As essential as it is after a snowfall, plowing is an inherently dangerous business, executed on slippery roads and in blinding storms. But by following some basic safety procedures, public and private enterprises can reduce the likelihood of property damage and auto collisions involving plows.

One of the most effective ways for public entities to prevent potential accidents involving snowplows is to have drivers visit assigned areas to locate hazards and map out parking lots – **before** the plowing season begins.

Agencies should instruct all plow operators to visualize routes to assigned work sites, as well as the parking lots and driveways they’ll be plowing, and to record the location of potential hazards. If operators are unfamiliar with the route, they should be accompanied by a coworker, who can pass along information about sharp turns, steep hills and potential problems associated with locations chosen to pile snow.

It’s also wise for truck drivers to revisit parking lots each season; the pavement may have settled, leaving raised manholes or other hazards, newer lots may have sunk and older lots may have developed cracks. Hitting raised areas can injure a driver and damage the plow. Mark hazardous curves or other needed areas with tall, sturdy stakes.

Advance planning is critical, so have drivers decide beforehand where to pile snow; it’s important not to block access to drainage, fire hydrants, building exits, mailbox, or other key areas. Do not restrict entrances or exits to lots, and don’t block or obstruct the view of drivers. Usually it’s best to choose spots toward the edge of the lot.

If snow plows are shared or a truck is reassigned from one driver to another, it’s imperative that specific safety information be communicated. Were there any notable problems? Does the truck need to be restocked with any emergency supplies? Does it need to be refueled or refilled?

If drivers will be working in tandem, they should discuss their plans with each other and use a radio to communicate, not hand signals. Clear communication is the key to working safely together.

Operators also should check trucks at the start of their shifts, looking around and under the vehicle for obvious problems. In the cab, drivers should be sure to run down a checklist that includes mirrors, wipers (they should be clear of ice) and fluid, the heater, windshields, headlights, all other vehicle lights, and fuel. It’s also important to see that plow attachments, lifting chains, tire chains, pins, connections and the spreaders (which can be used to spread sand or salt) are set properly.
Some public entities use a salt-brine system to treat or pre-treat the roads. Salt has become more popular to use on winter roads than sand, due to the rising costs of sand disposal. In the salt-brine system, the two components are combined into a liquid or paste to apply to roads. This operation uses mainly the same equipment as a traditional salting or sanding operation. When the solution is applied, it is immediately activated to begin the melting process. When poor driving conditions are predicted, the solution can also be applied to create a barrier over the road, preventing a chemical bond from forming before the snow or ice arrives. This pre-treatment, called “anti-icing”, is very effective at easing snow plow operations. Anyone who handles the salt pellets or salt solution should wear rubber gloves because the product is drying to the skin.

Not every hazard lies outside a vehicle, though, so operators also should check for items in the cab that might be distracting or pose a danger. Drivers should throw out trash such as coffee cups and soda cans, and store other items securely. If an empty can gets stuck under the pedals, the result could be disastrous, and if an accident occurs, any loose item could become a deadly projectile.

Here are some additional tips for snowplow operators:

• Always wear your seat belt when plowing because hidden objects may cause sudden stops;

• Never plow with your head out the window; hidden objects could cause head and neck injuries;

• When operating a plow, it is imperative that drivers check their mirrors about every three to five seconds to avoid the danger of hitting a motorist who has advanced into your blind spot. Double check in the rearview mirror when turning;

• Try to scan ahead about a quarter mile. Look for suddenly appearing hazards such as pedestrians, stalled cars, animals or disabled vehicles;

• A plow isn’t a bulldozer. It’s not designed to move rocks, dig dirt or spread gravel;

• When two snowplows pass in opposite directions, plow blades may need additional clearance;

• Other motorists may be hidden behind the other plow and may pull out in front of you;

• Some parking lots pose special challenges. Motorists in hospital parking lots, for example, can be emotionally distracted and 24-hour convenience store lots will have shoppers pulling in and out all day;
• Use a three-point grip when entering and exiting the truck cab – two feet and one hand, or two hands and one foot – to avoid injury. Always face the truck when getting in or out of the cab, and don’t jump. Use footholds and handholds. When your feet hit the ground, the surface will most likely be wet or icy so use caution.

**Super Job**
Department supervisors are responsible for overseeing operators and setting an example, and these safety-minded tips can go a long way toward keeping drivers at their safest and most alert.

Timing is a strategic part of the job, and supervisors should make sure that snow plowing doesn’t begin too late in the storm cycle. Most plowing runs begin when there is an accumulation of one to four inches. Snow will quickly become too difficult to remove if drivers are not plowing with the storm.

Be aware of driver fatigue and assign rest periods as needed. Remember that drivers must be constantly evaluated to ensure they are in the proper condition to handle their assigned routes. If a supervisor notes that a driver has been drinking or is sick or tired, the route should be reassigned to another employee.

Coffee, by the way, can have some eye-opening effects, but not necessarily the good kind. Drinking too much of it can cover up natural signs of fatigue, causing drivers to fall asleep with little warning. In addition, watch out for drivers who use stimulants that may cause them to overreact, exhibit a false sense of driving capability or act aggressively or impatiently. Be on special alert for the use of over-the-counter medications such as cold medicine, which can make drivers drowsy.

Some snow storms are worse than others, so it’s imperative that plow operators adjust their approaches to road and weather conditions. Wet snow can weigh up to 12 pounds per cubic foot – a factor that can influence how quickly and effectively it can be pushed, even with the heftiest of rigs.

At the other end of the spectrum, snowplows can go too fast at times. Supervisors should point out that skidding, sliding or snow flying back into windshields are sure signs that operators need to slow down. Crews should be instructed to match their speed to the conditions of the road.

**The Back Story**
Uneven road surfaces, narrow streets, parked cars, low-hanging tree limbs or wires, mailboxes and fences are obvious hazards to avoid, but oftentimes backing up can be as dangerous as moving forward. Snow plow equipment and the truck itself can impede visibility, and, as strange as it may seem, other motorists often don’t consider that snowplow operators may actually need to move in reverse. For those reasons, snow plow operators should avoid backing up unnecessarily to reduce the chance of accidents.
Here are some techniques to teach drivers to avoid collisions when backing up a snowplow:

• Slow down way in advance, and scan for obstructions;
• Make sure your four-way flashers are on and check your mirrors;
• If you don’t know whether it’s clear behind you, get out and check;
• Don’t assume the back-up alarm will protect you; fixed objects can’t hear.

As important as anything else, plow operators should remember that motorists typically don’t understand plowing operations and may misjudge the length, width or speed of a plow. As a result they may drive too fast, pass improperly or tailgate – mistakes that can lead to collisions.

Anticipate to avoid problems.

When plowing is completed and trucks are parked for later use, ensure that operators always lower the plow, and keep bystanders clear as the blade comes down. Changes in temperature over time also can cause the plow to drop without warning.

Finally, drivers should be reminded to report any problems they encountered to the mechanic and share critical information with the next operator before leaving the worksite. If drivers are involved in any accidents, instruct them to write down the details immediately.

Having taken all those safety measures, public agencies may be able to settle back and ... let it snow, let it snow, let it snow.