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OPERATIONS WORK SESSION
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PLOWING - SPREADING--START TO FINISH

The snow and ice battle is usually won or lost before the first snowflake falls. Preparation is the key to a successful snow and ice removal effort. Proper planning may not always achieve the anticipated results. But inconsistent approaches and “seat of the pants” problem solving will always compound our work.

In order to develop a plan, we must ask ourselves; “What do taxpayers want from our snow and ice removal effort?” I can tell you in one word what they want—“miracles!” They want to be able to get to work, they want to get to school, they want to get to the store, they want to get to church, all without delay. That is what they will tell you. But what they really want is for their trip to be quicker because they want to make up the time it took to scrape off the windows, and warm up the car, and still get there in the same amount of time it took them yesterday when there was no snow on the ground.

They expect us to listen to the weather forecasts and weather reports and find out that the big snow is coming so they don’t have to. But, we have to know what to expect. I think that can best be shown by a joke I like to tell. These two, old highway employees, who had worked about 35 years each, decided to retire. They had always talked about being fishermen so after they retired, they got a boat, tackle, and everything they needed, and went to a lake. They were fishing in the middle of the lake, but neither was doing any good. They looked at each other and one of them asked what they were doing wrong. The other answered, “I don’t know, we have never done this before.” The first one said, “I remember
reading one time that if you don’t catch anything in the middle of the lake, go to one of the shores.” So, they rowed over toward the shore. Just as they were ready to cast near the shore, they heard this beautiful woman’s voice crying “Help me, help me, help me.” They looked around and didn’t see anything so began fishing again and heard the voice again, “Help me, help me.” One of the old fishermen looked around and saw this frog on a lily pad talking to them. They were a little stunned at this. The frog said, “I am really a beautiful woman who has been trapped inside this frog’s body, but if only a fisherman would kiss me I would turn back into a beautiful woman... and I will be very appreciative.” The old fisherman picked up the frog and placed it in his pocket. The other fisherman asked, “Did you hear what that frog said to you?” He answered, “Yeah, but at my age I would rather have a talking frog.”

We can’t set the expectations—we must consider what the public expects. If we want the beautiful woman, that is not good enough. We have to anticipate what the person making the decision is going to expect. How do we accomplish this? We are not mind readers; however, we can determine certain things from what we do know from experience, and need to concentrate on the areas where we have control. There may only be a few things that we can change to improve our situation, so we should concentrate on those things and not waste time on areas we can’t control.

What variables impact our efforts and which ones do we control? We heard a lot about the things we don’t control. Which variables do you control? Trucks? Personnel? Salt usage? Salt stockpiles? Spread pattern? Application rate? Overtime? Route assignments? Snowfall amounts? Response time? Public response? Temperature? How many of these do you control? You may have limited control over some of the variables listed, but some of them control you. We generally put the blame on things we can’t control—we don’t have enough trucks, we don’t have enough materials, some guy called in sick. It is always easier to put the blame somewhere else but it doesn’t solve our problem. Let me pose this question: “Can you get control?” Concentrate on the variables of which you can gain more control and prepare your plan within your area of control, because that is the only place you are going to make a difference. Don’t go outside your area. When you do, it is just another excuse. I think Carl Wells showed us that with the spread pattern. Broadcasting the salt in a small area can make a dramatic effect. Salt thrown over the guardrail is not going to have much effect. Concentrate the salt on the center of the road. This is a very minor detail that has a dramatic effect. A controlled spread pattern can more than double the concentration rate at the same application by placing it over the smaller areas.

Every unit, whether it is a district or a highway department in general, whether it is the county, whether it is your crew (if you have more than one crew in your particular county), or whether it is a driver, needs a plan. A basic flexible plan suited to your requirements. When a
driver leaves the building, he/she should know what he/she is going to
do. Without a plan, one is just going into the darkness.

From a public relations standpoint, it is better to share your plan
than defend your actions. Sometimes we don't always want to share our
plan, but the media and everyone will tell you if you do what you say you
are going to do, that is enough. Because that is what people expect from
you.

Expectations can get you into or out of trouble. To exemplify this
statement, during our crew snow and ice control meetings, I tell the
following story: I tell the crew members that the first thing I am going to
do is to lock the door. Nobody is allowed to leave, and I am going to keep
them there until midnight. Then I ask, “How many will be in trouble
with their spouse when they are not home at their regular time?” Will
your spouse believe you when you tell her that some bozo from the
district office locked you in the crew room and did not let you go home
until midnight? Suppose I gave them a 10-minute break to let all of those
who thought they would be in trouble go call their wives. I said, if you
call her at 10 o'clock in the morning and tell her that some bozo is going
to lock you in a room until midnight, when you get home at midnight
things are okay. That is what she expected. Exact same excuse, same
goofy guy locked you in a room, and didn't let you leave until midnight.
The difference is timing--when you tell them. Beforehand, it is a reason­
able explanation. Afterwards, it is just an excuse. Expectations - Give
them what they expect.

There are six important keys to a good plan:

1. **Realistic.** A lot of times, we have heard that something is a great
plan, but it won't work. It can't be a great plan if it won't work. So look
at it; make sure it is realistic.

2. **Easily Understood.** In order to be easily understood, it has to be
understood by everyone who has a part in it. And, if it is a good plan,
everyone has a part in it. What part does each person play in that plan?

3. **Compatible With Policy and Procedures.** If it is not part of
your policy and procedures, then you may have trouble selling it to the
people above you. That is going to be difficult to do—it is always easier for
information to go down than it is to go up.

4. **Measurable.** We ought to be able to tell how well we have done
with the plan we have. Again, if it is a good plan and you don't have any
way of determining where you are in that plan or how well you have
done, you may make changes that you don't need to make.

5. **Flexible.** It has to be adaptable to changing conditions. In Ken­
tucky, there is an old saying, If you don't like the weather, wait a
minute, it will change. That is important when we look at any of our
plans, they certainly have to be flexible. If our plan is not flexible and we
go in there asking why you did it that way, we could get the answer,
Well, that is the way it was done yesterday. You have to be able to adapt to the changing conditions.

6. Acceptable. Not only to the rank and file, you have to get a commitment up front from everyone, even the drivers. If you tell the driver to do 30 miles of road an hour after it stops snowing, it is not going to get done. It can't be done, so he is not going to do it. So what is his plan? His plan is that he will either do what he wants or he doesn't have any other plan so he won't do anything. (I am going to get yelled at anyway, so I might as well not do anything.)

If we have a plan that is realistic, easily understood, compatible with policy and procedure, measurable, flexible and acceptable, we have a great plan, and a blueprint for a successful snow and ice control program.

Previously, I listed some variables and asked if you had control. Let's review that list and discuss each one in detail.

Trucks. Do you control trucks? Does the county foreman control trucks? How many county foremen control trucks in their county? Half maybe, not even half. Can you get more trucks if you need them? Can you get them fixed quickly? Do you have to fix them yourself or do you have to send them out somewhere? The more questions I ask, the more you are going to lose control. You may be thinking, Yeah, I control the trucks. I control the trucks as long as I have the trucks. Can you get more? Probably not. So, what do you control? You probably control how many go out at any particular time on any particular snow. Can you consider reducing your number of frontline trucks to build in replacements? If you are going to have a workable plan, you are going to have to hold trucks back for alternates. If you send everything out—all ten drivers or all eight drivers or all seven or eight trucks—and you have another problem, what are you going to do? The more flexibility you can build into your plan, the better off you are going to be.

Personnel. Can you get more people if you need them? Secretary Kelly is about the only one I know of who can do this and we heard his hints this morning. We are going to get about 10 more statewide, so the chance of your getting help is very slim—(maybe the person who wins the Roadeo tomorrow should get all 10 new guys). Can you force employees to work? Our policy requires our personnel to work, so, if we have personnel, we can probably get more hours out of them than we usually do. You have to know what the policy is and you have to make sure that it is explained to all your employees when you talk to them about policy. Do you need everyone or can you get by without some? Are additional people available? Are there people in the traffic sections who can drive a truck? There has to be, they are driving trucks for them now. Are there people in equipment who can drive trucks, and who have a CDL? Can we use them? Are there people who are retired or semi-retired, who might like to work a few nights? (Who in their right minds would want to retire
from here then come back and work the hardest job there is?) But, they might be out there, you certainly ought to at least ask.

How do you contact the ones whom you need? Do you do it by phone? Some of our people don't have phones. We give them pagers, because when we call them we expect them to return our call. You can do it by scheduling. Tell them that they have to be here on Monday, Wednesday, and Friday nights if it snows, or they have to be here this week, or, however it works. The idea is if you don't get them at your garage, they are not part of your plan.

Salt Usage. A common way to control usage is to control purchasing. You can't use what you don't have! The salt company controlled the salt usage this past year because they couldn't deliver it. We certainly would have used more if we had more. It is risky if you are controlling your salt usage by purchasing. A better way to control your salt usage is by application rate. You also can gain control by determining where to apply, and how often to repeat your application. How long does it take for salt to work? Twenty minutes? If you are repeating your application quicker than 20 minutes, you really can't tell if the first application has done any good or not. A lot of our truck drivers will tell you if they can't see the salt coming out of the back, it is not doing any good. Well, my wife salts all my food and I can tell you when it is too salty, and I never see the salt. Because the truck drivers want to see that salt, give them a bigger mirror, or figure out some way that they can see what they are doing. Because they like to see results too. We all want to see the results.

Salt stockpiles. How much can you store? This is a current topic. Are you worried about the price? I can only buy so much because there is only so much money. If I do buy more, am I going to be over budget? Should I build a larger blacktop pad? Can I get the tarps to cover it? Should I be responsible for storing it all? Should I depend on the salt company to get me more salt during the winter? We stockpiled close to 50 percent of what we thought we were going to use, but what if we needed four times that amount? How much is too much? What will you use if you run out of salt? Will it be abrasives mixed in with your salt? Will it be rock? Will it be sand? Will it be sawdust? I don't know. What are you going to put on the roads if you run out of salt? How long will it take you to get more salt? If you are like us and you are within 30 minutes of the terminal, and salt is not rationed in this state, we can get it in three or four days. But, if they have to pass by our stockpiles and take it to other places in the state, it may be three or four weeks. Do you have any alternatives available? Can you just go on the radio and say we are shut down? I don't think so. The idea is, which of these things do you control?

I will tell you right now the things that are going to make a difference, the things that will be changed as a result of today's meeting, will be those things that you control.
**Spread patterns.** A uniform pattern is the most efficient. A spread pattern is a good use of a resource. Who must control a spread pattern? The guy operating the knob. Many of us have followed salt trucks before, and thought that if we could only tell the driver to reduce the rate or cut back on the pattern. When he returns to the headquarters, he is not going to believe you. I taught my son how to drive. Recently, my wife came in and said that she wasn’t taking him driving anymore. I asked why not. She answered that he drives too close to parked cars. I asked her what she meant, and she said that every time they drive by, she looks out the window and can reach out and touch the car. I asked her if she told him about it, she said that she did, but it didn’t do any good. So, I went out driving with Mike and I told him to stop the car. He stopped the car. I told him to switch positions, I am going to scoot over, you come around and get in on the other side. He got out of the car, walked around to the other side, and told me that he couldn’t open the door. I asked why not? He responded, I’m too close to the parked car. I asked him what does that mean? He said if I want to get in the other side of the car, I’m going to have to pull over farther. I said that he was right, that this is what his mom is talking about. Sometimes we have to get the driver out and let him look at it. Sometimes you have to let him go back quickly enough to see what he has done. You have to let him see what progress he is making or he may or may not believe you. Better yet, let the driver have input into the solution.

**Application rate.** We have all heard enough about how it should be a fixed amount for specific conditions. When we do the first application rate at 500 pounds a mile, we repeat those application rates at 400 pounds, or when we put liquid calcium or whatever that application rate is--if it is not consistent, it will get you into trouble. Every foreman in here has been compared to the adjacent county, I will guarantee it. How come so-and-so’s roads are clean and your’s aren’t? Well, because I’m doing it by the policy and I don’t know what he is doing over there. Consistency--throughout your county, throughout the district, throughout the state—that is our goal. If people drive from Louisville to Covington and the roads are in exactly the same shape, I am in a lot better shape than if the Louisville District gets out and gets their roads to bare pavement and I only have wheel tracks people will ask “Why can Louisville do that and you can’t?” There are no good answers--any reason will somehow become an excuse. We must consider this at every location where one responsibility ends and another begins. This might be a county line, a crossover, a major intersection, etc. Some of those things are unavoidable. One truck is going to get there and the other one is not going to be there for another 30 minutes or so. You want to cut down on that. And, you can certainly do that by planning. You must know where those areas are located. When I say you, I mean you. Because you are the ones who do that. You know when you had trouble on that one hill at one time, if you just send that truck out there 30 minutes earlier than
you send everybody else, things are going to look a lot better overall. Look at the overall picture.

**Overtime.** This is always an area of controversy if you have more than one person getting overtime. Sometimes I feel like I ought to wear my striped shirt and be the referee. “How come so-and-so got more overtime than I did?” Well, he is a better driver than you, he has a more important route than you, he gets here when I call him. If that is my answer, it doesn’t do me much good, I have lost that guy, he is not part of the plan any more. A better response would be, “You want more overtime, I will be glad to let you have it, you show me that you deserve it.” If that is how you use overtime, if it is a reward for them, be consistent. We have a number of dedicated employees, but they work for the money. Efficient and effective use of overtime can give you some control.

When you consider the overall cost of salting roadways, a small amount is overtime for employees. Don’t create additional problems in your plan by upsetting employees over “unfair” overtime policies. Even though the foreman decides whether John or Jim drives that truck, we hear a lot of criticism on the upper levels about overtime not being balanced, so you might want to take that into consideration.

**Route Assignments.** Do we treat all the streets and roads or just certain ones? Which ones first, which ones second? Do you clear any roads twice before you clear some the first time. If you follow our priority system, (A.B.C.), then the answer to these questions is: “Yes, I know which ones I treat first, second, third. And, yes, I treat some twice before I get others the first time.”

If you have interstates, it is a curse. If you have an interstate in your county and you have any other road, having interstates is a curse because you are required to treat those roads first. And, if you place all your efforts there, you’ll get called. The people who use the interstates are not usually the property owners in that county, and they are not usually the people who know you by your first name. The ones who call might say, “Well, John, it sure is nice that you keep those interstates clean, I sure wish I could use them on occasion, but I can’t get to them because you haven’t cleaned my road yet.”

**Amount of snowfall.** I threw this one in because I don’t have much control over this. I don’t expect that most of us in this room do unless you have a direct line to people with whom I don’t get in touch. We don’t control it, but we can certainly plan for it, and we can certainly make modifications if we have a flexible-enough plan to take under consideration 17 inches of snow and six inches of ice. I don’t think any of us is going to want to plan for that. I can plan for winning the lottery, but I don’t think I am going to base my schedule on it tomorrow.

**Response time.** How long does it take to get the trucks out? If we could get the trucks out earlier in the storm, would that be better? Can we get out too quickly? This is something that you can control. How can you get better response? You can already have your trucks fueled and
preloaded before you leave for the day. You can make sure the trucks are mechanically ready before you let your employees go home, especially if it is a long weekend and there is a threat of snow. There are a lot of areas that may only make a few minutes difference, but this may make the difference. The more time we can put up front before the snow accumulates, the faster we can go home.

**Public response.** Can we take the heat? We are compelled to respond to the public, sometimes to the media. We found that in our operations it is a lot easier for one person to talk to the media than for four or five people to talk to the media. Anybody who has ever had to talk to the media probably had an experience in which they gave their opinion and the media person said, “That is not what your boss said.” Then you cringe a little and wonder why they are talking to you if they already talked with your boss. It happens. If they only talk to one person, the information is consistent, and you are less apt to be caught in the crossfire. Also remember, when you answer the phone for the Department of Highways, the person on the other end believes you are the Department of Highways, or the city of Lexington, or the Fayette County Government, not just a timekeeper or office person. Whenever you answer the phone, (I don’t care if you just began there that night or if you are the night watchman), you answer the phone as a representative of the agency for which you work.

**Temperature.** Again, that is the one over which we don’t have very much control, but we can certainly plan for change. We know temperatures can change very rapidly, on occasion. Within hours the temperature may change drastically, but we usually have some notice. We don’t just wake up and find 10 inches of snow on the ground. In the last 10 years, I don’t think I have ever awakened to 10 inches of snow. Someone has always called me well before that. Same way with temperature. I am sure most of us don’t sleep when it gets that bad. Everybody in this room is up and about and maybe hoping they were back in bed by the time 10 inches of snow is on the ground. We don’t control it. We can expect changes, and we can make plans for the changes whether the temperature is going up or whether it is going down, we can make modifications to our operations. Wouldn’t it be nice if the temperature were rising? There is nothing better than to let Mother Nature remove the snow that she put there in the first place!

No matter how much or how little control you have, you should ask yourself this question for every variable that you consider, “Does changing this item affect the outcome in a positive manner?” You must keep the desired outcome in mind. What is the desired outcome? Give the public what they expect. That can be achieved in one of two ways. We can either do more or lower the expectations. Both are extremely difficult. I went to a dinner theater the other night. My neighbor had gone a few nights before and he said that the play is pretty good but the food is lousy. He was right. The play was fine but the food wasn’t very good, but I was satisfied because I got exactly what I expected. If we can’t do
If you can make some modifications on your own in your plan, what you control, to do more, then that is what we need to do.

I cannot tell you how to plow a street. I have never been in a truck, plowing snow, in my entire life. I have stood around them and watched them go by too fast, (because they are in a hurry to get more done). We have got more dedicated drivers in this state than anyplace I have ever seen, and they don’t get much credit even though they do everything they possibly can. If there are things that we, in this room, can do to make their jobs better or easier or safer, we should be doing them. I think we are taking a big step if we do get radios in all the vehicles, that would certainly make me feel a little safer for them. I think those are the kinds of things where we need to concentrate our efforts.

If you see something you need to fix, that will make a positive difference, then fix it. This is what we are here to do. We are here to make things a little better. Try to keep as many of these variables as consistent as possible. The only way you can do that is by good planning. A good plan, properly executed, will produce desired results.

Drivers must be familiar with their routes, they must know where the problem spots are and what action to take. And, that all has to happen before the snow. If you have a new driver who has not been out on the route, he might say, “Where did that bridge come from?” (even though it has been there the last 50 years), or “I have never noticed that high spot in the road”, or “I didn’t realize that my plow would catch that driveway.” Now is the time to find out, not when he comes back in and shows you where the plow is torn up and the truck is damaged.

A driver must be able to handle his vehicle under all types of conditions and he should communicate what he sees. If he comes back and tells you about a bad spot and you don’t do anything about it, he is not going to tell you next time. Maybe you can’t do anything about it but you have to make sure that he at least understands that you were listening. Most of all, though, the drivers should follow the plan. If they don’t follow the plan, and you don’t get done what you are expecting to get done, then they have not met your expectations. If they haven’t met your expectations, then you can’t meet your boss’s expectations nor the public’s expectations.

I am going to end with another joke. These two hunters go moose hunting every year. They found the best place to go is a secluded place in Canada and the only way to get there is by hydroplane. They charter the plane, load the equipment and leave. The pilot flies in and lands on the lake, drops them off on the shore, and tells them that in exactly three days he will pick them up. Well, in three days, the pilot comes back and sure enough each of those guys has shot a moose. They are dragging them over to the edge of the shore so they can put them on the plane. They loaded all their equipment and the pilot told them they couldn’t put
both moose on the plane, they would never make it. They look at each other and said, "I am not leaving my moose." So, the pilot says, "Well then, we are leaving them both." The hunters responded that they were not leaving them both, that they were taking them both. They said, "Last year, the pilot had a plane exactly like yours and we put them both on his plane." He said, "Are you sure the plane was exactly like this?" They answered that it was. And, it was the same place. The pilot agreed that if they did it last year in the same type of plane, they would do it this year. So, they loaded the two moose on and took off. They started up over the lake and just as they got to the other side they crashed into the trees. The two hunters were laying there next to each other. One of them groggily looked up and said, "Where are we?" The other one answered, "About the same place we crashed last year."

If you want to make a change, then you are going to have to do something now. It is not going to happen on its own. We can’t leave it to guesswork and say, Well, just leave everything the way it is and expect things to be better. If things are going to get better in this state on removing snow and ice, the people here are going to make it happen. We can’t wait for the Governor to give us more trucks. We are not going to make any big changes, we don’t control those things. We are not going to take care of a 17-inch snow and four inches of ice overnight. But there are things that we can do better. Each one of us. And, those are the things we need to concentrate on today, tomorrow, right up to the first snow. And, if it doesn’t work, then change it, modify it, and relate that to the people who work for you and for whom you work.

We don’t have to have people from Wisconsin tell us what to do when it snows. We know it snows here and we know we are never going to get $18 million to clean off our roads. We may get some incremental things from time to time. However, the difference as to whether or not the roads are clean in any particular county is going to be up to the people in this room. That is where the difference is going to be made and it is going to be made with each person here. No matter what else you hear today, it is what you think you can do that is going to make a difference.