of salt that should be applied to two adjacent lanes of traffic (Europeans often use grams per square meter, to further confuse you!). Thus, 300 pounds per two-lane mile would mean that the road manager can multiply the number of road miles, since roads are generally 2-lane or 4-lane and always in multiples of two, and knowing the truck's capacity and application rate, can know how many miles of roadway can be covered on any given route. Road miles and centerline miles refer to the total length of the road and make no distinction based on the number of lanes.

Q **"NPDES II" applications are due March 10, 2003. What does this mean for snowfighting operations?**

A The National Pollutant Discharge Elimination System, Phase II (NPDES II) regulates rain, ice, and snow runoff to surface waters, whether as direct runoff or through a storm water groundwater drainage system. Municipal garages, vehicle fueling areas and salt and sand storage facilities must prevent exposure and contamination. If storm water enters the grounds of a facility and flows through it, NPDES II applies. Municipalities must either certify "No Exposure" or prepare more costly Storm water Pollution Prevention Plans (SWPPPs). "Salt" includes not only piles of highway deicing salt, but any sand piles where salt has been mixed-in to prevent freezing or prepared for application of salt-sand mixtures. Temporary tarping with operating policies calling for coverage except during loading operations can be sufficient; roofed salt and sand storage with proper drainage and operations policies to ensure prompt sweeping of any materials spilled during transfers would almost certainly qualify for "no exposure" certification. A storm water collection system can also meet the requirement. These are good management practices and far less costly than preparing a SWPPP. See the Salt Institute's online *Salt Storage Handbook* http://www.saltinstitute.org/34.html#wi for best salt management practices. Remember, snowfighting operations are only a portion of the required storm water controls.

SALT INSTITUTE GETS NEW TECHNICAL DIRECTOR

Susan R. Feldman has been appointed as the new Technical Director of the Salt Institute, succeeding 17-year Institute veteran Bruce Bertram who will retire.

Feldman joins the Salt Institute with 20+ years of technical experience in the salt business. She served, since 1997, as Quality Services Manager-North America for Akzo Nobel Chemicals, Chicago, IL. In that capacity, she was corporate change agent and lead facilitator for the Chemicals group, overseeing quality policy, quality training, and continuous improvement efforts.

Prior to Akzo Nobel's sale of its North American salt business in 1997, Feldman was Director of Quality Assurance for Akzo Nobel Salt Inc. She held a series of technical and research positions from chief chemist to director of product technology for industrial and food grade salt products at Akzo Nobel Salt. Her areas of particular expertise include quality assurance, quality control, R & D, technical service and product development. Her experience includes working with highway salt customers.

Feldman holds a M.A. degree in Organic Chemistry from the University of Scranton, Scranton, PA and a Chemistry B. A. from Douglass College, New Brunswick, NJ.

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Published four times a year.