

## IT'S TIME TO STUDY THE IMPACTS OF THE WINTER SEASON ON WINTER MAINTENANCE CREWS

---

In many parts of the country, local and State Public Works and Transportation agencies are responsible for clearing ice and snow from roadways throughout a long winter season. Depending on the region, crews must be prepared to fight a winter season that can last 5 – 6 months (or more) and face conditions ranging from freezing rain to blizzards and everything in between.

Because winter weather is (mostly) unpredictable, and because nature does not respect regular working days and hours, snow-fighters are subjected to interruptions in their normal work days, work hours, sleep patterns, eating habits, exercise and family and social lives. Anyone who has spent a winter around an agency that provides snow and ice fighting will know that there are observable impacts of these unscheduled, unpredictable interruptions over a long winter season on employees' physical, mental and emotional well-being.

There are other professions and industries that face the challenge presented by shift-work or long hours behind the wheel of a large truck. Police and fire, health-care professionals and factory workers work overnight shifts that impact the body and mind. But these are typically regularly scheduled, predictable shifts that allow an employee to develop some sense of a routine to which the mind and body can become accustomed. Long-haul truckers may face similar circumstances, but again in many cases these are predictable, repetitive conditions.

A brief review of literature will yield a large number of studies and articles identifying the health impacts of shift work and offering guidance for employees to minimize or better tolerate those impacts. Do a Google search of “health impact on shift workers” and you’ll come upon countless articles, studies and guidance from WebMD to the Federal Motor Carrier Safety Association. Well-documented impacts include: interruption of natural sleep rhythms, increased risk of heart disease, depression and mood disorders, workplace injury, obesity and diabetes<sup>1</sup>; shift workers also face more family-related problems and strains on social life<sup>2</sup>.

One will note, however, that studies performed and subsequent guidance offered relate only indirectly to our work. There are few studies to be found that consider the unique conditions under which winter maintenance employees work for months on end. Most of what’s been studied deals with how many hours a driver can safely operate behind the wheel.

It’s time that we have a conversation about the true impact of winter on snow and ice-fighting employees. I propose that an effort be undertaken to partner one or more professional associations (PSA, APWA, Clear Roads?) with one or more research institutions such as universities and medical associations<sup>3</sup> to conduct season-long studies of employees from

---

<sup>1</sup> Source: WebMD - <https://www.webmd.com/sleep-disorders/features/shift-work>

<sup>2</sup> Source: Monthly Labor Review, October 1981 – Effects of Shift Work on Employees

<sup>3</sup> Note: Another interested partner should be the insurance industry. Employee health insurers, workers compensation insurers and liability insurers can all benefit from healthier employees and operations managers who are able to make decisions about safe employee deployment based on science. There are dollars to be saved here.

multiple snow-fighting agencies to assess the impact of the unique factors these employees face. By first studying actual impacts on snow-fighters, it is my hope that we can then work with health professionals (both physical and mental) to develop practical strategies for employees to minimize the impacts. Furthermore, employers will benefit by gaining a better understanding of how to encourage employees to follow the recommended strategies and how to foster a culture that supports employees. Finally, employers can use this new insight to make the best decisions about how to use their most important and precious resource – the winter maintenance worker.

Winter maintenance workers have developed habits and strategies to help get through the long, cold winter. And those habits and strategies may have changed with experience and have likely served them pretty well. But what is really informing these habits and strategies?<sup>4</sup> And what about the inexperienced, yet eager, employees looking to make an impression – what factors are influencing their approach to this work? And what about the aging employee who may not be facing the fact that age is demanding different strategies? Intuitive decision-making by these employees, with so much at stake (health, safety, service delivery), may not be enough.

As an agency director I work with operations supervisors to develop deployment plans in advance of each storm based on factors such as how many hours the employee has already spent at work, what work they were engaged in the day or days before this event, how long the storm response will be, what day of week it is, what is the forecast for the next day and the day after that. To the extent possible, our intent is to make decisions about how to best meet service expectations and demands while also making the best (and safest) use of employees. To this end we are currently employing what we consider to be common sense, or a “gut feeling”, about how the employees are coping and what is best for them. But results of a study, and scrutiny by a variety of health and safety experts, may yield results and strategies that either support our held beliefs or are counter-intuitive – and wouldn’t we want to know that?

I imagine that data will have to be collected over one or more winters, from all regions of the country. I also can imagine that outcomes will vary based on age and experience of drivers, gender, pre-existing health conditions and other factors. It is likely, I would think, that the strategies that are eventually developed based upon the studies, may also vary based on some of these factors. And the physical, mental and social health professionals may offer different, and possibly conflicting opinions which will have to be reconciled by experts in order to be helpful to us.

The bottom line is I want the best tools available to me to deliver the services that are expected. We know more today than we used to about salt, brine, organics, plow blades, route maximization, weather and pavement temperature, and we have turned that knowledge into performance improvements and cost-savings. I have seen little, if any progress, in understanding how to get the most out of our most precious (and costly) resource over the long, cold winter.

The work we do is unique and the impacts on employee health are not hard to see. The time has come to collect the data, boil it down and act!

---

<sup>4</sup> Prior to last season my agency brought in resources to talk with employees about how nutrition can impact short and long-term health and ability to safely and effectively perform. One major focus was the impact of drinks that serve as stimulants (i.e. – coffee, quick-energy shots, and other “energy in a can” products).