



SNOW & ICE CONTROL POLICIES AND PROCEDURES

Kansas City, Kansas Public Works
Revised 2017



I. Introduction

Purpose

The purpose of this manual is to establish an acceptable policy and operational procedures for snow and ice control on public streets under the jurisdiction of Kansas City, Kansas. This policy provides a uniform understanding of the priorities and procedures to be used to combat the accumulation of snow and ice on city maintained streets. The Street Division is persistent in monitoring the snow policy to become more efficient in the snow removal process including materials and best practices.

Objective

The primary objective of these policies and procedures is to provide adequate traction for vehicles properly equipped for winter driving conditions. Priority is given to streets that carry the largest traffic volume. It is most effective, especially early in storms, to commit the large majority of resources to streets with the highest volume of traffic. As conditions allow, resources will transition to secondary routes, followed by neighborhood routes. Resources may be shifted back-and-forth during the course of a storm depending on conditions. Cul-de-sacs and dead end streets serve far less motorists and are subsequently last to be cleared. It can be expected during storms of high intensity or long in duration, drivers on local/neighborhood streets will encounter snow-packed or icy conditions. Snow and ice control operations will continue until all streets have clear pavement, or plowing and treating is no longer effective.

Scope

This policy applies only to public streets under the jurisdiction of Kansas City, Kansas. The City has over 2,400 lane miles of main thoroughfare, collector, and local/neighborhood streets. Many of these streets have multiple lanes. City streets have been divided into three priorities as follows:

Hot Routes.....Main Thoroughfares/Emergency Routes/Hills
Secondary's.....Collector Routes
Neighborhoods.....Local/Neighborhood Routes

Snow removal of 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 St from Pacific Ave south to the Johnson County line;
- K-32 from 65th St west to the Edwardsville city limit;
- K-5 from Hutton Rd north to the Leavenworth County line;
- K-7 from Bonner Springs city limit north to Leavenworth County;

Snow and ice removal from the Courthouse, City Hall, Memorial Hall, and all KCKPD & KCKFD facility parking lots, as well as the adjacent sidewalks, is managed by the

Buildings & Logistics Division. 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 his 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 Fleet Maintenance, 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. Beginning in the fall of 2018, all snow plow operators will participate in an in house Equipment Rodeo.

Weather Monitoring

The Street Manager, or his designee, with the use of the weather service Weather Me Not and various daily weather forecasts, will monitor weather conditions and will be responsible for placing snowplow crews on “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. When snow or ice begins accumulating on the streets, the Street Manager, or his designee, will authorize commencement of plowing and/or treatment operations.

Priorities

Availability of resources and the need to provide the greatest safety and benefit to the traveling public, in the most efficient manner, necessitate that priority be given to certain streets above others. Streets with higher intensity use are a higher priority for snow removal service. Streets that require proportionally more time for snow removal, and/or have low traffic volumes, are the lowest priority.

City streets have been divided into three priority categories as follows:

Hot Routes- Main Thoroughfare Routes: These are arterial and major collector streets. Also included are streets with emergency response facilities and hills.

Secondary's- Collector Routes: These are generally subdivision collector streets. Included in this category are streets serving schools.

Neighborhoods- Local/Neighborhood Routes: All other residential 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 and 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 has a total of 53 dump trucks with snowplows and salters, eight pickup trucks with plows, six loaders, and two graders, which can be utilized in the snow and ice removal process. Whenever trucks are on the street, Fleet Maintenance personnel are called in to support the operation by changing plow blades, and mechanical repairs.

Unit No.	Type	Plow	Sander		Unit No.	Type	Plow	Sander	
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	
303	Dump	Yes	Yes		528	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	
307	Dump	Yes	Yes		606	Dump	Yes	Yes	
309	Dump	Yes	Yes		800	Dump	Yes	Yes	
310	Dump	Yes	Yes		801	Dump	Yes	Yes	

311	Dump	Yes	Yes		802	Dump	Yes	Yes	
312	Dump	Yes	Yes		803	Dump	Yes	Yes	
313	Dump	Yes	Yes		1120	Pickup	Yes	No	
320	Dump	Yes	Yes		1130	Pickup	Yes	No	
321	Dump	Yes	Yes		1150	Pickup	Yes	No	
329	Dump	Yes	Yes		1160	Pickup	Yes	No	
403	Dump	Yes	Yes		201	Pickup	Yes	No	
404	Dump	Yes	Yes		301	Pickup	Yes	No	
405	Dump	Yes	Yes		302	Pickup	Yes	No	
406	Dump	Yes	Yes		401	Pickup	Yes	No	
408	Dump	Yes	Yes		501	Pickup	Yes	No	
409	Dump	Yes	Yes		10L1	Loader	Yes	No	
410	Dump	Yes	Yes		1L1	Loader	Yes	No	
411	Dump	Yes	Yes		2L1	Loader	Yes	No	
412	Dump	Yes	Yes		3L1	Loader	Yes	No	
413	Dump	Yes	Yes		4L1	Loader	Yes	No	
420	Dump	Yes	Yes		5L1	Loader	Yes	No	
422	Dump	Yes	Yes		2G1	Grader	Yes	No	
503	Dump	Yes	Yes		4G1	Grader	Yes	No	

Human Resources

There are 48 operators in the Street Division, as well as 4 operators from the Parks & Recreation Department, which operate plows and salters for snow removal. Two employees are assigned to driver dispatch for storm record keeping. The on duty Street dispatcher also supports the operation by fielding calls from the public as well as calls for assistance from KCKPD and KCKFD. Eight mechanics and technicians in the Fleet Maintenance Division provide mechanical support.

Response Plan

Kansas City, Kansas is divided into 35 Hot Routes, 54 Secondary Routes and 145 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 snow fall, 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 Secondary's, trucks will be dispatched back to these streets as needed.

Continuation and Completion

Although no snow event is exactly the same, as a rule of thumb, it usually takes 10-12 hours AFTER the snow stops falling to plow and treat Hot Routes and Secondary's. 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.

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. Secondary's (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 the weather conditions, Hot Routes and Secondary's 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, treating may be limited or cease temporarily on local/neighborhood streets to conserve salt for main thoroughfares and collector.

Materials

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 extreme cold temperatures where salt is less effective, a mix of salt and sand will be used primarily in neighborhoods.

Salt Storage

The Street Division maintains three salt storage facilities. Locations and storage capacities are as follows:

5033 State Ave: 4,000 Tons

47th & Shawnee Dr: 5,000 Tons

Donahoo & Hutton: 2,500 Tons

Orders for salt delivery are regularly made to keep the storage facility full. The objective is to maintain the minimum amount of salt on hand at 5,000 tons.

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 and KCKPD 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 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 UG website, and other media outlets.

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 complainants before letting the operators respond in accordance with the Snow Removal Policy. The Street Division dispatcher, as well as 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, from the dispatcher or 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.

G.P.S.

By the end of the 2017 calendar year all snow plow trucks will be equipped with a GPS monitoring system. The system will allow Street Division supervisors and dispatchers to track progress, and ensure total completion during snow events. This system will also allow supervisors to locate and dispatch the nearest truck to a complaint call. Additionally the system could contribute to improving operating efficiencies in the snow removal process.

IV. Operational Procedures for Different Storm Intensities

The following procedures describe implementation of the Operations Plan and Policy for various intensity storms. 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 his designee, to best meet the demands of changing storm events. The procedures will also provide readers with an understanding of how the City manages snow removal.

Minor Snow Event: 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.

8 trucks, 1 Loader and 9 operators. 12 hrs. per day, 7 days per week, when needed.

AUTHORITY

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

ADDITIONAL RESOURCES NEEDED

No additional resources needed.

Moderate Snow Event: Generally 1-3” accumulation of snow on the road

Resources will be committed to Hot Routes first. Only after Hot Routes are cleared, will resources be shifted to Secondary streets.

Hot Routes: 23 trucks, 2 Loaders and 25 operators, 16 hrs. per day, 7 days per week, when needed. Generally cleared within 12 hours after the end of the storm.

Secondary Routes: After Hot Routes streets are completed, 23 trucks, 2 Loaders and 25 operators, 16 hrs. per day, 7 days per week, when needed. Generally cleared within 12 hours after the end of the storm.

Neighborhood Routes: Slick calls as needed.

AUTHORITY

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

ADDITIONAL RESOURCES NEEDED

No additional resources needed.

Heavy Snow Event: Generally 3-6” accumulation of snow on the road

Streets Division resources will be committed to Hot Routes first. Only after Hot Routes are cleared, will resources be shifted to Secondary Routes, and Neighborhood Routes.

Hot Routes: 48 trucks, 2 Loaders and 50 operators, 16 hrs. per day, 7 days per week, when needed. Generally cleared within 12 hours after the end of the storm.

Secondary Routes: After Hot Routes streets are completed, 48 trucks, 2 Loaders and 50 operators, 16 hrs. per day, 7 days per week, when needed. Generally cleared within 12 hours after the end of the storm.

Neighborhood Routes: After Hot Routes and Secondary Routes are completed, 48 trucks, 2 Loaders and 50 operators, 16 hrs. per day, 7 days per week, when needed (unless snow-packed). Generally cleared within 48 hours after the end of the storm.

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 days to remove the packed snow and ice from these streets depending on weather conditions.

AUTHORITY

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

ADDITIONAL RESOURCES NEEDED

Generally no additional resources will be needed.

Snow Emergency: 6 or more inches of snow on the road

Streets Division resources will be committed to Hot Routes first. Only after Hot Routes are cleared, will resources be shifted to Secondary Routes, and Neighborhood Routes.

Hot Routes: 48 trucks, 2 Loaders and 50 operators, 16 hrs. per day, 7 days per week, when needed. Generally cleared within 16 hours after the end of the storm.

Secondary Routes: After Hot Routes streets are completed, 48 trucks, 2 Loaders and 50 operators, 16 hrs. per day, 7 days per week, when needed. Generally cleared within 16 hours after the end of the storm.

Neighborhood Routes: After Hot Routes and Secondary Routes are completed, 48 trucks, 2 Loaders and 50 operators, 16 hrs. per day, 7 days per week, when needed (unless snow-packed). Generally cleared within 48 hours after the end of the storm.

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 days to remove the packed snow and ice from these streets depending on weather conditions.

AUTHORITY

The Street Manager, or his designee, has the authority to call-out, and direct snow removal resources. The Public Works Director authorizes additional resources from within the Department, press releases, public information, etc. 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. **Public Information**

On-Street Parking

It is dangerous and difficult to plow streets clogged 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.

Driveway Clearing

One of the most frequent concerns in the removal of snow from public streets is snow being deposited in 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 street boulevards and in driveways. The more snow that has fallen, the greater the problem will be.

One way property owners can help is to pile snow they have shoveled from their driveways on the right side facing the street, in lieu of placing it on both sides at the end of the driveways. 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 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 to keep sidewalks clear.

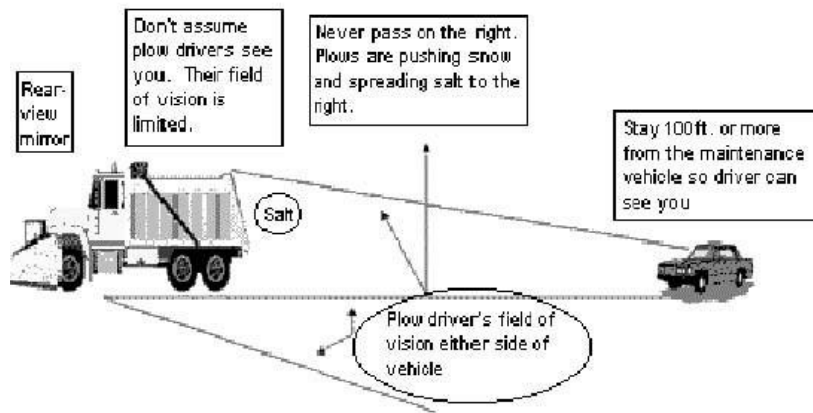
Mailboxes

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 snow plows can push over mailboxes that are not stable.

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, 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.



Broken Tree Limbs

During some heavy wet storms, tree limbs will be broken. Please call 3-1-1 to report limbs blocking traffic. The Street Division will clear the street of limbs by placing them in the adjacent property's front yard.

Broken limbs inside or outside the roadway are the responsibility of the property owner. Limbs can be cut and bundled for Waste Management pickup on the regular collection day. Branches and limbs must be tied in bundles less than 4 inches in diameter, 4' in length, and 50 lbs. in weight, per bundle.

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 uses.

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 during snow removal efforts, the property owner shall file a claim with the City's Legal Department, by calling 573-5060. The damage will then be investigated to determine if any damage 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. Lawns that are physically damaged by City plows or motor graders will also be repaired. However, 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, or other damage to structures. Such damage is the responsibility of the property owner and his/her insurance company.