

MUNICIPALITY OF ANCHORAGE

SNOW & ICE

CONTROL

PLAN

Winter 2023-2024

Dave Bronson
Mayor

October 12, 2023

The Municipality of Anchorage (MOA) Street Maintenance Division is dedicated to serving the people of Anchorage in the interest of health, safety, and convenience. This is best attained by providing snow removal services in the most cost-effective manner possible. The Street Maintenance Division maintains 1,281 lane miles of Municipal roads and approximately 200 miles of sidewalks and trails. A staff of over 100 full time and seasonal employees provide continual service to keep the streets, sidewalks and trails in the Anchorage Bowl Area maintained.

No single maintenance function affects residents more directly than the removal of snow and ice from Anchorage's streets. We are pleased to present the 2023 - 2024 Snow and Ice Control Plan. It outlines a systematic approach to snow removal and reaffirms that Street Maintenance will continue to provide the best winter maintenance possible for the citizens of Anchorage.

Sincerely,

Kent Kohlhase, P.E.
Municipal Manager

EXECUTIVE SUMMARY FOR THE SNOW PLAN

- It is the policy of the Municipality of Anchorage to plow, store, or remove snow from publicly owned rights-of-way.
- Arterial and Collector streets and Priority 1 sidewalks are to be plowed as first priority.
- Remaining streets and Priority 2 sidewalks in the will be plowed to full width within 84 hours after the storm ends, with driveways gated.
- Snow from cul-de-sacs will be placed on adjacent rights-of-way where space is available.
- As resources permit, snow will be hauled from streets with rights-of-way of insufficient width to store snow.
- "No-parking" hours for snow removal in the downtown area will be from 2:00 a.m. to 6:00 a.m.
- Sidewalks in the Central Business District are completed by the Anchorage Downtown Partnership.
- The Right of Way Enforcement Division will work to ensure compliance with municipal codes related to use of right-of-way.
- Ice control throughout city will use aggregate pre-wetted with liquid deicer for selected intersections, hills, school bus stops and other high hazard areas. Aggregate will be used in residential areas when road conditions require it.

I. OVERVIEW

A. INTRODUCTION

Managing the personnel, equipment, and material necessary to provide a winter maintenance program begins in early summer and continues through the snow season and into late spring. This Snow and Ice Control Plan is the basic guide for the Street Maintenance Division and other Municipal departments to assure a safe and effective snow and ice control program for roads, sidewalks, and bus stops.

8. GOAL

The goal is to open Municipal streets, sidewalks, and bus stops using a priority system. Major streets designated as snow routes will be continuously plowed during a storm and completed as the first priority after the storm ends. This focus emphasizes emergency response, public safety, public transportation, and the ability of residents to travel as needed. The Central Business District (CBD) will be cleared within 48 hours and remaining subdivision streets within 84 hours after a storm ends.

It should be noted that the Street Maintenance Division will attempt to meet these goals; however, severe weather, equipment breakdowns, or other conditions may impede the Division from meeting them and may require deviation from the plan to meet unforeseen circumstances.

C. PREPARATION

1. Equipment:

Municipally-owned winter equipment will be maintained and repaired as dictated by service needs.

The Division works with the Purchasing Department to establish contracts for contracted private snow removal equipment to supplement Municipal in-house crews when needed. These contracted resources include graders, snow blowers, end-dump and side-dump trucks, front-end loaders, and bulldozers.

2. Stockpiles:

In May, aggregate, salt and de-icer/anti-icer are ordered for delivery in late August or early September. Order quantities are determined by surveying existing stockpiles and estimating future needs.

A liquid deicer is used for ice control during freezing rain events and is used to pre-wet aggregate for the rest of the Municipality, to improve adhesion on the road surface. These stockpiles and holding tanks are located at the MOA Northwood Street Maintenance Facility.

3. Personnel Scheduling:

From mid-October through early May, Street Maintenance implements personnel scheduling to provide seven-day staffing for its field crews with twenty-four-hour coverage. This allows maximum flexibility in managing normal winter maintenance, while having the capability to rapidly respond to snowstorms with on-shift crews.

4. Other Municipal Agencies:

In late fall other Municipal and State agencies are queried for changes in equipment and personnel needed in the event of a major snowstorm. Agencies having their own snow removal responsibilities are also notified to assure proper coordination with Street Maintenance activities.

5. Update of Contract Rosters:

In September, contact rosters of employees, contractors, and other agency key staff are updated to include names, phone numbers and assigned responsibilities.

6. Training and Snow Plan Review:

During late September and early October, training for Municipal/contractor crews, administrative staff and other personnel is conducted. The Snow and Ice Control Plan is reviewed by Street Maintenance management. All truck drivers will be thoroughly trained in the Municipal Aggregate Policy, to ensure only the minimum required aggregate will be used on intersections for safety purposes. Generally, residential streets will no longer be treated with aggregate, particularly if they are in a level area. Exceptions will occur based on conditions.

D. ACTIVATING A SNOW ALERT

A snow alert establishes various levels of authority of an impending snow or ice storm.

The Street Maintenance Division has primary responsibility for disseminating information to the public, including the media when requested. Status updates on snow control operations will be issued through the Division's Dispatch Center (DC). These updates will be issued as events develop and current information will be available to callers who use our Hotline number, 907-343-8277.

Upon the official designation of a storm alert and a response level, the Division will respond to media requests and advise them of snow control operations. In addition, Street Maintenance may ask the media to run public service announcement messages, distribute certain information on newscasts, and/or announce parking restrictions.

E. SNOW AND ICE ALERT RESPONSE LEVELS

Designated snow routes have been determined by traffic volume, public transit routes, school bus routes, hospitals, schools, and hazards such as hills, curves and intersections. In the Central Business District, special parking restrictions also go into effect. In a Level 1 response, snow routes, sidewalks and the CBD are plowed while residential streets are plowed under Level 2 and Level 3 responses.

1. Level 1 (zero to four-inch snowfall):

Snow routes will normally be plowed using underbody truck plows mounted on dump trucks and aggregate hauling trucks. When required, aggregate placement and sidewalk plowing will be done simultaneously with plowing.

2. Level 2 (four or more inches of snow):

All Level 1 activity continues. Graders with gates will plow all residential streets. Once the snow has stopped falling a plow out will be declared, with a goal of plowing all residential streets within 84 hours.

The Manager of Street Maintenance has the authority to manage and augment the amount of equipment and personnel engaged in storm activities using additional contracted equipment or other Municipal agency resources to meet necessary time frames.

The Municipal Manager or a designee also has authority to implement certain provisions of the emergency parking ordinance, including the authority to direct APD to tow illegally parked vehicles to allow plowing operations to proceed.

3. Level 3 (Snow Emergency):

When Street Maintenance is unable to maintain roads at an acceptable level, the Mayor may declare a snow emergency. A Level 3 response will constitute maximum effort in providing all available resources (private and public) to clear roadways.

F. SNOW STORAGE IN MUNICIPAL RIGHTS-OF-WAY (ROW)

1. Because of the high cost and time required to haul snow, Street Maintenance crews and municipal contractors store snow removed from streets in municipal rights-of-way. In most locations, Municipal ROWs extend 30 feet from the center line of a street (60 feet total width). Depending on the width of the street, the edge of the right-of-way is normally located 5 to 15 feet behind the back of a curb or sidewalk. Although residents' lawns and yards may extend into the ROW, it is Municipal property, and its use is controlled by the Anchorage Municipal Code (AMC).

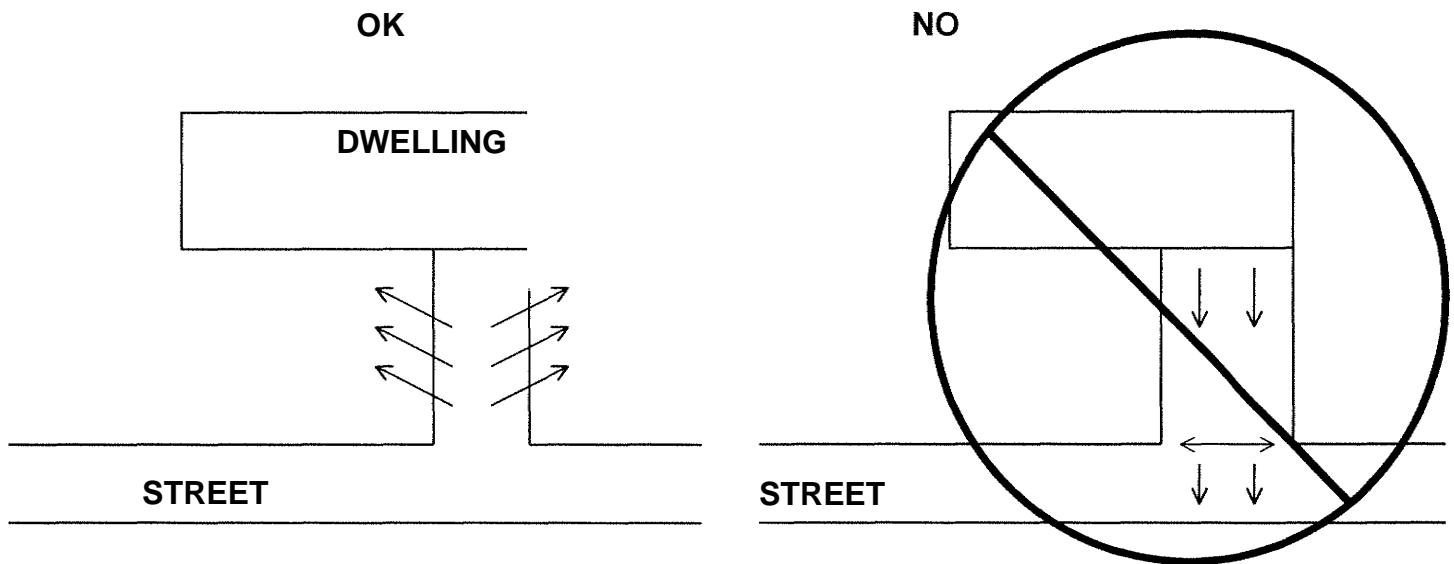
2. Because the ROW is used during the winter to store snow, the placing of obstructions/encroachments in the ROW is strictly controlled. The following excerpts from the AMC are applicable.
 - a. AMC 24.90.020 Encroachment permits.
Any person desiring to construct an encroachment on a public right-of-way, or any other property dedicated to public use shall apply for an encroachment permit to the office of Development Services.
 - b. AMC 24.90.030 Unauthorized encroachments.
Unauthorized encroachments shall be subject to immediate removal by the owner upon being given notice by the Municipality. Notice shall consist of a written letter, sent by certified mail, return receipt requested, explaining the violation and allowing 20 days to remove the encroachment. If the owner does not remove the encroachment after being given proper notice, the Municipality shall remove the same and the person encroaching shall reimburse the Municipality for all costs incurred.
 - c. AMC 24.90.040 Approval of existing encroachments.
Any encroachment of a private nature without a permit may be removed in accordance with Section 24.90.030 or may be granted a permit allowing such encroachment to remain if such encroachment meets the approval of the Director of Development Services.
3. Anchorage Municipal code also prohibits the pushing, placing, or depositing of snow from private property (driveways, parking lots, etc.) into the street or ROW. The following code provision applies.

AMC 24.80.090 No person shall place, leave or deposit upon any street, avenue, alley, sidewalk, or other public place any accumulation of snow or ice which has been removed from a private driveway or parking area. MOA Right of Way Officers enforce this section of municipal code. Persons violating the code may be subject to fines, although officers strive to educate first.

NOTICE

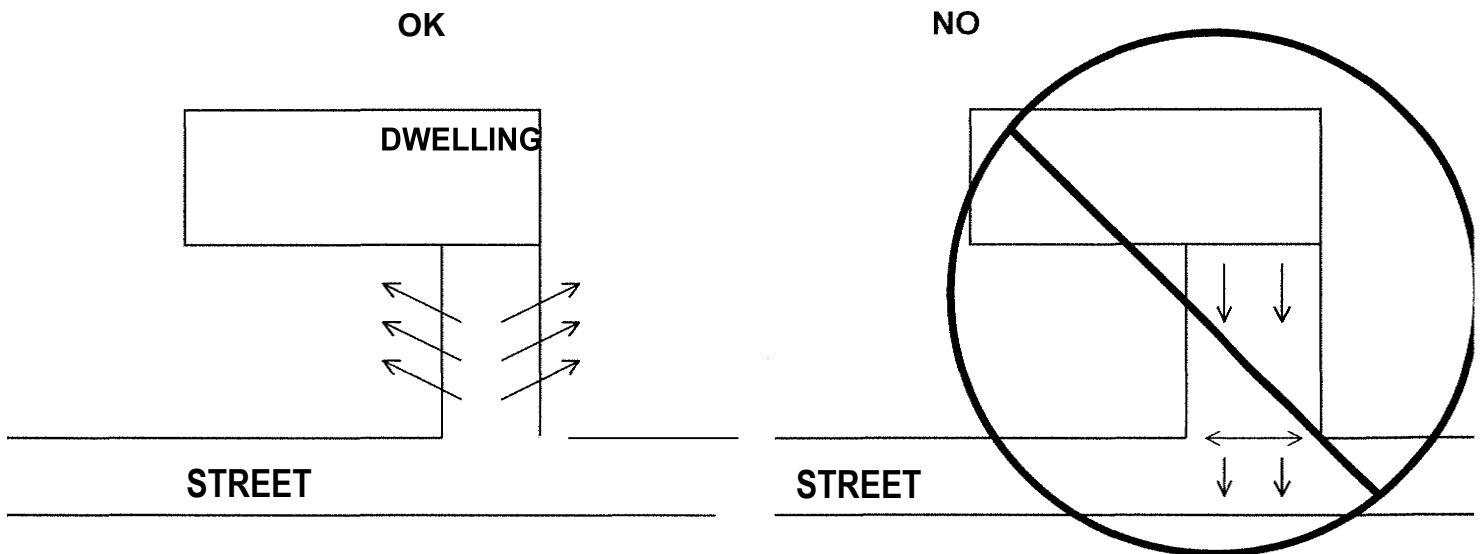
MUNICIPALITY OF ANCHORAGE RESIDENTS HIRING PICKUP PLOWS FOR DRIVEWAY PLOWING

All residents are reminded that Anchorage Municipal Code does not allow driveway snow to be pushed into the street. When plowing driveways the snow must be pushed from the driveway onto adjacent private property. Snow **may not** be pulled from driveways and pushed across the street or stored at the intersection of the street and driveway. For driveways on a cul-de-sac, snow **may not** be placed in the middle of the cul-de-sac. If configuration of the driveway will not allow for snow to be pushed onto the resident's lawn area, it must be either blown or placed onto the adjacent lawn area. If utility boxes are damaged by plowing of driveways, residents are responsible for the cost of the necessary repair. Residents should ensure persons hired to plow driveways are both licensed and bonded. Residents may be cited for improper plowing by a contractor.



GUIDELINES FOR PRIVATE SNOW PLOW OPERATORS

1. When plowing driveways, the snow must be pushed from the driveway onto adjacent private property. Snow **shall not** be pulled from driveways and pushed across the street or stored at the intersection of the street and driveway. For driveways on a cul-de-sac, snow **shall not** be placed in the middle of the cul-de-sac. If configuration of the driveway will not allow for snow to be pushed onto private property, it must be either blown or placed onto the adjacent private property. Private snowplow operators may be cited for improper plowing.
2. All snowplow vehicles shall have a flashing amber beacon activated when plowing snow.
3. All other vehicles and pedestrian traffic have the right-of-way over private snow plowing operations.
4. All private snowplow operators shall be licensed and bonded.
5. For information call Street Maintenance at 907-343-8277.



II. LEVEL 1 STORM RESPONSE

A. OBJECTIVE

In snowfalls of up to 4 inches designated snow routes and sidewalks will be plowed and have aggregate applied (if necessary).

B. DIRECTIVE

1. Snow Alert Issued:

Upon issuance of a snow alert, the Street Maintenance Dispatch Center will carry out snow alert procedures.

C. OPERATING PLAN

1. Plowing:

a. Snow Routes

- Snow routes will be plowed with a truck with an underbody plow. The truck plows the center of the street, including turn pockets, placing the berm on the right side of the vehicle.
- This truck is followed closely by a truck carrying aggregate or another truck with an underbody plow that continues moving the berm and all additional snow to the right side of the street. Simultaneously, sidewalk crews will begin plowing sidewalks that have been designated for maintenance.
- At selected intersections, hills, school bus stops, and other high hazard areas, the aggregate truck also places aggregate on the street during plowing.

b. Central Business District (CBD)

If the depth of snow in the CBD warrants snow plowing, it is initiated by the night shift using the following procedure:

- Illegally parked cars are removed.
- Snow is moved by graders to the center of the street and accumulated in a berm.
- The snow is then loaded into dump trucks using a belt loader or snow blower.
- Trucks deposit snow in designated snow storage sites.

D. ENFORCEMENT SUPPORT TO SNOW REMOVAL OPERATIONS

The Right of Way Enforcement Division will enforce all provisions of the Parking and Snow Removal Section of Title 24. In the event conditions require additional enforcement personnel, the Director of Development Services may authorize the transfer of qualified personnel from other divisions to support the ROW Division.

The Right of Way Enforcement Division Supervisor is charged with removal of vehicles parked on routes to be plowed.

Parking is prohibited on snow routes until the ban is rescinded by the Manager of Street Maintenance.

The Right of Way Division will coordinate all work with the Anchorage Police Department when towing illegally parked vehicles.

E. DOWNTOWN SIDEWALK SNOW REMOVAL

The Anchorage Downtown Partnership along with the Right of Way Enforcement Division shall enforce Anchorage Municipal Code Section 24.80.090 which requires property owners to timely remove snow accumulation from public sidewalks.

The boundaries for enforcement shall be between L Street and Ingra Street and between 3rd Avenue and 9th Avenue, including sidewalks on both sides of the boundary streets. Enforcement outside this area shall be at the discretion of the Director of Public Works.

The following procedures shall be followed:

1. Letters:

Letters shall be distributed to businesses within the CBD, making them aware of the ordinance and their responsibility for snow removal.

2. Enforcement:

- a. Enforcement shall commence after 6:00 p.m. of the day snowfall ends with at least two inches of ice and/or snow on the ground.
- b. A citation may be issued at the discretion of the ROW Enforcement Officer after this time.
- c. The cost of any cleanup by the Municipality will be billed to the property owner and made part of the citation.

F. ICE CONTROL

Ice control is a necessary part of winter operations, enhancing safety and mobility for individual motorists, commercial vehicles, first responders, and other emergency equipment. Material used is aggregate pre-wetted with a liquid de-icer/anti-icer. The minimum amount of aggregate required to ensure safe vehicle operations will be placed on the streets. Aggregate will not be placed in residential areas unless emergency conditions require it.

Ice Control is used to provide vehicle traction:

- to keep traffic moving
- to keep commerce and industry operational
- to lower the number of accidents
- to allow emergency vehicle access

1. Standard Methods:

The Municipality has 9 aggregate trucks for maintaining streets in the ARDSA.

2. Routine Aggregate Placement:

- a. The traffic density and highway design largely control the aggregate spreading pattern. The full-width spreading pattern is used most often on multiple-lane pavements with medium to high traffic patterns.
- b. Aggregate will be applied to the high side of elevated curves so any brine will flow down and across the roadway. Aggregate will be applied for 100 feet preceding a stop sign and 150 feet preceding a signalized intersection. Hills and curves will have aggregate spot applied every 10 to 20 feet, with skipped intervals of 100 feet between treated areas.
- c. The aggregate truck driver shall use good judgement in applying aggregate by adjusting the spreader controls appropriately.
- d. Based on conditions, traffic route and safety consideration the Street Maintenance Manager may direct more road surface areas to be treated.

3. Aggregate Application During Snow Storms:

- a. The Department of Public Works maintains a snow route map to designate streets that receive aggregate as conditions dictate, indicating priority routes classified by degree of traffic.
- b. After plowing, a reduced amount of aggregate may be applied as required.
- c. Complaints will be taken and dispatched from the Dispatch Center.

4. Aggregate Application During Severe Weather:

a. **Methods**

- Wet snow conditions: After plowing, road surfaces will be treated with pre-wetted aggregate as needed (this is generally done behind the snowplows).
- Snow and sleet: Pre-wetted aggregate is applied on high priority routes.
- Freezing rain: Pre-wetted aggregate may be applied to give more traction on low volume rural routes.

5. Liquid Deicer Application:

Procedure for applying liquid de-ice is as follows:

Material will be spread at the manufacturers' suggested rate, beginning 100 feet before the intersection.

G. **POST-STORM WORK**

After the snowfall is over and all snow routes have been plowed, normal shift work will resume with all crews returning to their normal duties. The Street Maintenance Superintendent will travel routes in the areas to assure plowing is completed, and to note any damage or other concerns.

III. LEVEL 2 STORM RESPONSE

A. **OBJECTIVE**

In a Level 2 snow response all Level 1 activities will occur. In addition, all residential streets will be plowed using Municipal and private contract resources when warranted. Generally, this will occur when snowfall exceeds 4 inches.

B. **DIRECTIVE**

1. Declaration of Level 2:

The Manager of Street Maintenance notifies appropriate offices that a Level 2 snow storm response is required. Contractors are notified if needed to provide snow removal equipment within 6 hours at selected sites.

C. **OPERATIONS PLAN**

1. Plowing:

Continue Level 1 activities.

2. Central Business District:

Continue Level 1 activities.

3. Residential Streets:

Residential streets will be plowed using Municipal and contract crews with motor graders to plow from curb to curb, opening driveways and side streets as required. Driveway berms for the elderly and disabled are removed as calls are received. Other driveway berm complaints are handled as time allows.

4. Snow Hauling Procedures:

Snow hauling occurs in areas where the side of the street cannot be used for snow storage. In the CBD and snow route areas, snow removal is usually done by night shift personnel; in all other areas, snow removal will be done by both night and day shift personnel.

Areas with inadequate snow storage along the side of the street or roadway such as zero-lot line areas, condominium associations and townhouse areas may be maintained by one or more of the following procedures.

- a. Snow will be plowed to the center of streets wide enough to temporarily store snow.
- b. Snow will be plowed to the curb line on streets too narrow to store snow in the center of the street.
- c. Areas under "a" and "b" will be hauled after all streets in the Municipality are plowed and hauling of the CBD and snow routes has been completed.
- d. Snow will be plowed to the streets center and hauled immediately from areas with streets too narrow to store snow either in the center or curb line. This procedure will be done after all the streets in the Municipality are plowed, and the CBD and snow routes have been hauled. These streets are not included in the 84-hour plowout goal.
- e. Snow disposal: Snow is disposed of on the right-of-way behind the curb or beyond the edge of the street. If this is not possible, it is hauled using the priorities.

5. Snow Hauling Priorities:

The following are the priorities used to determine the order in which an area's snow is hauled.

- a. The CBD area bounded by 3rd Avenue & 9th Avenue and A Street & L Street is hauled between 9:00 p.m. and 6:00 a.m., as needed. These streets are hauled by plowing snow to the center and using a snow blower to place snow into trucks for hauling to a snow storage site.
- b. Snow routes are hauled by one of two methods, depending on the configuration of the street and amounts of snow. On streets with no center median, snow is pulled from behind the curb by a grader from both sides of the street to the center where it is picked up and hauled. On streets with a center median, snow is pulled from behind each curb and each side is hauled independently.

- c. Townhouse areas, condominium associations, zero-lot lines, business parks, and other areas lacking adequate snow storage along the side of street or roadway will be hauled as in (5.a.) above.
- d. After all the streets in the Municipality have been plowed and areas denoted in (5.b.) above have been hauled and on an as-needed basis, snow will be removed from cul-de-sacs and eyebrows when time and budget allow. Wherever possible, snow piled in the cul-de-sacs and eyebrows will be placed in the right-of-way behind the curb between driveways and walkways. If there is not enough room to store snow in this manner, Street Maintenance will haul it away.
- e. Other residential areas will not be hauled unless the streets become too narrow to allow the passage of emergency vehicles or become dangerous in some other way, i.e., excessive ice accumulation. Snow hauling in residential areas will be at the sole discretion of the Street Maintenance Manager.

D. ICE CONTROL

Continue Level 1 activities.

E. POST-STORM WORK

After a heavy snowfall is over and all snow routes and streets have been plowed, a cleanup operation will begin. This will consist of:

- Peeling snow buildup off the driving lanes and pushing it to the sides.
- Pushing back the existing berm to a point just behind the curb within the ROW to make room for additional snowfall accumulation.
- Opening storm drains and catch basins as required.
- Pushing back berms where cars have been parked.
- Clearing snow from around mailboxes and driveways where needed.
- Making sure there is no berm in front of fire hydrants.
- Removing or pushing back snow at intersections to improve site visibility.

IV. LEVEL 3 STORM RESPONSE (SNOW EMERGENCY)

A. DEFINITION

In a Level 3 snow emergency operations are a continuation of Level 2; however, snow or ice accumulation has reached such proportions that Street Maintenance is unable to maintain the streets at an acceptable level. Under these conditions, a driving ban may be declared by the Mayor and additional resources made available to Street Maintenance.

B. DIRECTIVES

1. When a forecast for heavy accumulation comes during a snowfall, and follows a previous heavy snowfall, cleanup operations end and a Level 2 response begins again. This operation will continue until the storm ends.
2. The Mayor, at the request of the Director of Public Works, can declare a Level 3 snow emergency and ask the public to refrain from traveling on the streets for the sake of safety and to avoid hampering plowing and aggregate operations.
3. If deemed necessary by the Street Maintenance Manager, additional contractors will be called in to help with plowing operations.

C. PLOWING AND HAULING

The method of plowing and hauling will be the same as in Level 2 response. At the discretion of the area supervisor, front-end loaders may be used in the cleaning of intersections along major thoroughfares and cul-de-sacs, (with additional emphasis on removing snow berms to allow for future snowfall).

D. ICE CONTROL

Continue Level 1 activities