



WINTER WEATHER

SNOW & ICE CONTROL POLICIES & PROCEDURES

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I. Introduction

Purpose

The purpose of this document is to establish a uniform understanding of the priorities and procedures to be used to combat the accumulation of snow and ice on streets within the jurisdiction of Kansas City, Kansas.

Objective

The primary objective of these policies and procedures is to provide adequate traction for vehicles properly equipped for winter driving conditions.

Scope

This policy applies only to public streets under the jurisdiction of Kansas City, Kansas.

Mission, Definitions, and Quick Facts

Public Works' Street Division's snow and ice removal operations' mission is to provide adequate traction for vehicles properly equipped for winter driving within a reasonable amount of time and at the lowest possible cost to taxpayers.

The City has more than 2,400 lane miles of main thoroughfare, collector, and local/Neighborhood streets. Many of these streets have multiple lanes. To deploy resources in an organized and consistent fashion, city streets are divided into three priority types:

- **Hot Routes**
Hot Routes are main thoroughfares like State or Parallel Avenues, routes serving emergency personnel like Police Stations, Fire Stations, and hospitals. Hot Routes also include some streets with steep inclines.
- **Secondary Routes**
Secondary Routes are those streets that neighborhoods use to get to major thoroughfares like State or Parallel Avenues.
- **Neighborhood Routes**
Neighborhood routes are streets that carry traffic from residential areas to Secondary Routes, including cul-de-sacs and dead-end streets.

Snow removal on state highways is provided by the Kansas Department of Transportation (KDOT). The following streets in Kansas City, Kansas are state highways maintained by KDOT:

- 18th Street from Pacific Avenue south to the Johnson County line
- Turner Diagonal Interchange from South 55th Street to westbound K-32 ramps
- K-32 from Turner Diagonal Interchange west to Edwardsville city limit
- K-5 from Hutton Road north to the Leavenworth County line
- K-7 from Bonner Springs city limit north to Leavenworth County

Snow and ice removal at the Courthouse, City Hall, Memorial Hall, and all Kansas City, Kansas Police & Fire Department facility parking lots, as well as the adjacent sidewalks, are managed by the Buildings & Logistics Department. The Parks & Recreation Department performs snow removal for all recreation centers, park roads, and shelter parking lots.

II. Policies

Responsibility

The responsibility for implementing the Snow and Ice Control Policy lies with the Street Manager or their designee. The Public Works Director or Deputy Director will authorize the use of additional resources when conditions warrant.

Training

Prior to the start of the snow season, the Street Division will, in conjunction with Public Works' Fleet Services Division, inspect and repair all trucks, plows, and salters to ensure they are in proper working order. The Street Division will also conduct training activities for all personnel that will be involved in snow and ice control activities. The training will consist of hands-on equipment training, including the operation of salters, snowplows, and front-end loaders. Additionally, at least one "dry run" will be conducted, which will consist of driving the routes to familiarize the drivers with any obstructions they may encounter. Annually in the fall, all snowplow operators will participate in an in-house Equipment Rodeo.

Weather Monitoring

The Street Manager, or their designee, with the use of the weather service Weather or Not and various daily weather forecasts, will monitor weather conditions and will be responsible for placing snowplow crews into "On-call Status."

Commencement of Operations

Whenever there is a danger of icy or snowy conditions on city roadways, the Street Division will monitor conditions 24 hours a day. The Street Manager, or their designee, will authorize commencement of plowing and/or treatment operations when deemed necessary.

Priorities

Resource availability, safety, benefit, and efficiency necessitate that priority be given to certain streets. Streets with higher traffic volumes are a higher priority for snow removal services. Streets that require proportionally more time for snow removal and/or have low traffic volumes are the lowest priority.

City streets are divided into three priority categories as follows:

- **Hot Routes**

Hot Routes are main thoroughfares like State or Parallel Avenues, routes serving emergency personnel like Police Stations, Fire Stations, and hospitals. Hot Routes also include some streets with steep inclines.

- **Secondary Routes**

Secondary Routes are those streets that neighborhoods use to get to major thoroughfares like State or Parallel Avenues.

- **Neighborhood Routes**

Neighborhood routes are streets that carry traffic from residential areas to Secondary Routes, including cul-de-sacs and dead-end streets.

Deviations from Policy

Deviations from standard policies and procedures may occur due to unusual or extraordinary circumstances. Each winter storm has unique characteristics. Factors such as storm intensity, duration, timing, wind, temperature, and moisture content influence the methodology used to combat each storm. Deviations and exceptions from the general priorities and procedures may be made, when in the judgment of the responsible authority, such deviations will best enable the established objectives to be met.

III. Operations Plan

Equipment Resources

The Street Division and the Parks and Recreation Department have a total of 48 dump trucks with snowplows and spreaders, 9 pickup trucks with plows, 6 loaders, and 1 grader, which can be utilized in the snow and ice removal process. Whenever trucks are on the street, Fleet Services personnel are called in to support the operation by changing plow blades and making mechanical repairs.

Unit No.	Type	Plow	Spreader	Unit No.	Type	Plow	Spreader
203	Dump	Yes	Yes	504	Dump	Yes	Yes
204	Dump	Yes	Yes	505	Dump	Yes	Yes
205	Dump	Yes	Yes	506	Dump	Yes	Yes
206	Dump	Yes	Yes	508	Dump	Yes	Yes
208	Dump	Yes	Yes	510	Dump	Yes	Yes
209	Dump	Yes	Yes	511	Dump	Yes	Yes
211	Dump	Yes	Yes	512	Dump	Yes	Yes
212	Dump	Yes	Yes	513	Dump	Yes	Yes
213	Dump	Yes	Yes	520	Dump	Yes	Yes
304	Dump	Yes	Yes	603	Dump	Yes	Yes
305	Dump	Yes	Yes	604	Dump	Yes	Yes
306	Dump	Yes	Yes	605	Dump	Yes	Yes
Unit No.	Type	Plow	Sander	Unit No.	Type	Plow	Sander

307	Dump	Yes	Yes	606	Dump	Yes	Yes
309	Dump	Yes	Yes	1180	Dump	Yes	Yes
310	Dump	Yes	Yes	18-FL1	Dump	No	Brine
311	Dump	Yes	Yes	18-E1320	Dump	No	Brine
312	Dump	Yes	Yes	18-E220	Pickup	Yes	No
313	Dump	Yes	Yes	18-E320	Pickup	Yes	No
320	Dump	Yes	Yes	18-E420	Pickup	Yes	No
321	Dump	Yes	Yes	18-E520	Pickup	Yes	No
329	Dump	Yes	Yes	18-E720	Pickup	Yes	No
404	Dump	Yes	Yes	18-E820	Pickup	Yes	No
405	Dump	Yes	Yes	18-E920	Pickup	Yes	No
406	Dump	Yes	Yes	18-E1020	Pickup	Yes	No
408	Dump	Yes	Yes	10L1	Loader	Yes	No
409	Dump	Yes	Yes	1L1	Loader	Yes	No
410	Dump	Yes	Yes	2L1	Loader	Yes	No
411	Dump	Yes	Yes	3L1	Loader	Yes	No
412	Dump	Yes	Yes	4L1	Loader	Yes	No
413	Dump	Yes	Yes	5L1	Loader	Yes	No
420	Dump	Yes	Yes	2G1	Grader	Yes	No
422	Dump	Yes	Yes				
503	Dump	Yes	Yes				

Human Resources

There are 40 operators in the Street Division and 28 operators from the Parks & Recreation Department who operate plows and spreaders for snow removal. Four employees are assigned to driver dispatching. Ten mechanics and technicians in the Fleet Services Division provide mechanical support.

Response Plan

Kansas City, Kansas is divided into 34 Hot Routes, 34 Secondary Routes, and 131 Neighborhood Routes. Hot Routes are the first streets to receive plowing and treatment. When Hot Routes are deemed safe for travel during or after a snowfall, plows begin operations on the Secondary Routes, and then as those are completed, trucks will move to Neighborhood Routes.

If during plowing or treating operations on Neighborhood Routes, conditions deteriorate on Hot Routes or Secondaries, trucks will be dispatched back to those streets as needed.

Continuation and Completion

Although no snow event is exactly the same, as a rule of thumb, **it usually takes 12-24 hours after the snow stops falling to plow and treat Hot Routes and Secondaries**. Neighborhood Routes generally take 48 hours to plow and treat, assuming no interruptions to move back to Hot Routes or Secondary Routes.

During major storms, traffic on Neighborhood Routes usually causes the snow to become packed or icy before it can be plowed. In these cases, it may take several days to remove the packed snow and ice from Neighborhood Routes. When snow has become compacted on neighborhood streets and plowing is ineffective, treating and plowing operations may discontinue until regular working hours.

Pre-Treating

Pre-treating is the process of applying an anti-ice material to the surface of the road before a winter event. The purpose of the material is to prevent the initial precipitation from bonding to the road surface, making it easier to remove with a plow. The pre-treating can either be done with rock salt or a liquid solution of salt and water. Pre-treatment is only effective when no rain is predicted prior to snow or ice. Thus, pre-treating operations will only be done when the weather conditions allow. The priority system for pre-treating operations is as follows:

1. Bridges
2. 4-lane or wider Hot Routes
3. 3-lane or narrower Hot Routes

Treating

Treating is usually done in conjunction with plowing and has a similar priority system. Treating alone will be done when roads are icy or plowing is ineffective on snow-packed roads. The priority system for treating operations is as follows:

1. Hot Routes (including perimeter streets around hospitals)
2. Secondaries (including perimeter streets around schools on weekdays)
3. Neighborhood Routes

Once operations have begun, treating may continue until the selected streets have traction restored. Depending on weather conditions, Hot Routes and Secondaries may receive multiple applications, along with other hazardous intersections or street inclines. Due to limited salt storage and delivery capacities, when more snow is predicted, treatment may be limited or cease temporarily on local/neighborhood streets to conserve salt for main thoroughfares and collectors.

Materials

For pre-treatment operations a 23.3% concentration salt brine mixture will be used. For treating operations, straight salt will be used in different amounts, depending on pavement temperature, air temperature, and the amount of precipitation. In circumstances of extremely cold temperatures when salt is less effective, a mix of salt and sand will be used on all routes.

Material Storage

Orders for salt delivery are regularly made to keep the storage facilities full. The objective is to maintain the minimum amount of salt on hand at 5,000 tons. The facilities also store a similar amount of salt/sand mix. The Street Division maintains three salt storage facilities. Locations and storage capacities are as follows:

- 5033 State Avenue: 4,000 Tons
- 47th & Shawnee Drive: 5,000 Tons
- Donahoo & Hutton: 2,500 Tons

The Street Division maintains 20,000 gallons of salt brine at the 5033 State Avenue location. The Street division also has the capability to produce up to 5,000 gallons of salt brine per hour if necessary.

Bridges

Bridges often become icy before the adjacent streets. There are 49 bridges in Kansas City, Kansas. Bridges are monitored for slippery conditions by Street Division personnel 24 hours a day. When circumstances arise where snow or ice is imminent, but not to be preceded by rain, bridges will be pre-treated with salt brine to prevent snow and ice from bonding to the surface.

Loading and Hauling of Snow

Hauling of snow will only be done when there are no other alternatives to keep streets open or to maintain access to adjacent properties, or under other special circumstances. If necessary, this would only be performed in the downtown area.

Public Relations

Providing information to the public is a vital part of snow removal services. Residents need to know how they can help facilitate snow removal and what to expect in terms of a response to winter storms. Messages sent to the public can range from simple requests to remove parked vehicles from the street, to notification of street closures, or other severe conditions. Information will be distributed through the City's newsletter, as well as on the website, and through other outlets and platforms.

Dispatching and Complaints

Since snowplow operators are already trained to follow priorities set in the policies and procedures, it would be detrimental to the whole to respond to individual complaints before letting the operators respond in accordance with the Snow Removal Policy. The 3-1-1 call center, will log requests for service and periodically forward these logs to supervisors for review and action. Supervisors will use complaint logs to direct operators to areas needing further action.

Supervisors will need to be notified immediately, by 3-1-1, of hazardous icy conditions or new snow accumulation on main thoroughfares and collectors, roadways blocked by drifting snow, or other emergency conditions.

Claims from residents for property damage caused by snowplows should be reported to the Clerk's Office at (913) 573-5260.

Global Positioning Sensors (GPS)

Snowplow trucks are equipped with a GPS monitoring system. The system allows Street Division supervisors and dispatchers to track progress, and to ensure total completion during snow events. This system also allows supervisors to locate and dispatch the nearest truck to a complaint call. Additionally, the system contributes to improving operating efficiencies in the snow removal process.

IV. Operational Procedures for Different Storm Intensities

The following procedures describe the implementation of the operations plan for various storm severities. The procedures are intended as an aide to supervisors, and management staff, to ensure essential actions are taken. Variations to these procedures may be made by the Street Manager, or their designee, to best meet the demands of changing storm events. The procedures will also provide citizens with an understanding of how the City manages snow removal.

Minor Snow Event

There is generally a trace to 1" of accumulation of snow on the road. **Resources will be committed to treating bridges, monitoring Hot Routes, and treating slick calls as necessary.** 34 trucks, 2 Loader, and 36 operators are deployed.

- **Authority**
The Street Manager, or their designee, has the authority to call-out, and direct snow removal resources.
- **Additional Resources Needed**
No additional resources needed.

Moderate Snow Event

There is generally 1" to 3" accumulation of snow on the road. **Resources will be committed to Hot Routes first.** 34 trucks, 2 loaders, and 72 operators split between 2, 12-hour shifts are deployed.

- **Hot & Secondary Routes**
Hot routes will be plowed and treated as necessary. Only after Hot Routes are cleared will resources be shifted to Secondary streets. These routes are generally cleared within 24 hours after the snow ends.
- **Neighborhood Routes**
After secondary routes are completed, resources will be shifted to neighborhood routes, if necessary. Variations of treatment depend upon the storm.

- **Authority**

The Street Manager, or their designee, has the authority to call-out, and direct snow removal resources.

- **Additional Resources Needed**

No additional resources needed.

Heavy Snow Event

There is generally 3" to 6" accumulation of snow on the road. **Resources will be committed to Hot Routes first.** 34 trucks, 2 loaders, and 72 operators split between 2, 12-hour shifts are deployed.

During heavy storms, traffic on Neighborhood Routes usually causes the snow to become packed or icy before it can be plowed. In these cases, it may take days to remove the packed snow and ice from these streets, depending on weather conditions.

- **Hot & Secondary Routes**

Hot routes will be plowed and treated as necessary. Only after Hot Routes are cleared will resources be shifted to Secondary streets. These routes are generally cleared within 24 hours after the snow ends.

- **Neighborhood Routes**

After Hot Routes and Secondary Routes are completed, Neighborhood Routes will be plowed and treated (unless snow-packed). These routes are generally cleared within 72 hours after the snow ends.

- **Authority**

The Street Manager, or their designee, has the authority to call-out, and direct snow removal resources.

- **Additional Resources Needed**

Generally, no additional resources are needed.

Snow Emergency

Generally, 6" or more of snow on the road. **Resources will be committed to Hot Routes first.** 34 trucks, 2 loaders, and 72 operators split between 2, 12-hour shifts are deployed.

During a Snow Emergency, traffic on Neighborhood Routes usually causes the snow to become packed or icy, before it can be plowed. In these cases, it may take days to remove the packed snow and ice from these streets depending on weather conditions.

- **Hot & Secondary Routes**

Hot routes will be plowed and treated as necessary. Only after Hot Routes are cleared will resources be shifted to Secondary streets. These routes are generally cleared within 32 hours after the snow ends.

- **Neighborhood Routes**

After Hot Routes and Secondary Routes are completed, 44 trucks, 2 Loaders and 46 operators. Generally cleared within 48 hours after the end of the storm (unless snow-packed). These routes are generally cleared within 72 hours after the snow ends.

- **Authority**

The Street Manager, or their designee, has the authority to call-out and direct snow removal resources. The Public Works Director can declare a snow emergency or authorize additional resources from within the Department. The County Administrator authorizes assistance from other Departments within the City and increased budget expenditures.

- **Additional Resources Needed**

Additional resources may be called upon during a snow emergency at the discretion of the Street Manager and/or Public Works Director.

V. Frequently Asked Questions

On-Street Parking

It is dangerous and difficult to plow streets congested with parked vehicles. Some streets may not be plowed if plows cannot safely maneuver them. The most helpful thing residents can do to facilitate snow removal is to get their cars off the street and encourage others to do the same. Residents with no other option other than on-street parking should park as close to the curb as possible.

Driveway Clearing

One of the most frequent concerns in the removal of snow from public streets is snow being pushed back into driveways during plowing operations. As plows travel along streets, the snow accumulated on the plow blade has no place to go but on the adjacent streets and in driveways. The more snow that has fallen, the greater the problem will be.

Property owners can reduce the likelihood of snow blocking their driveway by shoveling snow to the right while facing the street. Doing this will help snowplow drivers avoid carrying piles from the “upstream” side back across driveways.

In addition, shoving or blowing snow/ice into streets may cause hazardous conditions to other drivers. Property owners are encouraged to follow the directions above in both commercial and residential areas.

Sidewalks

Snowplows will try to avoid placing snow on sidewalks, but in some instances, this is impossible. The adjacent property owner is responsible for keeping sidewalks clear.

Mailboxes

Property owners are responsible for the condition and stability of their mailboxes. Please make sure mailboxes are installed properly and are maintained to be stable. Even at low speeds, snow being pushed to the side by snowplows can knock over mailboxes that are not stable.

Property Damage Claims

Snowplowing and ice control operations can result in property damage, particularly during blizzard conditions or during night-time snow plowing. Incidents involving contact between City equipment and private property typically occur within the public street right-of-way, which commonly extends beyond the adjoining sidewalk. The intent of the right-of-way is to provide for snow storage, utilities, sidewalks, and other City needs.

Property owners are permitted to place some improvements, such as mailboxes and sprinklers within the right-of-way. In the event of damage to private property or grass during snow removal efforts, the property owner should file a claim with the Clerk's Office by calling (913) 573-5260. The damage will then be investigated to determine if it is the responsibility of the City. The City accepts responsibility for mailboxes, if the damage is caused by impact with a plow or other piece of equipment. Mailboxes should be constructed solidly enough to withstand the force of snow rolling off a plow. Sprinklers placed in the right-of-way that are damaged will not be repaired by the Unified Government.

The weight of accumulating snow may cause tree limbs to break and cause damage to structures. Such damage is the responsibility of the property owner and their insurance company.

Safety Tips

Trucks are plowing snow and spreading salt/sand. Stay back from the vehicle 100 feet to avoid problems:

- Plow trucks often have to back up. There are blind spots in the mirrors. For your safety, do not pull directly behind them, as they may not be able to see you.
- When cleaning driveways or parking lots, do not put snow in the street. This can cause hazardous conditions for other motorists.
- Plow trucks generally push snow to the passenger side of the truck (right side when looking at it from the rear). Never attempt to pass a truck on the right side since there can be much more snow on that side of the vehicle.

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