

# The Challenges of Inclement Weather in the Southeast

G. Wayne Owens, CFM

Public Works Operations Manager

City Of Greenville, SC

APWA Winter Maintenance Subcommittee

864-467-8928

The first question I usually get asked at the Snow Conference when someone reads my badge - “You guys get snow?” My usual response, “yes, and with more than our fair share of ice.” This usually provokes a much longer conversation and healthy comparison between geographic areas, planning, and methods of attack. One only has to look at the Atlanta ice storm in 2014 to realize that doing nothing and not being properly prepared is not an option in today’s society. Let’s take time to look at some of the factors associated with this particular region.



**Forecasting:** Meteorologists find it difficult to predict the weather around the Foothills of the southern Appalachians due to Gulf moisture coupled with the blocking effect of the mountains. The precipitation type depends literally on a couple degrees variance and whether the cold air can make it over the mountains to settle on the Foothills. As with any other region, accurate and timely forecasts are a must when deciding the best course of action to take or not to take without being too cautious or getting caught unprepared. Our agency, City of Greenville Public Works, constantly monitors at least 3 forecasting services and compares each to get the best snapshot of what’s coming. It’s crucial to establish a personal relationship with your primary forecasting agency if at all possible. Although, we

utilize the local news sources we primarily rely on NOAA (National Oceanic and Atmospheric Administration) weather forecasts. The regional NOAA office is only 10 miles away. The local meteorologist is kind enough to allow us to send him questions concerning upcoming weather events outside of their usual email notifications. Many agencies in colder climates or in coastal regions contract with commercial companies for their own custom forecasts. Another valuable source is your energy provider. Larger providers have full time meteorologists on staff and if you make the right connections you can have access to their forecasts.

**Personnel:** Since we often prepare for the worst but run the risk of getting little to no inclement weather, it's hard to find the balance needed to be properly trained and prepared. As with any other tax payer based organization, it's necessary to be good stewards of our available resources. It can be challenging to fund the needed training without the appearance of wasting time and money. Training- how much and when? How do you schedule temporary events? How best to utilize your manpower? These are all factors that have to be balanced due to the uncertain weather of this region.

**Equipment/Supplies:** What kind, how many and how much equipment can you justify? These questions are much easier to answer in a colder climate region where you're expected to be fighting snow. This is not so easy when there's a chance that you won't get any snow the entire season. The City Of Greenville is now ensuring all vehicles are purchased as multiuse vehicles. This will maximize our equipment use for extended periods of time. We're making sure all dump trucks come properly equipped to be combination units, all pickups are heavy duty 4x4's with plows attached (some with their own spreaders), and all UTV's come equipped with plows and spreaders. Fortunately, our City is one of the fastest growing communities in the nation and this type equipment can be justified whereas a lot of smaller more rural areas may not be able to afford this type of equipment. Smaller municipalities and some rural counties have little to no snow fighting equipment. They rely strictly on Mother Nature or the State Department of Transportation for snow and ice remediation. The same goes for salt storage and the facilities needed to properly house the material. Recently, we were fortunate enough to construct our own salt dome. But again, most agencies in the south can't afford this type of set up or simply don't see the validity in storing their own material. These types of decisions come down to the level of service you're trying to deliver balanced with funding and political support.

**Emergency Operations Center/Dispatching:** Justifying the training needed to handle winter events in the Southeast can be challenging. With all the other duties and projects on everyone's plate, it's difficult to pull your key personnel in the summer and fall to stay up to date on what's required of them during an emergency situation. For example: we use a work management system for all requests and work performed by public works. We have now adapted our work management system to our Ice and Snow Plan. We have migrated away from pencil and paper and now our drivers simply call in codes for bridges, roads, steep grades, etc. and the dispatchers complete preloaded work orders that can be saved instantly. This way everything is time stamped to include the truck, driver and what service was

performed on that particular asset. It's much easier to provide a cost associated with an event if you have the necessary data stored in your management software that can be easily retrieved if needed. Also, we use live tracking in all our trucks to better assist with managing the event and available assets. This type of setup is commonplace in colder climate regions, but again, in the southeast you must have the budget, leadership and political backing to perform at the desired level.

**Preposition Contracts:** A necessity for coastal communities but not usually considered by inland agencies. This all changed when ice storms crippled much of the Southeast in 2014. We now have both a debris management contract and a debris monitoring contract. These companies provide valuable training and information at no cost to your agency and gives you some peace of mind if a major event strikes. Again, the challenge is convincing your agency's leadership to see the value in pursuing these contracts and the benefits they can provide.

So! Now that we've covered some of the issues we all face, although these can be more controversial in the Southeast, let's look at a typical scenario with a few of the questions that must be answered.

All the forecasting agencies are predicting frozen precipitation but each forecast is a little different. The one thing you know, you're probably going to get something. So what do you do?

1-Schedule your interagency meeting?

2-Equip and load the vehicles? How many? How much?

3-Activate 12 hour shifts?

4-Push a press release?

5-Pre-treat or not? Will it come in as rain? Do you get ahead of the curve and pre-treat anyway and run the risk of criticism?

6-ETC., ETC., ETC.

We all know that no two storms are the same and all present different challenges requiring various methods of attack. However, the majority of these can be covered in a detailed plan that is properly developed and followed before, during and after an event. If you talk to a seasoned veteran of the Midwest or a Northern Region then I'm sure they will agree to one thing- "Have a plan and stick to it."

I look forward to feedback from other agencies especially in the southern Appalachian region of the country to discuss and compare how they're preparing for these situations. I encourage more agencies in the South to attend the North American Snow Conference to be able to interact with the experts from around North America and take valuable information back to their respective agencies so we're all on the same sheet of music. I strongly recommend joining associations that specialize in ice and snow removal, such as the Professional Snowfighters Association. This is especially important concerning the environment and the proper use of chemicals as our industry continues to be scrutinized concerning these issues.

Contact Information: G. Wayne Owens 864-467-8928 [wowens@greenvillesc.gov](mailto:wowens@greenvillesc.gov)