



Winter Operations Task Force

Final Report

Executive Summary

The Winter Operations Task Force met to consider the charge that was given them by resolution of the City Council. The Task Force met four times and came to a consensus on the following conclusions and recommendations:

Streets are normally in good condition within a reasonable timeframe after a winter weather event.

Eliminate the current four inch threshold for plowing residential streets. Create a data driven matrix for making the residential plowing decision. The matrix should consider moisture content, pavement and air temperature, and weather forecast. Additional sensors would be required for location specific data.

Inform citizens of the new practices and keep them apprised of winter operations.

Plow only areas meeting the matrix criteria, not citywide. Business areas, bridges and known “problem” areas would continue to receive attention. This may require future modifications to current snow districts as defined in the existing operational plans.

Limit parking bans to only one side of residential streets, resulting in one side of streets being plowed.

Increase fines associated with snow parking ban tickets. Communicate the importance of snow parking ban compliance at the start of the winter season. Increase towing as feasible.

Increase salt storage capacity to 150% of the annual average usage. Ensure salt storage at strategic locations citywide where it can be easily accessed.

Increase the number of weather stations and sensors around the city to provide more data to use in the decision matrix.

Expand the network of residential feeder collector streets plowed to help funnel traffic to the arterial streets. Clear them early during residential plowing.

Request more frequent communications from Lincoln Public Schools for coordination of school routes.

Prioritize “hot spots” in early mitigation efforts.

Residential plowing should not typically be prioritized in flat areas where motorists have little trouble getting around.

Investigate “green” ways to remove snow and ice.

Hire contractors to operate City equipment to ensure that equipment does not sit idle during storm fighting.

An implementation plan and financial analysis should be conducted based upon the changes proposed.





Introduction

The Winter Operations Task Force was created by City Council Resolution A-91527 adopted March 25, 2019. The resolution mentioned the near record snows from the winter of 2018-2019 and expressed a desire to examine existing snow removal procedures and to recommend changes in the best interests of the citizens of Lincoln.

Task Force Charge

Thoroughly review the existing policy and program and make recommendations to the Mayor and City Council on the following topics related to winter operations:

- 1) Identify the needs and expectations of residents regarding Winter Operations;*
- 2) Determine how the City should prepare for winter operations and clear streets during and after a winter weather event; and*
- 3) Determine how to assure that City streets are safe to drive on during and after a winter weather event; and*
- 4) Conduct a financial assessment of the Task Force recommendations.*

Task Force Meetings

The task force met four times in August and September. Per the City Council resolution, Wilma Hanson-McCoy was elected to be the task force chair, Tamara Sloan was elected as the vice-chair, and Fred Freytag was selected to be the secretary.

The first meeting provided task force members with an overview of the current winter operations efforts. The members were provided with a copy of the Winter Operations Plan, and Tim Byrne presented additional information on what goes into the planning for and operations during a winter weather event. Following the presentation, a tour was taken of the West District Maintenance shop, the Fleet Maintenance area and the brine production facility. A number of Lincoln Transportation and Utilities staff were on hand to present information as well as to answer questions from the task force members.

The second meeting began with a question and answer discussion of the Winter Operations Plan. Following that discussion, Byrne gave a presentation on the impacts of weather timing and variables. The pavement and air temperatures, the amount of moisture in the snow, the timing of when a storm hits and the accuracy of the meteorological forecasts all play an important role in the response to any weather event.

Randy Hoskins then gave a presentation on what other cities use as guidelines for their winter operations. Nearly every City uses different standards. Some cities make greater use of contractors to help with snow



removal while some use exclusively city employees. The depths at which snow removal starts and the depths at which residential street plowing occur vary widely. Sanding, salting or brining operations were discussed, as well as various means used to ensure that residential street parking is cleared.

Meeting 2 ended with a short discussion of Lincoln service expectations. Several members feel like the City does a good job with snow removal. They like the idea of using data driven decisions when deciding when to plow or not, and there is general agreement that plowing depths and parking removals are a couple of the major issues that need addressed.

Meeting 3 began with a discussion of the cost of existing services by Byrne. A chart showing the costs expended for winter operations over the last five years was provided to the members. Approximate costs for pretreating, arterial plowing, residential plowing and full snow removal in congested areas were provided. Next Captain Duane Winkler of the Lincoln Police Department provided information on crashes and response times during the winter season. He noted that while the numbers of crashes increase during winter events, the severity of those crashes is typically less (fewer fatal and injury crashes).

Byrne provided information to the task force regarding salt and brine impacts on the pavement and the environment. He explained the decision-making process behind pretreating the streets with brine prior to forecast weather. Salt costs, delivery time and storage levels were discussed. Meeting 3 concluded with a longer discussion of service level expectations.

Meeting 4 was spent discussing service level expectations. Becky Witt provided the results of a “survey” she conducted with neighbors on their thoughts regarding snow removal.

Recommendations

The Task Force was very complimentary of the job the City is currently doing on arterial street snow and ice removal. In recognizing all the factors involved in winter storm response, they feel the streets are normally in good condition within a reasonable timeframe after a winter weather event.

The major recommendation of the Task Force was the elimination of the four inch snow depth threshold for plowing residential streets. The varying conditions that go along with any winter storm were discussed extensively, and it was recommended that rather than having a set snow depth to begin full removal options, the City should create a matrix looking at more conditions in making the residential plowing decision. The matrix would take into consideration things like the moisture content of the precipitation received, pavement temperatures, air temperature, and forecast weather over the coming days. This would allow for more staff discretion when making the decision to plow or not.

Informing citizens of the new practices would be an important part of this change. Citizens are currently conditioned to expect residential plowing when four inches of snow have fallen. That would no longer necessarily be the case, so a new set of expectations would need to be created. Also informing citizens that plowing might only take place in portions of the community will be a new way of doing business and will need to be communicated for understanding as well as to ensure it is not perceived as a lack of fairness to certain areas.





The Task Force also recommended that when conditions vary across the city, only those areas meeting the criteria for residential plowing would receive it. If snowfall was heavier in parts of the city and below the newly established matrix criteria for other portions of the city, only those areas meeting the criteria would be plowed. Business areas, bridges and known “problem” areas would continue to receive attention as is now done.

Parking bans during snow emergencies was another area of interest for the Task Force. They recommended that parking bans be limited to one side of the street only, not trying to move vehicles from side to side during snow removal operations. This would typically result in only one side of a street being plowed, but would allow for faster response to all areas, better compliance with the parking bans, and greater ability for residents to travel around on the residential streets, as well as providing for better emergency response. The parking ban would coincide with the year – in 2019, vehicles would be banned on the odd side of the street and park on the even side of the street. In 2020, parking would be banned on the even side of the street and vehicles would park on the odd side of the street.

In order to ensure the parking bans are effective, the Task Force discussed current ticketing and towing practices. The Police Department currently uses a three step process for towing – first contact is a warning, second contact is a ticket, third contact is towing. While this is good from a fairness standpoint, it does not work well with snow removal. In order to create compliance with the bans, the Task Force recommended increasing the cost of tickets associated with snow parking bans. They also recommended that the message be communicated more strongly at the start of the winter season. Towing should also be increased as feasible. The Task Force concluded that people will be more likely to respond to snow emergency declarations if there is a greater financial impact to them, and that the word would quickly spread, resulting in more compliance.

The Task Force recommended that Maintenance Operations increase their salt storage capacity to 150% of the annual average usage. Since salt procurement is less expensive during the off-peak months, this has the opportunity to save the City costs in the long run. It also ensures that the City will have sufficient supplies of salt on hand during hard winters when all communities are trying to get salt at the same time. Ensuring that the salt and brine are stored and manufactured at strategic locations around the city where they can be easily accessed during winter operations was also a part of this recommendation.

In addition to having sufficient supplies of salt available for use, the task force discussed whether there are sufficient units to spread and apply brine and material citywide. The addition of more spreader units would allow for shorter routes that could be completed more quickly, and would provide the flexibility to expand operations if conditions dictated a need. It would also allow the potential for greater redundancy when machinery breaks down.

A recommendation was made to increase the number of weather stations and sensors around the city. This will give Maintenance Operations more data to use in determining whether the criteria for residential plowing is being satisfied or not.

The Task Force recommended the identification of a network of residential streets that would funnel traffic to the arterial streets. These “feeder” streets (to aggregate residential traffic) would attempt to ensure that all citizens live within a few blocks of a street that is cleared early in the process of residential





plowing to aid in getting around neighborhoods. The priority of these streets would be just below school routes and bus routes.

It was noted that schools don't always route their traffic in ways that take advantage of the school routes that the City plows. In order to rectify this situation, it was recommended that the City request more frequent communications from Lincoln Public Schools to ensure the best possible coordination.

The Task Force recommended that Maintenance Operations continue to prioritize so called "hot spots" in early mitigation efforts. Intersections on hills, shaded locations, and other places where crashes might be likely when streets are slickened would continue to receive early attention and treatment. On the other end of the spectrum, the Task Force recommended that residential plowing should not be done if not definitively needed, especially in flat areas where motorists can typically get around just fine.

Continued investigation into "green" ways to remove snow and ice was recommended. It was noted that some technologies, such as solar generated electricity or geothermal heating are being developed to the point that they might be viable in keeping winter precipitation from freezing on the roadway surface, especially bridges.

The final recommendation centered on the City's ability to ensure sufficient staffing levels when gearing up for winter weather events. Maintenance Operations is currently investigating the potential to hire contractors to use City equipment. The Task Force was in favor of this idea, particularly as a way to plow the primary residential feeder streets sooner after the advent of a storm. The idea of using additional contractors with pickup mounted plows was considered for this task, though there were concerns with the quality of work that would be done under that scenario. They also recommended working with the PAGE union to ensure that staffing levels are such that equipment does not sit empty and idle when storm fighting is occurring, which has frequently resulted from the City's current volunteer snow removal program.

Fiscal Impact

The fiscal impact of the Task Force recommendations will be further vetted in a financial analysis of the program, but could result in long term savings. Using a more data driven approach to residential plowing may result in fewer number of citywide plowing events each winter. The idea of only plowing those areas that meet criteria also has the ability to save money. A more effective parking ban would decrease the amount of time plows spend on residential streets, as well as reducing the number of passes through each neighborhood. Increased contractor support could increase costs, but should not be significantly higher than when the machinery is staffed instead by City employees.

The recommendations to increase salt storage and add sensing equipment will be one-time, up-front costs. These will potentially provide cost savings as salt can be procured and stockpiled at a lower price during the off-season, and the additional sensors might result in less plowing operations across the whole city. Plowing residential feeder streets may increase costs, but only in those instances where full residential removal is not also included.





Continued improvements to the winter operations fleet are also needed, both to provide adequate number of material spreader/brine units, and also to eliminate costly mechanical burdens that continue to increase due to the aging of the existing fleet.

Using “green” technology to prevent snow and ice would be used on a case by case basis as future projects are constructed. These costs would be attributed to the project construction, and would not impart costs to the snow budget.

Task Force Members

Lincoln Transportation and Utilities would like to thank the members of the Winter Operations Task Force for their time, concerns and advice in coming up with these recommendations.

Wilma Hanson-McCoy – Chair

Tamara Sloan – Vice-Chair

Fred Freytag – Secretary

Gloria Eddins

Mark Ewalt

Moe Jamshidi

Annette McRoy

Becky Witt

John Yoakum

James Bowers, City Council

Duane Winkler, Police Department

Brad Thavenet, Fire Department

Troy Bolender, PAGE Union

Jon Carlson, Mayor’s Office

Brandon Kauffman, Finance

Tim Byrne, Lincoln Transportation and Utilities

Randy Hoskins, Lincoln Transportation and Utilities, ex-officio



Appendices

- Agendas
- Minutes
- Handouts



Mtg 1 PPP -
Byrne.pdf



Five Year Snow
ExpensesS.xlsx



Peer City
Analysis.xlsx



Accident Presentation
2016-2018.pptx



Resolution
A-91527.pdf



Witt Neighborhood
Input.pdf





Task Force Agenda

Agenda for Meeting #1

August 6, 2019, 11:00 AM to 1:00 PM

- Introductions (15 minutes)
- Elect Chair, Vice-Chair and Secretary (10 minutes)
- Schedule of meetings, good time?
- Explain Winter Operations Plan – Byrne (45 minutes)
- Tour West District and Salt/Brine Facilities (45 minutes)

Outcome: Task Force introduction to current winter operations.





Winter Operations Task Force

Agenda for Meeting #2

August 20, 11:00 AM to 1:00 PM

- Winter Operations Plan Q&A/Discussion (40 minutes)
- Impacts of Weather Timing and Variables (20 minutes)
- Peer City Operations (20 minutes)
- Lincoln Service Expectations Discussion (40 minutes)

Outcome: Gain consensus on acceptable levels of service.





Winter Operations Task Force

Agenda for Meeting #3

September 3, 11:00 AM to 1:00 PM

- Cost of Existing Services (20 minutes)
- Safety Issues (Police Department, Lincoln Fire and Rescue) (30 minutes)
- Salt/Brine Environmental and Pavement Impacts (10 minutes)
- Lincoln Service Expectations Discussion (Continued) (60 minutes)

Outcome: Financial and safety assessment of the Task Force recommendations.



Winter Operations Task Force

Agenda for Meeting #4

Task Force Charge:

Thoroughly review the existing policy and program and make recommendations to the Mayor and City Council on the following topics related to winter operations:

- 5) Identify the needs and expectations of residents regarding Winter Operations;*
- 6) Determine how the City should prepare for winter operations and clear streets during and after a winter weather event; and*
- 7) Determine how to assure that City streets are safe to drive on during and after a winter weather event; and*
- 8) Conduct a financial assessment of the Task Force recommendations.*

Tuesday September 17, 11:00 AM to 1:00 PM

- Comments and Discussion Towards Draft Document

Outcome: General consensus on the draft document.

Findings to Mayor/Council – October 1

M e m o r a n d u m

To: Winter Operations Task Force

From: Fred Freytag, Secretary
Randy Hoskins, Assistant City Engineer

Date: 8/7/19

Subject: Meeting #1 Minutes

Task Force members in attendance: Troy Bolender, James Bowers, Tim Byrne, Gloria Eddins, Mark Ewalt, Fred Freytag, Randy Hoskins, Wilma Hanson-McCoy, Tamara Sloan, Brad Thavenet.

Also present: Clay Engelman, Ben Glantz, Travis Laughlin.

Following introductions, officers were elected as required by the City Council resolution. Wilma Hanson-McCoy agreed to be the chair, Tamara Sloan the vice-chair, and after a short stare-down, Fred Freytag agreed to be the secretary.

Tuesday from 11-1 was confirmed as being a good time for the meeting, so meetings will be continued at this time every other week.

Hoskins pointed out the information contained in the Task Force members' notebook – the charge, a letter from the Mayor's Office, the proposed agenda and a copy of the City's Winter Operations Plan.

Byrne walked the Task Force through the Winter Operations plan, highlighting many of the changes and upgrades to winter operations that have been made recently.



The Task Force took a tour of the West District Maintenance shop, where two plow/material spreading trucks were on display. The Fleet Maintenance area was seen, noting the importance of that group in keeping equipment on the road. The final stop was the brine manufacturing/storage area, explaining some of the steps and processes that are involved.

The next meeting is scheduled for August 20th from 11 AM to 1 PM.





Winter Operations Task Force

Minutes for Meeting #2

August 20, 11:00 AM to 1:00 PM

Members Present: Fred Freytag, Gloria Eddins, Mark Ewalt, Becky Witt, Wilma Hanson-McCoy, Annette McRoy, Duane Winkler, Brad Thavenet, Tamara Sloan, Troy Bolender, James Bowers, Tim Byrne, Randy Hoskins

Others Present: Ben Glantz, Travis Laughlin, Clay Engelman

- Winter Operations Plan Q&A/Discussion

Differences between 2" snow and 10" snow and how you handle it knowing what the weather forecast will be for the next few days? We look at day of week, time of day, forecasts. Our response is easily scalable. Have plans in place for the extremities of those storms. Plow teams ready any time more than in inch is forecast. We put resources on stand-by.

What are the thresholds? Any predicted surface freezing of pavement – look at pretreatment anti-icing operations. At 1", emergency snow routes. 2", add other arterials. 3" adds bus and school routes. At 4" we get into residential streets.

Is that cumulative (back to back storms), or per storm? Situation dependent. Often will consider cumulative amounts, depending on weather conditions.

Strategy for identifying hills in residential? We do have our "hotspots" that we hit in residential areas where we know we'll have issues. 14th and Adams is a good example of this, gets treated first.

Plows put snow on sidewalks, sometimes multiple times per storm? Unfortunately that's what happens as we try to keep up with removal. Some of the areas are full removal (South Street business area) and we will come back in and remove snow in those areas. StarTran does have some equipment that they use to ensure bus stops are clear.

School routes – plowed by LPS or City? Done by City. Revised all of our bus route plowing when StarTran changed their routes a couple of years ago. When school is called off, we will hold off on school routes and hit the other important areas first. Schools are responsible for clearing their lots and sidewalks, etc.

People say they never see snow plows, how many pieces of equipment do you have? Close to 3000 lane miles being covered by 105 pieces of equipment (City and contractor). We had a 20 day period in February where we were out working 20 straight days/nights. Pretreatment is done the night before. Plowing often starts at midnight to have things done by morning rush. Much easier to do our work when there is very little traffic on the street.





Any inkling this last winter would be as bad as it was? No, not really. We do track El Nino and El Nina periods, which might give us some notice.

How long do you run a truck? Have a 10 year lifecycle, though they are likely going to be around closer to 20 years.

Best way to get streets cleared is by pretreating so ice/snow doesn't stick. We also have multiple trucks plowing together to clear full street width at one time.

Speed of trucks? Storm dependent. Slower on residential streets. When material spreading, we need to ensure that bounce of salt doesn't go to where we don't want it.

If plow next to curb doesn't go as fast, it would put less snow on the sidewalks. Depends on the type of snow. A lighter snow can be moved at a slower speed, but a heavy, wet snow needs some speed in order to get the snow to roll off the plow. It takes 6 hours to clear a route once the snow stops, does not count all the efforts that have been going on while the snow was falling. We do deploy plows as soon as snow reaches levels of need. Getting snow on the sidewalks is unavoidable.

Who clears snow on downtown sidewalks? DLA is responsible for that. Also issues in the Uni Place area, no place to put the snow.

Residential street plowing times? Shoot for 48 hours following storm end.

Who makes the decision on when to go? Tim Byrne has prime responsibility. He works with District Supervisors as well as others who are knowledgeable. We staff up the Snow Center to manage it citywide so we can see what's happening on the cameras, as well as having people out on the streets driving the routes. Our plow operators have a lot of experience as well.

Any gaps in our safety efforts? All staff, including contractors, have a high level of safety consciousness. They work on the streets all year long, so they are familiar with dangers. Go through extensive training on snow plowing. Public messaging about safety around plows. Better light packages to make them more visible on the street. NDOT has done a good job the last few years in getting PSAs out about giving plows more room. We remind employees about slip and fall concerns when getting in and out of equipment.

Coldest time of day is right before sun comes up, which is right before rush hour in the winter. Worst case scenario for providing safe driving conditions.

When drivers are tired and working nights with the stress and lack of visibility, it gets harder and harder to keep safety at high levels. When employees say they are too tired to continue, we have to respect that. We do take into account older drivers and try to schedule them for daylight hours, but with the volunteer OT, the younger guys start to burn out and we may need to call the older guys in for night shifts. When we go to mandatory 12 hour shifts, we go by seniority, so they can pick the daylight hours if they want. Lots of guys like the night shifts due to lower traffic and the fact that it generally pays OT.





Do guys work their 8 hour shift and then work OT? We allow flexibility. They can do that and then work another 8 hours for the OT. We have guys who will take vacation for the first 8 and then work another 8 for OT. We have other guys who will skip the normal shift and work the later shift to get their 8 hours.

How important is it for us to get more sensors on the ground? Having more would definitely help us respond appropriately. Weather reports and forecasts provide generic information, but the sensors give us actual numbers. We may not really need to go to 150 sensors (which would be ideal), but the existing 6 sensors are not enough. We currently have no way of purchasing any more, but we will ask for more in the upcoming budget cycle. We can show a cost savings that helps offset the cost of the sensors.

- **Impacts of Weather Timing and Variables**

When a storm is coming in, a conference call is initiated by the National Weather Service. When rain is included in the forecast, it makes a huge difference in our response – can we pretreat, will it put black ice underneath, will it make for heavier snow? So many different factors that come into play. Sometimes we are in the “Zone of Greatest Uncertainty”, which is not helpful for our planning efforts. We typically put people on standby about 24 hours ahead of an event. Type of storm also determines how many resources we’ll need to have ready – material spreading only, plowing, etc. NWS is often conservative in their forecasts, so we use multiple resources to get our advance information. Our consultants that we have hired seem to be giving us more accurate information.

We would rather see a foot of snow than 0.1” of ice. People do not always know the ice is there and can’t drive nearly as well on it. Wind impacts operations, drifting creates significant rework. Still get surprised sometimes – last October 14, Husker football game day, supposed to get 0.5” of snow, got 3.5”. We had brined, but were not ready for that amount of snow, especially that early in the season. Pretreatment is a cheap form of insurance.

Have we looked into selling brine to others? Yes, potentially considered, though we still need more capacity to do that.

- **Peer City Operations**

How other cities perform winter operations was investigated. A summary of the Lincoln resources was provided for comparison purposes.

Omaha exclusively uses contractors to clear residential streets. Denver plows residential streets at greater than 3”. Minneapolis doesn’t plow residential streets unless snow depth exceeds 12”. They are also very aggressive in their enforcement of parking bans. American Fork (UT) only plows one lane on residential streets. Flagstaff (AZ) uses no salt, only cinders.





Spokane (WA) plows only daytime shifts until the snowfall reaches 4", at which time they go to round-the-clock plowing. They also limit parking to the odd side of the street from November 15 until March 15. Walla Walla (WA) only plows when 6-8" of snow is forecast, and they don't start until 4" have accumulated. Complete snow removal takes 5 days.

Indianapolis exclusively uses contractors on residential streets, and only when snowfall is greater than 6". Cleveland (OH) begins plowing main streets with ½" of snow. With less than 2" of snow, they only salt residential streets, above that they salt and plow. Detroit (MI) only uses salt up to 3" of snow, they plow major streets between 3"-6". Greater than 6", contractors clear residential streets to a width of 16'.

Ft. Collins (CO) doesn't plow residential streets unless traffic movement is completely blocked. Madison (WI) has a similar number of material spreading units as Lincoln, but nearly twice as many plows (City and contractor) when they go into residential clearing at greater than 3". Ames (IA) plows major streets when snowfall reaches 2", residential streets are cleaned by contractors when snowfall reaches 3".

- **Lincoln Service Expectations Discussion**

Several people mentioned they are very happy with snow removal across the City and that the City does a good job.

Data driven decisions on snow depths – seem to agree that we wouldn't necessarily need to plow the whole City if some areas are below the plowing threshold.

Parking bans – important to get one side cleared so we can get at least one pass through residential streets. Need a more aggressive means of enforcing them. Also important to public safety in order to get to people. Maybe we do not worry about moving vehicles back and forth, instead go with a one-sided parking ban, especially in high density areas. We do a lot of re-dispatching trucks out to take care of areas that couldn't be accessed due to parked vehicles.

We occasionally decide that snow has been packed down so much that we'll just use salt and ice. We treat on a complaint-only basis in that situation, we don't have the units or the materials to do that on a citywide basis.

Residential removal is the big issue. Feel we do a pretty good job on the major streets.

Getting the public to comply with a parking ban is a big issue. Need to work on how we will make that happen better. Snow emergencies – look at opening more garages for parking, especially in the Haymarket.

Items for further discussion:

- Plowing only certain areas of the City based on data-driven information.
- Should we do a better job of parking enforcement? Allow Lincoln Transportation and Utilities the option to ticket and tow more vehicles?







Winter Operations Task Force

Meeting #3 Minutes

September 3, 11:00 AM to 1:00 PM

Members Present: Fred Freytag, Gloria Eddins, Mark Ewalt, Moe Jamshidi, Becky Witt, John Yoakum, Duane Winkler, Troy Bolender, James Bowers, Tim Byrne, Randy Hoskins

Others Present: Travis Laughlin, Clay Engelman

- **Cost of Existing Services**

Pretreatment only costs \$187K. Arterial plowing costs about \$267K, citywide \$300-500K, complete removal \$410K. Averaged about \$400K per storm last year, but it is dependent upon depth of snow, weather, etc. Interest was expressed in knowing how much it costs per 2" snow, 4" snow, and 10" snow. It somewhat comes down to the question: What quality of life do you want?

Personnel costs are snow related only, not full personnel costs for the Street Maintenance Division.

All Public Association of Government Employees (PAGE) helping with snow removal get paid standard wages during normal shift, and premium pay (time and a half) for all work outside regularly scheduled shift. *Factual statement but now applies to all city employees...*

Always want to let people know what they are getting for the budgeted money, don't change service levels just because we are having a bad year. The State budgets for average year, takes money out of construction pool if more is spent on snow removal. Money goes back to construction if snow savings result.

Come up with a compromise for service provided based on type of snow. A 5" snow of fluff is much different than 3" of wet slush. We'd be better off plowing 3" of slush than 5" of fluff. NDOT goes 24/7 on interstate (their level of service), some routes are 16 hour routes. Depth/type of snow doesn't matter. It would be good for us to come up with something like that (Jamshidi). Put a "or City Engineer call" caveat on full city plowing with 4" of snow.

Better communications with schools, make sure they know the routes we are plowing. Some schools may have parents using different routes than what the City is plowing. LPS is go or no go when making a decision based on snow, they don't use late starts. Thoughts about just plowing all around schools? Sort of already do that, City reassigns personnel from other routes to start working around schools and bus routes. Getting material spreaders out on those routes is difficult due to limited resources.

Personal responsibility on maintaining your personal vehicle. Ability to get around has a lot to do with tires.



- **Safety Issues**

Captain Winkler presented a PowerPoint on safety observations. (attached)

LPD responds to crashes involving death, injury, or greater than \$1000 damage. Shoot for response time of under 3 minutes. Try to get lanes cleared in 15 minutes, clear scene in 45 minutes.

Typical crash stats: 20% involve injury, less than 1% are fatal. Crash numbers increase in snow, but severity (fatal and injury) drops.

Crash numbers cited are for the “winter” season, not just during snow/ice events.

- **Salt/Brine Environmental and Pavement Impacts**

Areas across the country are moving towards more liquid deicers. Getting even more all the time, especially in environmentally sensitive areas. Byrne showed a video with nationwide best practices. (attached)

Witt: You guys are doing a great job (using limited salt). Back east, after 10 years cars are virtually unrepairable due to rust issues.

Recycled salt – How about having a large undercarriage sprayer people can drive through after a storm. Capture the chlorides and reuse them 😊 City is looking at creating one for our trucks, costs in the \$350K range.

Liquid brine helps reduce the amount of chlorides used, should have less impact on streets and vehicles. Freeze/thaw is what causes issues with potholes, and while chlorides will cause snow melt, limited differential is the result.

Pretreating with salt brine – doesn’t help when washed off before snow arrives. We take that into account when we are planning pretreatment. We look at the weather forecasts and base decisions off those. We do have certain areas that we will pretreat (bridges and intersections) if we have an early season storm coming in. We also consider levels of residual salt on the street from previous storms or pretreatments when deciding whether or not to pretreat.

Salt storage – all sheds are filled off-peak. We now have delivery requirements to ensure we can get salt when we need it. Prices went from \$42 to \$70 per ton this year. Currently stock 6,000 tons, last year we used 10,000, 8,000 tons is “typical”. Working on increasing our storage levels. Will gain about 1,500 tons this year with a new shed. When we start depleting supplies, we start ordering more.

Has City looked into renting storage for additional salt storage? No, most owners are not keen on renting to us for salt storage due to corrosive effects. NDOT has greatly increased their storage and with more strategic locations over the last few years. Just because you ask for salt to be delivered, doesn’t mean you always get it.

- **Lincoln Service Expectations Discussion**

Eliminate the 4" level for citywide plowing and instead use common sense based on what we're getting, what is coming, temperatures, etc. Let the experts make the call based on lots of factors beyond 4". Plow only areas needed, not necessarily whole city, especially when snowfall is considerably different in different parts of town.

Better job of clearing sidewalks, especially where sidewalks are adjacent to street. South Street mentioned.

Residential streets – plow just one side, keep parking on other side (no switching back and forth), only when snow emergency is declared. Has lots of benefits. 2020 you park even side, 2019 you park odd side. Very aggressive ticketing/towing! High density areas are very difficult to make this work. Look at using all media sources available (we use Facebook, websites, radio, TV, etc.). Can we use the emergency text notification that is used for tornados?

First priority is safety, second mobility, third is cost.

Lincoln Municipal Code states that an emergency exists when 4" of snow has fallen in a 24 hour period, or when Mayor declares it. Look at removing that language, though that seems good for arterials (does not kick things in for residential streets). Better communication with public. First couple snows are toughest for drivers to adjust to, later in the season it's not that big of deal. Maybe we increase our threshold before we go plow later in the season.

"Nothing fun about snow unless you are on a hill riding a sled."

General agreement that current arterial operations are good, it's the residential streets that they want to discuss primarily.

Plow snow routes through residential areas? Create a collector street and a residential street plan that allows people to get out of their neighborhood vs. doing every street? Ensure every home is within X blocks of a street that is plowed.

Problem and perception of problem are two different things. (Bowers) People in northeast feel they aren't getting the same level of service.

Bolender objects to the term snow "emergency" – he'd like to get rid of it. Call it an "event"? Witt questioned the need to make that change. Don't need to change every term.

Jamshidi suggested that keeping people home after a storm allows us to do a better job on arterial streets. Based on that, getting residential streets done may not be that great of an idea.

Is 4" snow a good level if we're not going to get out there for 24 hours? Very dependent upon type of snow and weather. If it's a fluffy snow, let's just skip it. Don't see a reason to change from 4" as our base as a guideline. Suggested to remove the 4" threshold as a way to manage people's expectations. Make it as determined by LTU Director. Only do it as warranted in order to keep streets passable. Create a decision matrix that takes into account multiple factors – snow depth, moisture content, temperatures



(existing and projected), etc. Make the criteria on the decision matrix something that is easily understood by the general public.

“Squeaky door always gets the oil. Don’t listen to just the few who are complaining.”





Winter Operations Task Force

Meeting #4 Minutes

Tuesday September 17 11:00 AM to 1:00 PM

Members Present: Fred Freytag, Gloria Eddins, Mark Ewalt, Moe Jamshidi, Becky Witt, John Yoakum, Duane Winkler, Brad Thavenet, James Bowers, Tim Byrne, Randy Hoskins

Others Present: Travis Laughlin, Ben Glantz

- **Comments and Discussion Towards Draft Document**

Becki provided a neighborhood “survey” with ideas that she gathered from her neighbors. Looked at the concept of getting people out of the neighborhood, areas for first plowing, and ideas for when to start. Also forwarded an idea of heating streets using electricity at night.

- Matrix for determining residential plowing (moisture, temps, etc.)
 - OK plowing just certain areas of town vs. all? Yes. Need to break down even more so that we have good boundaries between plow/no plow areas. Business areas should also receive a higher priority, bridges too. Need to be able to get this information out to the citizens, need discretion based on data received. Don’t plow if you don’t have to, especially in flat areas. Discussion keeps coming back to using our own judgement. Moisture content, pavement temps, air temp, projected weather coming in would be main factors involved.
- Thoughts for parking bans
 - Base parking side on year, odd or even, only during snow event. Only plow one side basically. Might hit the other side in areas where parking is limited. Discuss with Postal service, will there be impacts when mailboxes are on one side of street.
 - Ticketing and towing thoughts – Police Department currently uses a 3 contact rule prior to towing. Warning, ticket, tow. – Would like to see the warning skipped. Winkler suggested for fairness purposes, warnings are good. Get the message out regarding parking bans at the start of the season! Word will get out if we start hitting them harder, either towing or tickets with a higher fine on them. “Your street will not be plowed if vehicles are not moved” – may not work in areas where most of the vehicles parking there are students, not residents.





- Recommendations for salt storage – Stockpile 150% of average winter usage during the offseason, with strategic locations for it around town (study this).
- Thoughts on contractor usage – like Tim’s plan. Some concerns about how good of a job we’ll get by using pickups with plows. Contractors in City equipment – maybe try it on the funnel streets?
- Thoughts on how to get City employees “in seats” of equipment – need a better method of getting them to work. People in paid on-call status are very seldom an issue, it’s when you’re calling them in at other times that issues start, and especially when the employees are strained by a long season. Need a way to go to mandatory employee reporting without declaring an emergency, but that’s a union issue and will require a “give” on the City’s part. Is there anything that inspires people to work extra? Moe: Not suggesting any additional raises for City employees (we already pay more than State does, they have trouble getting people to apply.)
- Increase number of weather sensors around town – 6 now, new ones will also give a grip measurement. Increase the number to provide better data for our determination.
- School routes and plowing around them
 - Communicate it better with the schools. Ensure schools are using the routes that we are plowing and vice versa.
- Neighborhood routes to get people out to arterials
 - Define better routes to get people out of the neighborhood. These could be hit earlier when schools and buses aren’t running. “Funnel” streets would be the 3rd priority, with residential being 4th. Hire contractors to get on funnel streets earlier. City is currently looking at hiring more contractors for assistance. Trying to get people to within X number of blocks of a plowed route.
- Continue to investigate “green” ways to melt snow (solar, geothermal, etc.)
- Important to hit the “hot spots” (known areas where snow and ice are typically issues) early on in our efforts.
- Refer back to an event that met those characteristics and use that as a “for instance” when getting the message out to citizens.

Outcome: General consensus on the draft document.

Findings to Mayor/Council – October 1





Winter Operations Overview

Winter Operations Task Force Kick-off Meeting
August 6, 2019

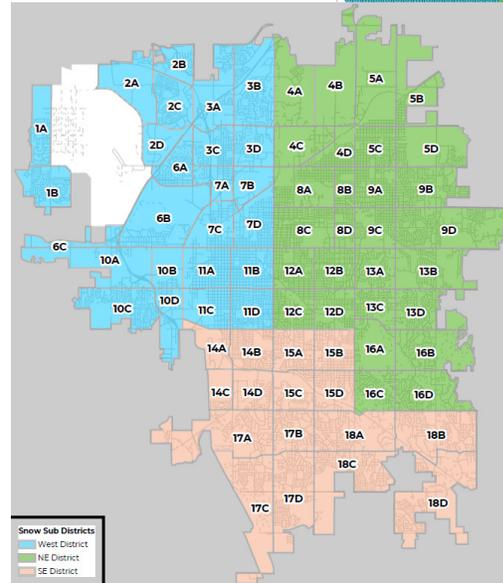
Welcome!

- ▶ Introductions
- ▶ Winter Operations Overview
- ▶ Program Advancements
- ▶ Facility Tour



Our Leadership Team

- ▶ Travis Laughlin, West Dist. Supervisor
- ▶ Clay Engelman, NE Dist. Supervisor
- ▶ Ben Glantz, SE Dist. Supervisor
- ▶ Bill Fleisher, Fleet Superintendent
- ▶ Tim Byrne, Division Manager



Winter Operations Plan

- ▶ The WOP sets out a policy and procedural framework for ensuring the City of Lincoln continuously improves on the effective delivery of winter maintenance services and the management of road salt used in winter maintenance operations.
- ▶ Approved by Executive Order
- ▶ Reviewed annually
- ▶ Process of continual improvement



Recent Weather

	13/14	14/15	15/16	16/17	17/18	18/19
Seasonal snow accumulation	18.2"	21.9"	20.5"	7.5"	21.4"	55.5"
Days with measurable snow fall	23	16	12	9	24	28
Continuous winter event responses	13	12	9	2	4	6
Spot winter event responses	4	1	4	11	15	13
Winter event hours	519	663	515	388	595	1,121
Service requests	377	1408	1013	563	310	1,874

By The Numbers

Equipment

- ▶ Liquid Units: 17
 - ▶ 69.5 miles per unit
- ▶ Sanders: 23
 - ▶ 51.4 miles per unit
- ▶ Plows: 108
 - ▶ Maintenance Operations: 59
 - ▶ Utilities/Parks & Rec.: 7
 - ▶ Contractors: 42
- ▶ Maintenance Ops delivers all liquid and granular treatments due to equipment capabilities
- ▶ Utilities, Parks & Rec, and Contractors support plowing operations

Service Area

- ▶ Emergency Snow Routes, Other Arterials, Bus & School Routes
 - ▶ 1,182 lane-miles in 2018
 - ▶ 1,099 in 2010
 - ▶ 931 in 2000
- ▶ Residential Streets
 - ▶ Over 1,500 lane-miles

Staffing

Determining Shift Schedules

- ▶ Scheduled based on forecasted timing of the weather system
- ▶ Includes stand-by and working shifts
- ▶ Forecast drives the type of operation and number of resources
- ▶ Decision making relies heavily on precision forecasting and live local data

Staffing

City Resources

- ▶ During regular business hours staff are deployed as-needed

After-hours shifts

- ▶ Shift schedules are posted at each shop 8 to 60 hours in advance of the first shift
- ▶ Voluntary basis to fill after-hours shifts
- ▶ Overtime is mandatory under Mayoral Snow Emergency declaration

Contractor Resources

- ▶ Alerted in advance of weather which may require plowing operations
- ▶ Maintain a state of readiness from November 15 to March 15
- ▶ Two hours to report for duty
- ▶ Only paid for the hours they work

Program Advancements

- ▶ Liquid Brine
- ▶ Weather forecasting
- ▶ Road Weather Information System (RWIS)
- ▶ Maintenance Decision Support System (MDSS)
- ▶ Automatic Vehicle Location (AVL)

Liquid Brine Program

- ▶ Why brine?
 - ▶ Faster treatment response using less chlorides
 - ▶ Material reduction = savings
 - ▶ National best practice
- ▶ Reduced environmental impact
- ▶ Reduced infrastructure impact
- ▶ In-house developed proprietary blends are manufactured on-site
- ▶ Cost-effective vs. purchasing
 - ▶ APEX Meltdown \$1.20/gal.
 - ▶ LinMelt \$0.80 /gal.

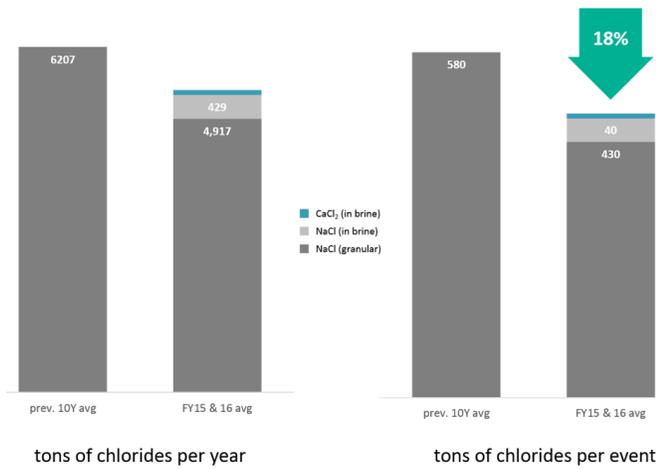


Treatment Strategy

- ▶ Continue utilizing rock salt as our principle deicing agent
- ▶ Brine strategies
 - ▶ Anti-ice - 50 gal/lane-mile
 - ▶ Residual effects
 - ▶ Starts working when precipitation starts
 - ▶ Pre-wet - 20 gal/ton.
 - ▶ Reduce bounce & scatter
 - ▶ Slurry
 - ▶ De-ice - 150 gal/lane-mile



Implemented in 2015/16

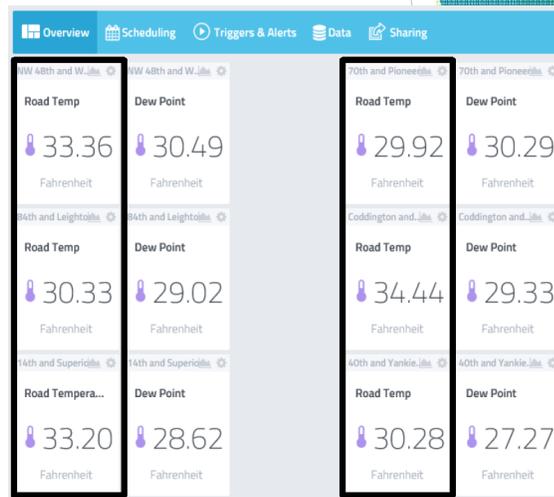


Manufacturing



Weather Forecasting: A City Problem

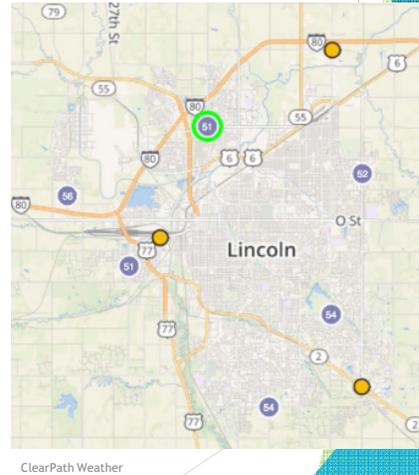
- ▶ Why aren't FHWA guidelines used by more cities?
- ▶ Road composition, traffic, localized weather, nearby building type/use, etc.
- ▶ How would you de-ice the streets if you had only ONE location's data available? What about none?



Frost Control Systems

Road Weather Information System (RWIS)

- ▶ Installation of six non-invasive infrared pavement sensors
 - Pavement surface temperature
 - Dew point
 - Relative humidity
 - Air temperature
- ▶ Sited in strategic locations
- ▶ Real-time information and critical observations to drive forecasts and treatment strategies

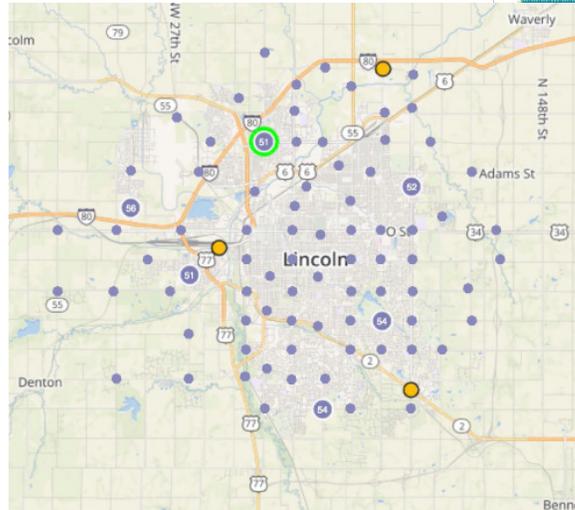


Future Program Investments

- ▶ Snow depth
- ▶ Surface state (grip)
- ▶ Full system deployment



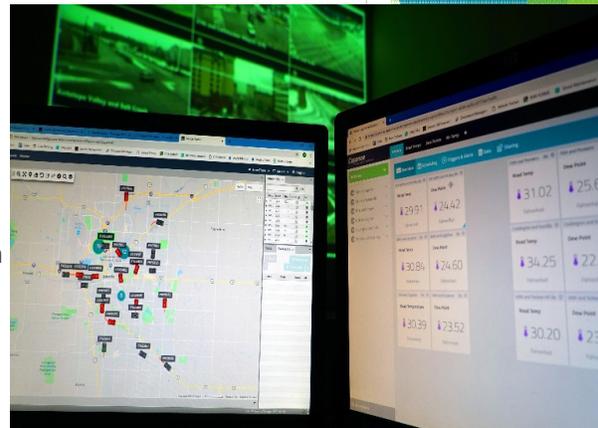
Frost Control Systems



ClearPath Weather

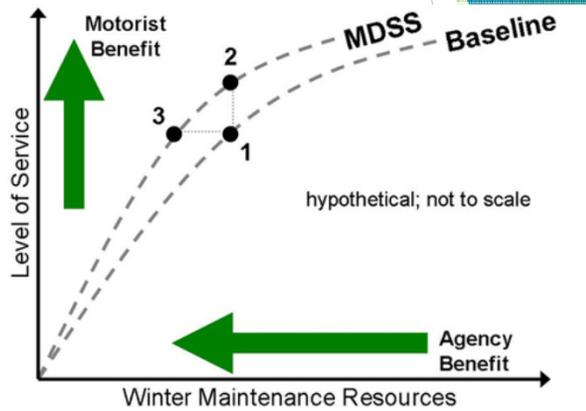
Maintenance Decision Support System (MDSS)

- ▶ SaaS which aggregates location-specific weather data, and applies advanced modeling technologies to deliver high-resolution information and applications for both short-term and long-range weather forecasts
- ▶ Specifically designed for pavement condition forecasting
- ▶ Consumption of live RWIS data = increased forecast accuracy
- ▶ Data driven winter maintenance response



Why Implement A Maintenance Decision Support System?

- ▶ Increased levels of service while using the same amount of materials
- ▶ Decreased material usage while maintaining the same level of service
- ▶ A compromise between increased levels of services and reduced material usage



Tools METAAlerts Help Logout

State-wide Current View

MDSS Weather Alerts

MDSS Road Alerts

MDSS Blowing Snow Alerts

MDSS Maintenance Alerts

NWS Alerts

Overlay

Radar

Opacity

Forecast Sites / Routes

None

RWIS

Road Temp

FAA / NWS

Air Temp

Cameras

Lincoln

MDSS Weather Alerts

Error / Not Available	No Precipitation	Drizzle
Light Rain	Moderate Rain	Heavy Rain
Thunderstorms	Blowing Snow	Light Snow
Moderate Snow	Heavy Snow	Light Rain/Snow Mx.
Moderate Rain/Snow Mx.	Heavy Rain/Snow Mx.	Light Sleet
Moderate Sleet	Heavy Sleet	Freezing Drizzle
Light Freezing Rain	Moderate Freezing Rain	Heavy Freezing Rain

Radar

Liquid

Ice

Mix

Snow

POP (Forecast Only)

0% 20% 40% 60%

N. 70th & Arbor Rd. - Pavement Forecast

Segment: N. 70th & Arbor Rd. Pavement

Thursday, Dec 27th 2018: 2:10 pm

[View NWS Alerts](#)

Weather

Air Temp 26 °F

Dew Pt 24 °F

Humidity 93 %

Visibility 10.00 mi

Winds NW 14 mph

Accumulation

0%

0% 100%

Liquid (in) -24 Hrs +24 Hrs

Ice (in) 0.00 0.00

Snow (in) 1.20 1.50

Pavement

Dry

Pvmt Temp 29 °F

Percent Ice 10 %

Mobility Index 100

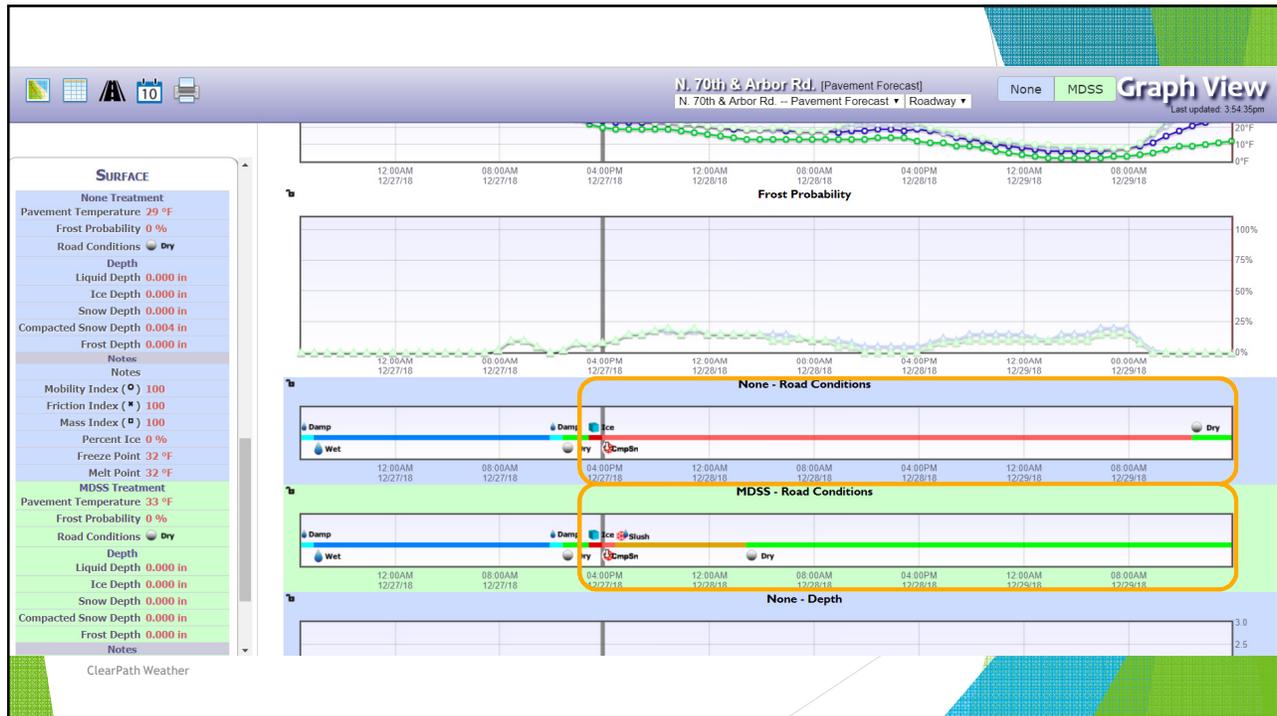
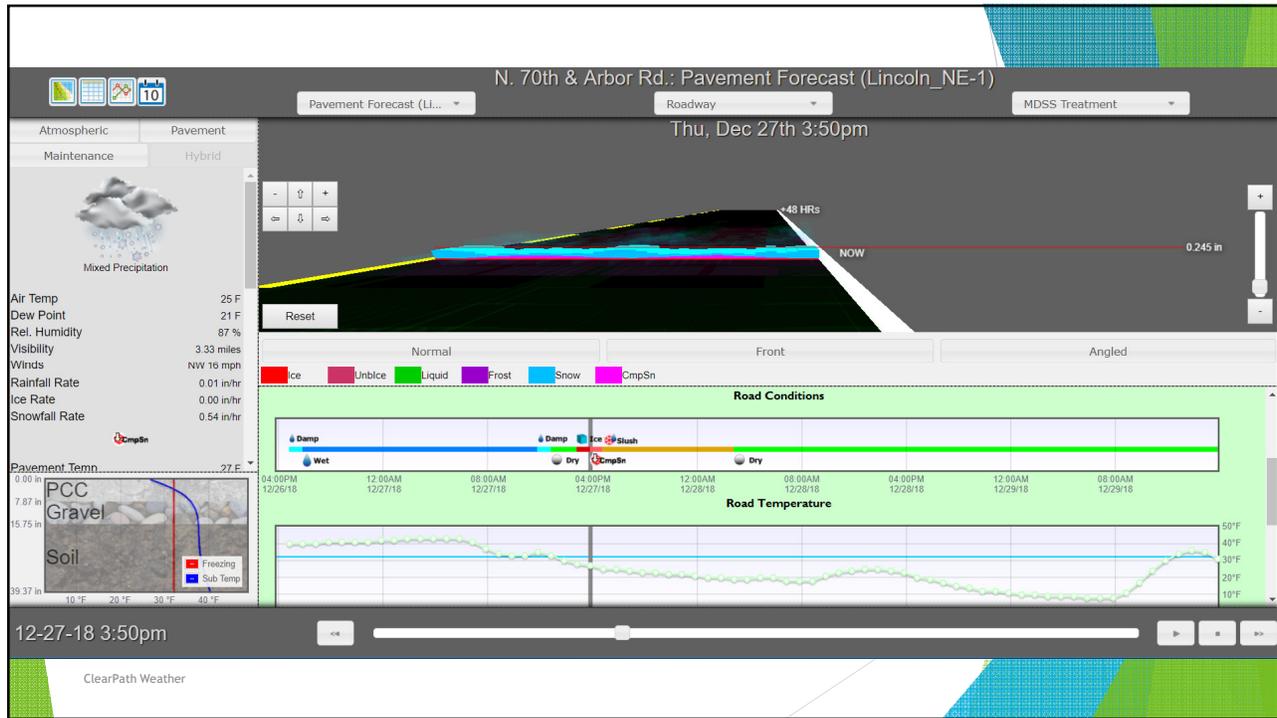
December 27 2018 2:10 PM

-24h -12h Now +12h +24h

2 Hour Historical 10 Minute Interval

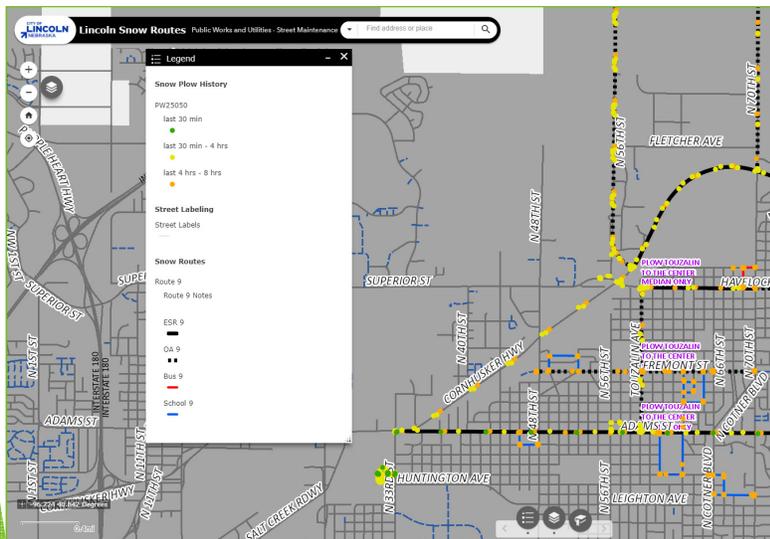
Slow Fast

ClearPath Weather

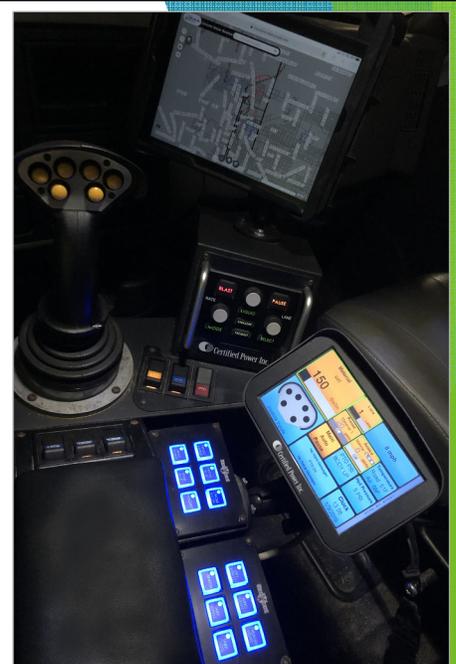


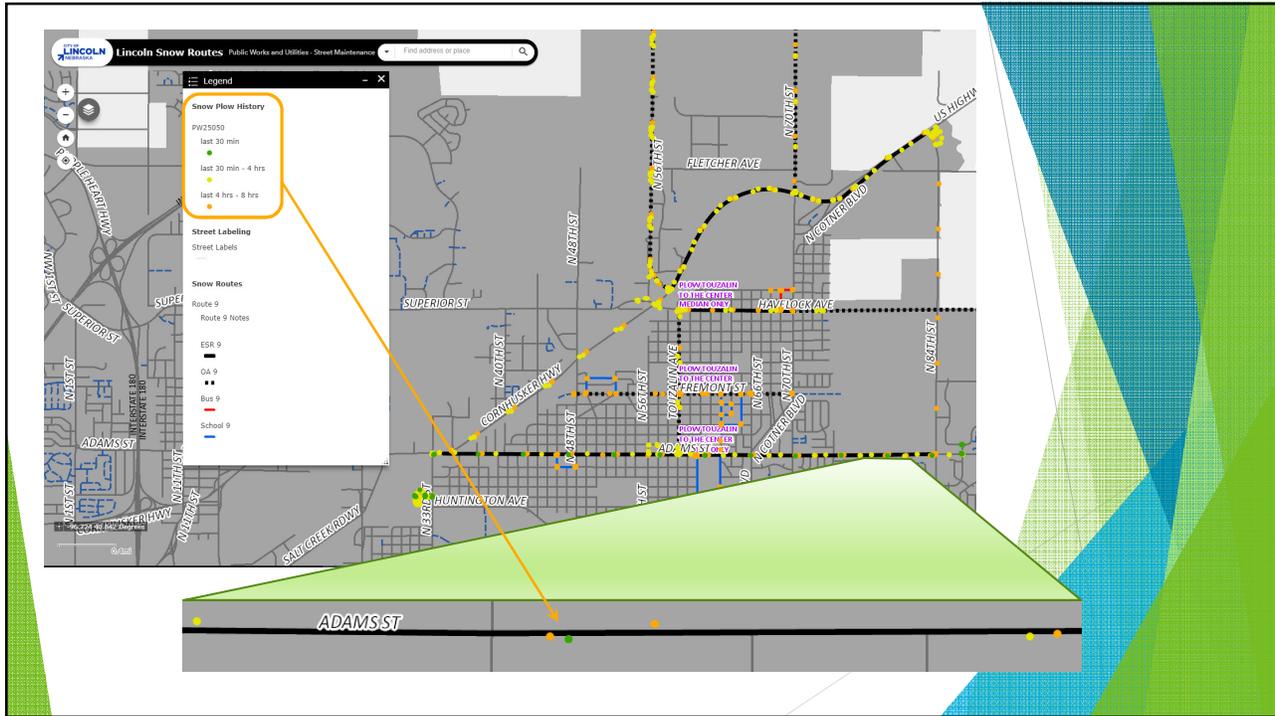
Routing Application for Operators

- ▶ Implementation of our first digital routing application
- ▶ From paper to GPS guided tablets
- ▶ Allows operators to independently select routes, service level, and assigned equipment
- ▶ Provides historical information of when they were last in an area via breadcrumb trails
- ▶ Increased information sharing during shift changes



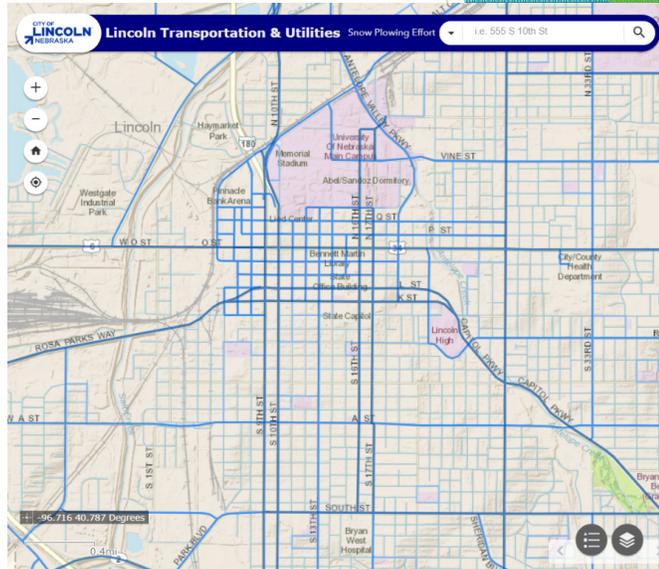
A Look At Route 9 In Progress





Snowplow Tracker

- ▶ Easy on-line access for citizens to view our progress
- ▶ Real-time information
- ▶ Displays color coded route history





Facility Tour!

Tim Byrne
Manager, Maintenance Operations
402.441.7701
tbyrne@lincoln.ne.gov



Snow Business Unit Expenditures by Fiscal Year & Category

Fiscal Year	14/15	15/16	16/17	17/18	18/19	Grand Total
Expenditures:						
Personal Services	\$ 1,036,854.31	\$ 931,714.02	\$ 764,584.68	\$ 893,975.52	\$ 1,440,834.74	\$ 5,067,963.27
Fringe Benefits	\$ 464,483.70	\$ 507,552.38	\$ 389,414.70	\$ 440,511.22	\$ 664,561.13	\$ 2,466,523.13
Materials & Supplies	\$ 599,691.80	\$ 296,387.64	\$ 534,349.91	\$ 614,052.00	\$ 949,582.54	\$ 2,994,063.89
Other Services & Charges	\$ 1,510,198.35	\$ 1,525,590.79	\$ 1,207,341.07	\$ 1,378,420.39	\$ 2,974,278.76	\$ 8,595,829.36
Capital Outlay - Equipment	\$ 67,808.66	\$ 21,313.99	\$ 333,866.48	\$ 466,505.38	\$ 110,466.52	\$ 999,961.03
CIP XFERS	\$ -	\$ 37,501.00	\$ 575,000.00	\$ -	\$ -	\$ 612,501.00
Grand Total	\$ 3,679,036.82	\$ 3,320,059.82	\$ 3,804,556.84	\$ 3,793,464.51	\$ 6,139,723.69	\$ 20,736,841.68

City	Population (1000s)	Lane Miles	Average Snowfall	Comments
Lincoln	287	2900	26"	Deicing and plowing major streets all instances. Residential street plowing >4". Mix of City personnel and contractors. 59 plow trucks, 23 with salt and/or brine capabilities.
Green Bay, WI	104	1100	51"	Supplements their fleet and personnel with contractors
Omaha	466	4500	26"	City clears major streets, contractors clear local streets (\$1.5M of \$8.2M budget paid to contractors). Main streets cleared within 3 hours of end of storm, dry within 18 hours. For residential streets, done within 12 hours of <4", 18 hours <8" and 24 hours for >8".
Denver, CO	716		54"	Until 2007, only plowed at 12"+. Added city staff and equipment, now plow residential at 3".
Des Moines, IA	217	2200	35"	All city forces (contractors for sidewalks). Main routes first, then residential streets if deep enough.
Minneapolis, MN	425		54"	No residential street plowing unless >12". Aggressive about enforcing parking bans.
Bellevue, NE	50	570	26"	Plowing done by city forces, complete removal within 12 hours.
Papillion, NE	19	295	26"	Removal by city forces. <1.5", streets clear within 4-6 hours. 8 hours for deeper snow.
La Vista, NE	16	220	26"	Removal by 15 city employees. Complete within 12 hours of storm end.
American Fork, UT	33	113	57"	Only plow arterial streets greater than 3" of snow. Only plow one lane on residential streets. Salt only used on hills, intersections and school zones.
Flagstaff, AZ	70		102"	0-4", priority streets only. 4-8", residential within 12 hours. 8-12", 18 hours. Over 12", 36 hours. Apply cinders (no salt usage) to aid traction on hills, intersections, and problem areas.
Spokane, WA	210		45"	Complete plowing at 1", normal daytime shifts. Snow greater than 4" go to round the clock plowing, 3 days complete removal. Parking limited to odd side of street only November 15-March 15. All by city forces.
Walla Walla, WA	31		13"	Plowing only if 6-8" predicted, start when 4" accumulated. 5 days to do complete clear.
Chicago, IL	2,706	9456	35"	Start with 2" accumulation. Have plows for garbage trucks, smaller pickups with salting capabilities. 287 plows, 50 garbage trucks, 26 4x4 vehicles, 400K tons of salt in 19 locations.
Indianapolis, IN	867	7300	26"	Residential streets when >6", plowed by contractors within 24 hours. No residential street salting.
Cincinnati, OH	302	3112	22"	96 available units. Focus mostly on material spreading.
Cleveland, OH	386		68"	½" of snow, plow main streets. 2" salting and plowing residential. Less than 2", salt residential (no plowing).

Detroit, MI	673	2557	43"	50+ city trucks on street in event. 3" snowfall – only salt, clear within 24 hours. 3-6" – major streets only, 2-3 days from end of storm. >6" – city clears main streets, contractors clear residential 16' width within ½" of the ground.
Ft. Collins, CO	165	110	54"	Don't plow residential unless snow accumulation completely blocks traffic movement. "First snowflake on the pavement, second snowflake in the back of the snowplow."
Madison, WI	258	1743	51"	26 scheduled salt/plow routes. Residential plowing >3". 90 city and 90 contractor plows for full operation. 10-12 hours for major street plowing, 48 hours for residential.
Ames, IA	63	~600	31"	Major street plowing at 2", city forces; residential >3", done by contractors. 16 hours to complete.

Accident Statistics and Locations 2017-2018

Lincoln Police Department

Lincoln Police Department Policy 1810

- LPD responds to:
 - All accidents involving Death or Injury on public or private property
 - Property damage accidents occurring on a public street where damage to one person's property is in excess of \$1000 or one party wishes to make a report
 - Damage to government property
 - Any hit and run
 - Driver impairment due to alcohol or drugs
 - Hazardous material involvement
 - City owned vehicles involved

Accidents responded to by Year

- 2018—9212
- 2017—8997
- 2016--8972
- For each year, approximately 20% involved injury
- Less than 1% were fatalities
- Between 3-5% involved alcohol or drugs
- Winter weather considered a significant factor between December-March

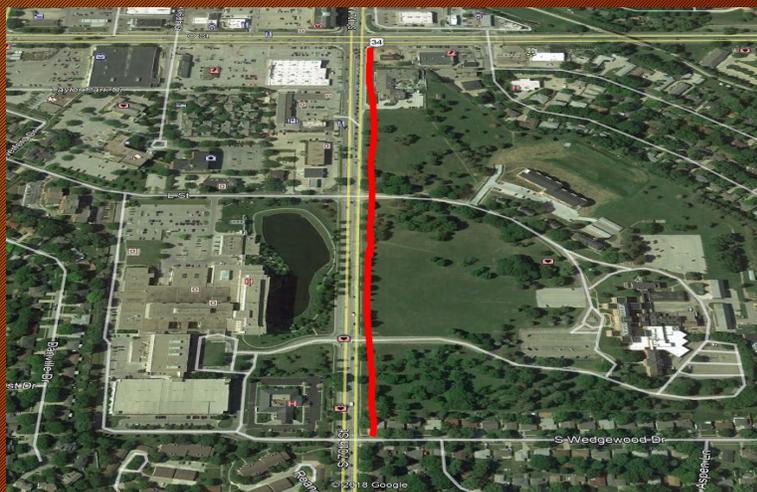
Procedures During an Accident

- Target response time <3 minutes. Distance, weather and traffic will increase
- If life or limb is a consideration, all other factors are secondary, LPD acts in an assisting role to LFR
- Once that is addressed, goal is to have accident assessed, traffic lane cleared and moving within 15 minutes.
- Documentation, education/enforcement complete and scene cleared within 45 minutes.

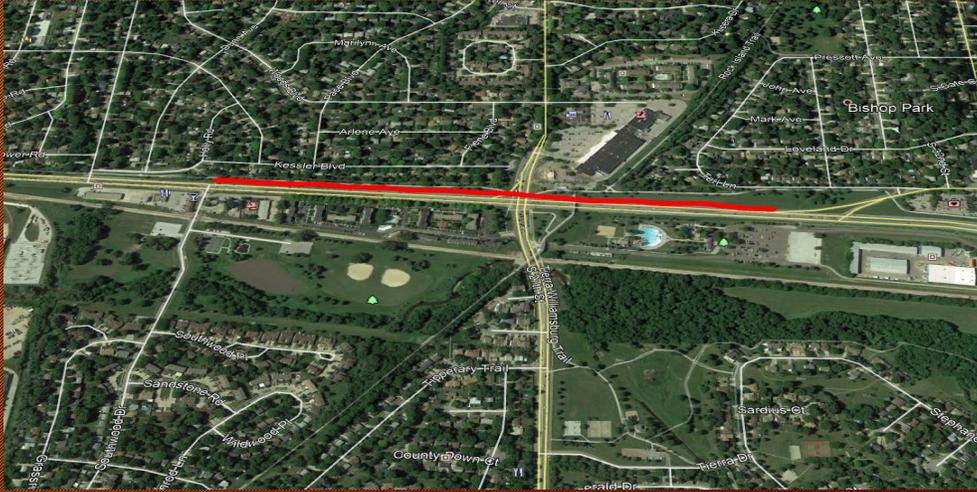
Majority Accident Locations 2017 27th, Old Dairy-Cornhusker & 14th-Superior



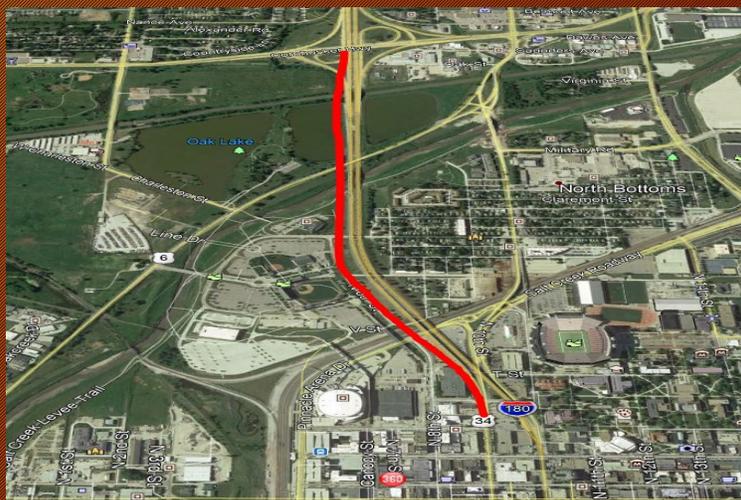
2017, Continued: 70th, 0 to South Wedgewood



2017, Continued: Hwy 2, Southwood/Pioneers



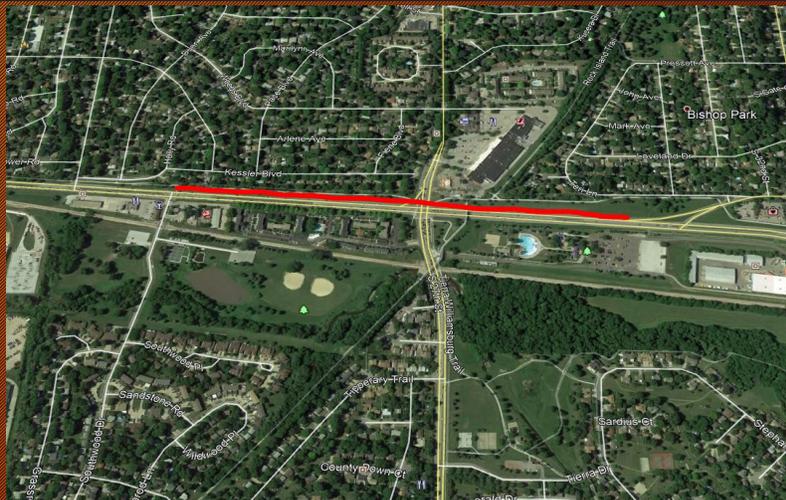
Majority of Accidents, 2018: I180, Cornhusker to R



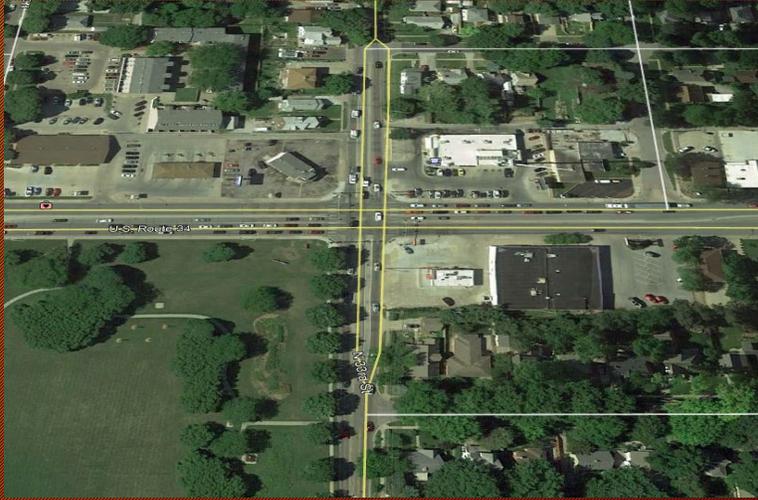
2018, Continued: 14th & Superior



2018, Continued: Hwy 2, Southwood to 27th



2018, Continued: 33rd and O



2018, Continued: Havelock/Cornhusker



Winter Weather Accident Trends

- Number of accidents increase
- Rate of injury and fatality accidents decrease
- Alcohol/Drug involvement decrease except holidays/sports events
- UNL/NWS identified days with 1” snow coverage or more—
 - 2015-16—31
 - 2016-17—8
 - 2017-18—41



A91527

19R-64

Introduce: 3-18-19

SUBSTITUTE

RESOLUTION NO. A- **91527**

1 WHEREAS, the City of Lincoln has experienced near record snowfall for the winter of
2 2018-2019; and

3
4 WHEREAS, a task force to examine the City’s Winter Operations Policy and recommend
5 changes thereto is in the best interests of the citizens of Lincoln,

6 NOW, THEREFORE, be it resolved by the City Council of Lincoln, Nebraska that a Winter
7 Operations Task Force (“the Task Force”) be and is hereby created subject to the conditions and
8 requirements set forth herein.

9 1. The Task Force shall be comprised of the following members:

- 10 a. Two residents from each City Council district, one to be selected by the Council
- 11 member of that district and one to be selected by the Mayor;
- 12 b. One employee of the Police Department, to be selected by the Chief of Police;
- 13 c. One employee of the Fire and Rescue Department, to be selected by the Fire Chief;
- 14 d. One or more members of the business community, to be selected by the Mayor;
- 15 e. One representative from the Public Association of Government Employees Union,
- 16 to be selected by the Union;
- 17 f. The Mayor or a designated representative (*an ex-officio non-voting member*);
- 18 g. One member of the City Council, to be selected by the City Council;
- 19 h. One employee of the Transportation and Utilities Department to be selected by the
- 20 Director (*an ex-officio non-voting member*);

AMENDED 3/25/19

-
- 1 i. One employee from the Finance Department to be selected by the Director of
2 Finance (*an ex-officio non-voting member*);
- 3 j. The Director of the Transportation and Utilities Department as a non-voting ex-
4 officio member (*an ex-officio non-voting member*).
- 5 2. Selection of the members shall be completed within sixty days of passage of this resolution.
- 6 3. All members of the Task Force that are not employees of the City shall serve without
7 compensation for time.
- 8 4. The Task Force shall thoroughly review the existing policy and program and make
9 recommendations to the Mayor and City Council on the following topics related to winter
10 operations:
- 11 a. Identify the needs and expectations of residents regarding Winter Operations;
- 12 b. Determine how the City should prepare for winter operations and clear streets
13 during and after a winter weather event; and
- 14 c. Determine how to assure that City streets are safe to drive on during and after a
15 winter weather event; and
- 16 d. Conduct a financial assessment of the Task Force recommendations.
- 17 5. The Director of Transportation and Utilities shall, after all members have been selected,
18 schedule and arrange for the first meeting of the Task Force, at which time a chairperson,
19 vice-chairperson, and secretary shall be selected from the membership.
- 20 6. After the first meeting, the Task Force shall meet at times as determined by the Task Force.
- 21 7. The Director of Transportation and Utilities shall provide a meeting space and City staff to
22 take and keep minutes of meetings and provide such information and subject-matter
23 expertise as the Task Force may require.

- 1 8. All meetings shall be conducted pursuant to the Nebraska Open Meetings Act and written
2 records shall be subject to public records requests under Neb. Rev. Stat. §§ 84-712 through
3 84-713.
4 9. The Task Force shall submit its findings and recommendations to the Mayor and City
5 Council no later than October 1, 2019 and shall be released to the public at the same time.
6 10. The Task Force shall be dissolved on November 1, 2019, unless further legislation extends
7 or eliminates the date of dissolution.

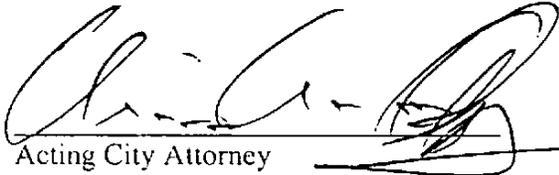
See further Council Proceedings on
next page.

Introduced by:


Councilwoman Leirion Gaylor Baird

AYES: Camp, Christensen, Eskridge, Gaylor Baird,
Lamm, Raybould, Shobe; NAYS: None.

Approved as to Form & Legality:


Acting City Attorney

Approved this 27th day of March, 2019:


Mayor

ADOPTED

MAR 25 2019

BY CITY COUNCIL

19R-64

MOTION TO AMEND NO. 1

I hereby move to amend Bill No. 19R-64 to adopt a substitute Resolution attached hereto.

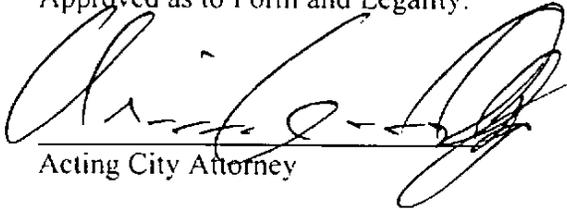
Introduced by:



Leirion Gaylor Baird

AYES: Camp, Christensen, Eskridge, Gaylor Baird,
Lamm, Raybould, Shobe; NAYS: None.

Approved as to Form and Legality:


Acting City Attorney

Requested by: Law Department

Reason for Request: To clarify and strengthen the task force process.

ADOPTED

MAR 25 2019

BY CITY COUNCIL

19R-64

3/25/19 Council Proceedings:

LAMM Moved to adopt Bill 19R-64. Seconded by Christensen.

GAYLOR BAIRD Moved Motion to Amend #1 to adopt a Substitute Resolution. Seconded by Raybould.

LAMM Moved to amend Bill 19R-64 to make the members designated in f. thru j. ex-officio non-voting members. Seconded by Camp.

LAMM Withdrew her motion.

LAMM Moved to amend Bill 19R-64 to make the members designed in f. and h-j. ex-officio non-voting members.

Seconded by Camp & carried by following vote: AYES: Camp, Eskridge, Gaylor Baird, Lamm, Raybould, Shobe; NAYS: Christensen.

FINAL VOTE AS AMENDED: AYES: Camp, Christensen, Eskridge, Gaylor Baird, Lamm, Raybould, Shobe; NAYS: None.

19R-64

Introduce: 3-18-19

RESOLUTION NO. A-_____

1 WHEREAS, the City of Lincoln has experienced near record snowfall for the winter of
2 2018-2019; and

3 WHEREAS, snow removal efforts by the City have not met the expectations of its citizens;
4 and

5 WHEREAS, a task force to examine snow removal procedures and recommend changes
6 thereto is in the best interests of the citizens of Lincoln,

7 NOW, THEREFORE, be it resolved by the City Council of Lincoln, Nebraska that a Snow
8 Removal Task Force ("the Task Force") be and is hereby created subject to the conditions and
9 requirements set forth herein.

- 10 1. The Task Force shall be comprised of the following members:
 - 11 a. Two residents from each City Council district, one to be selected by the Council
 - 12 member of that district and one to be selected by the Mayor;
 - 13 b. One employee of the Police Department, to be selected by the Chief of Police;
 - 14 c. One employee of the Fire and Rescue Department, to be selected by the Fire Chief;
 - 15 d. One or more members of the business community, to be selected by the Mayor;
 - 16 e. One representative from the Public Association of Government Employees Union,
 - 17 to be selected by the Union;
 - 18 f. The Mayor or a designated representative;
 - 19 g. One member of the City Council, to be selected by the City Council;
 - 20 h. One employee of the Transportation and Utilities Department to be selected by the
 - 21 Director;

- 1 i. The Director of the Transportation and Utilities Department as a non-voting ex-
2 officio member.
- 3 2. Selection of the members shall be completed within sixty days of passage of this resolution.
- 4 3. All members of the Task Force that are not employees of the City shall serve without
5 compensation for time, but shall be reimbursed for reasonable expenses, if any.
- 6 4. The Task Force shall examine and make recommendations to the Mayor and City Council
7 on the following topics related to snow removal:
- 8 a. The needs and expectations of residents regarding snow removal in residential
9 areas;
- 10 b. How the City should prepare for snow removal and clear streets during and after a
11 snow event; and
- 12 c. How to assure that City streets are safe to drive on during and after a snow event.
- 13 5. The Director of Transportation and Utilities shall, after all members have been selected,
14 schedule and arrange for the first meeting of the Task Force, at which time a chairperson,
15 vice-chairperson, and secretary shall be selected from the membership.
- 16 6. After the first meeting, the Task Force shall meet at the call of the chairperson or fifty
17 percent or more of the voting members.
- 18 7. The Director of Transportation and Utilities shall provide a meeting space and staff to take
19 and keep minutes of meetings and provide such information as the Task Force may require.
- 20 8. All meetings shall be conducted pursuant to the Nebraska Open Meetings Act and written
21 records shall be subject to public records requests under Neb. Rev. Stat. §§ 84-712 through
22 84-713.

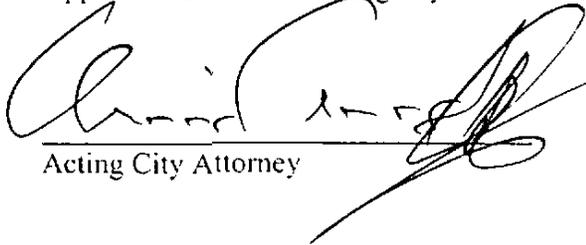
- 1 9. The Task Force shall submit its findings and recommendations to the Mayor and City
2 Council no later than October 1, 2019 and shall be released to the public at the same time.
3 10. The Task Force shall be dissolved on November 1, 2019, unless further legislation extends
4 or eliminates the date of dissolution.

Introduced by:



Councilwoman Cyndi Lamm

Approved as to Form & Legality:



Acting City Attorney

Approved this ___ day of _____, 2019:

Mayor

Winter Operations Task Force

Submitted by Becky Witt

Neighborhood input regarding residential funnel streets to plow.

Winthrop Road from South St to Van Dorn. Woods Blvd from 27th to 17th.

20th St from Van Dorn to Highway 2.

Rathbone Rd from Sheridan Blvd to Sheridan School

Calvert from 27th to 33rd

Woodsdale Blvd from 27th to Sheridan, 31st from Calvert to Sheridan

24th from Woodsdale to South

Stockwell from 13th to 27th.

Lake street between Sheridan and 17th

Neighborhood input regarding when to plow residential.

There was no solid information. The major concerns appear to be addressing hazardous/ice/slick spots at intersections. 27th St at Sheridan was a big one, with traffic getting backed up both ways after stopping for the light.

Neighborhood input regarding treatment areas. These are areas that should be treated with brine, salt and or gravel

The top of Rathbone Road and Stratford,

Woods Blvd where it intersects with 27th, O'Reilly at 27th St.,

Woods Blvd at Dunn Av.

Areas along 27th St, Sheridan and South Streets, where traffic transitions out of residential onto or off of those streets, where it is a slope.

Calvert St where it intersects Sheridan. It's a downhill slope, shaded that ices easily. You can't stop.

Woodscrest between 22nd and 24th, drop off for Irving students.

Bradfield Dr. at South St.

Final suggestion: Lay heating cable in future road construction of intersections to enable melting snow using heat. Lincoln Electric System has excess generating capacity at night. Perhaps there is enough energy to accomplish this. Also, could radiant heat be used from above. Miller and Paine did this for their sidewalk many years ago.

