



## Snow and Ice Control Policy 2018



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## TABLE OF CONTENTS

PURPOSE	Pg 3
FORECASTING	Pg 3
OPERATIONAL READINESS	Pg 3
SNOW PLOWING	Pg 4
ICE CONTROL	Pg 4
CLEAN UP	Pg 5
SNOW ORDINANCE	Pg 5
PRIORITIES	Pg 5-6
SIDEWALKS	Pg 7
EMERGENCIES	Pg 8
REQUESTS FOR SERVICE	Pg 8
CONTRACTORS	Pg 8
PRIVATE PROPERTY/DRIVEWAYS/MAILBOXES	Pg 8
FIRE HYDRANTS	Pg 9
DISCLAIMER	Pg 10
REPORTING	Pg 10
OTHER CITY FACILITIES AND PARKING LOTS	Pg 11
EQUIPMENT	Pg 11
EQUIPMENT MAINTENANCE	Pg 11
LABOR	Pg 12
CONTACT INFORMATION	Pg 12

## **PURPOSE**

The purpose of the City of Grimes Snow and Ice Policy is to provide direction and standards on maintaining the City's transportation network during snow and ice events. The intent is to provide safe and efficient movement of the traveling public and emergency response vehicles.

Every snow and ice event is unique; however, the response of the City of Grimes will be consistent with the policies and procedures outlined in this document. Field conditions will always warrant changes as the event progresses, but the goal of providing excellent customer service through efficient snow and ice control at the best price while maintaining the safety of the traveling public will always take precedence.

The City of Grimes has a population of approximately 12,500 and covers an area of over 130 lane miles of streets. We also clean 67 cul-de-sacs and 26 miles of trails within city limits.

The City of Grimes averages approximately 32 inches of snow on an annual basis and last winter season responded to 17 snow and ice events.

## **FORECASTING**

The City of Grimes is using Iteris for weather forecasting on a trial basis. Public Works staff will monitor commercially available web-based forecasts (i.e. Weather Underground, Weather.com), government forecast information (National Weather Service, Meteogram Generator), Iowa DOT Road Conditions, and local television news forecasts (KCCI, WHO, WOI). The Public Works Field Operations Manager will attempt to keep other City departments informed of the potential winter weather event beginning around 48 hours in advance of the event. Past experience has shown forecasting farther out than 48 hours is extremely variable. Information is typically emailed out with timing of the storm and anticipated response from City Crews.

The City will use all of this information to formulate a response to impending winter weather. The timing, duration, and temperatures involved in a winter weather event will dictate the scope of the response from the City of Grimes.

## **OPERATIONAL READINESS**

The City of Grimes Public Works Department has taken several proactive steps to ensure we can properly respond to snow/ice events. These include the following:

- Creation of snow books, route maps, and trail system maps
- Pre-trip and post-trip inspection forms
- Weather forecasting tools and pavement temperature sensors
- Reporting protocols to track labor and material by event
- Work flow management system utilizing GIS
- Cross training, equipment inspections, pre-season route tours

## **SNOW PLOWING**

Snow plowing is the primary means for mechanical removal of snow from City streets. The timing of initiation of plowing activities will begin based off a number of factors including weather forecast, traffic volumes, timing and intensity of snow, and many more. The overall goal of beginning to plow will be to attempt to stay ahead of the accumulation and to maintain the safe and efficient movement of emergency vehicles and the traveling public.

It is important to remember that plowing while a winter weather event is ongoing will not necessarily leave the street in a finished state. It is common for snow fall rates to be high enough to give the appearance that a street has not been plowed even though the plow may have made a pass very recently. Only after the winter weather event has ended can final cleanup commence and the streets begin to be returned to normal conditions. There may be several passes of plow equipment required to fully plow a street curb to curb.

Snow plow equipment will need to maintain certain speeds while plowing in order promote efficient movement of snow and to ensure that snow does not adhere to the plow blade.

If weather forecasts indicate that the snow and/or ice accumulations will dissipate in a time period deemed reasonable by the Public Works Operations Manager or his/her designee, the on-duty supervisors will have discretion regarding the level of plowing and ice control applications.

## **ICE CONTROL**

Ice control procedures are used to break and/or prevent the bond of ice to the pavement. The Field Operations Manager will have the discretion to modify the rates and types of ice control materials based upon weather and street conditions.

Anti-icing is defined as the application of ice control materials prior to a winter weather event. The intent is to delay or prevent the bond of ice and/or melted snow to a pavement surface.

The City of Grimes may utilize anti icing procedures when weather forecast and pavement temperatures indicate that their use will help prevent the bond of ice to the pavement. The anti-icing materials and/or chemicals will be applied on arterial streets and trouble areas only.

When pavement temperatures are low and the pavement is initially dry, the use of salts should be delayed as long as possible to avoid the formation of ice refreezing on the roadway surface.

Liquid Calcium Chloride (CaCl) will be purchased on an as needed basis and will be stored on site. The use of calcium chloride will be limited to extreme low temperature applications.

Road salt will be used in conjunction with a pre-wet system prior to spreading when conditions warrant. The pre-wetting allows the melting process to be expedited and to be effective at a lower temperature which leads to less salt demand. Using less salt aids in the ability to control

costs and lessen the impact of deicing chemicals on the environment. Last winter season we used approximately 554 tons of salt and one area of priority this winter is reduction of salt use. To accomplish this, we will use proper equipment calibration and target application rates per event based on weather conditions.

**CLEAN UP**

Once the defined levels of service have been achieved and the snowfall has finished, clean up activities will commence. These activities include stacking of snow, benching of snow windrows, clearing of slush from roadway pavement, removal of snow from sight triangles at intersections, cleanup of snow from cul-de-sacs, etc. Clean up activities will typically take place during normal business hours. The ultimate goal is to return the pavement to a dry condition as quickly as possible and is time dependent on the limitations of the weather, availability of resources, and traffic volumes.

**SNOW ORDINANCE**

The purpose of the Snow Ordinance is to allow for safe and efficient snow removal operations on designated snow routes throughout the City. Additional parking accommodations during snow ordinance will be available at the South Sports Complex.

The notification will include local televisions as well as official City social media sites such as Facebook and City website. It will be the City’s goal to time the commencement of the Snow Ordinance to minimize the inconvenience on the public; however, the timing of the beginning of the ordinance will be dictated by the winter weather event.

The Public Works Department will coordinate with the City Manager in regards to Snow Ordinance going into effect. Regardless of the timing of the commencement of the Snow Ordinance, ticketing and enforcement will begin when City crews start snow operations. Public Works will coordinate with Polk County and inform them when to start enforcement.

**PRIORITIES**

The Public Works Department has established the following priorities for **snow plowing** during winter weather events:

Priority	Classification	Actual Depth of Snow When Service Levels Apply	Depth of Snow/Timing When Plowing Commences
1	7 city zones – including 1 <sup>st</sup> pass on cul-de-sacs	1”	Plowing starts when snow depth/forecast will allow for efficient plow operations and will be continuous until final clean up (see Snow Removal Routes map)

2	City maintained walks & trails	1"	Plowing starts when snow depth/forecast will allow for efficient plow operations. Clean up will likely occur overnight (see Parks & Trail Routes map)
3	Circles and Cul-de-sacs – 2 <sup>nd</sup> pass	2"	Plowing typically starts when snowfall ends unless forecasts show a prolonged event (see Cul-de-sac Plowing map)
4	Parking lots, City buildings, parks & trails	2"	Plowing will typically start after snowfall ends and after street priorities are finished (see Priority Sanding Routes map)

During an average storm, the goal is that snow plowing operations will be completed in 8 hours. Actual performance will vary greatly, depending upon factors such as actual snowfall amount vs. forecast amount, air and pavement temperatures, previous accumulations, etc. It is important to note that many of these factors are outside of the control of the City. The Field Operations Manager will have the discretion to make decisions in line with the goals and expectations of the snow policy. Currently large-truck routes can be cleaned in 4 hours, curbing and final clean up typically takes additional 4 hours.

Priorities for **ice control** areas during winter weather events will be as follows:

Priority	Classification	When Service Levels Apply	Timing When Ice Control Commences
1	Controlled intersections, hills, curves, maintained roads Level I - red	Any ice	Ice control will be provided to aid in public safety and in vehicular traction as soon as possible.
2	Level II – yellow	Any ice	Ice control will be provided to aid in public safety and in vehicular traction as soon as possible.
3	Level III – green Other intersections, street sections not on hills or curves	When conditions warrant	Salt may not be applied to green route every snow/ice event.

During a city-wide ice storm, all streets may be treated with ice control materials. The use of these materials will be balanced between public safety and environmental concerns. It is important to remember that while ice control materials are a valuable and necessary tool, their use is not always the best method to control ice formation. Under certain conditions which are common in the winter using ice control materials can actually lead to additional ice formation because the pavement surface is too cold. More salt is not always the solution. The Field

Operations Manager will have the discretion to make decisions in line with the goals and expectations of snow policy.



Our current application rates will vary. Base line information is as follows:

- 300 lbs per lane mile
- 400 lbs per lane mile
- 500 lbs per lane mile

Over application of salt on a consistent basis is an unnecessary expense, and reduces the life of pavement. It negatively affects concrete and eats away at crack seal joints.

## **SIDEWALKS**

The City of Grimes values the many pedestrians who rely on sidewalks as their means of transportation during winter months. As such the City has a duty to ensure that public sidewalks are cleaned from snow and ice following winter weather events.

*135.12 DUMPING OF SNOW. It is unlawful for any person to throw, push, or place or cause to be thrown, pushed or placed, any ice or snow from private property, sidewalks, or driveways onto the traveled way of a street or alley so as to obstruct gutters, or impeded the passage of vehicles upon the street or alley or to create a hazardous condition therein; except where in the cleaning of large commercial drives in the business district it is absolutely necessary to move the snow onto the street or alley temporarily, such accumulation shall be removed promptly by the property owner or agent, and only after first making arrangements for prompt removal at the owner's cost of the accumulation within a reasonably short time. (Code of Iowa, Sec. 364.12[2])*

*136.03 REMOVAL OF SNOW, ICE AND ACCUMULATIONS. It is the responsibility of the abutting property owners to remove snow, ice and accumulations promptly from sidewalks. If a property owner does not remove snow, ice or accumulations within twenty-four (24) hours after the snow, ice or accumulation ceases, the City may do so*

*and assess the costs against the property owner for collection in the same manner as a property tax. (Code of Iowa, Sec. 364.12[2b &e])*

## **EMERGENCIES**

As a winter weather event unfolds. Emergency scenarios not covered by this policy may arise. At that time, consideration will be given to life and public safety when making decisions regarding snow and ice control. Those decisions will be made by the Field Operations Manager. These decisions may vary from the written policy depending upon actual weather and road conditions, projected winter weather forecast, and the nature of the emergency.

## **REQUESTS FOR SERVICE**

Residents have the following options to report concerns or ask questions regarding winter operations:

- 1) Call snow desk – Public Works 515-986-9636 7:00 a.m. – 5:00 p.m.
- 2) Send email to [snow@grimesiowa.gov](mailto:snow@grimesiowa.gov)
- 3) Use citizen portal on City website

As a winter weather event unfolds, there may be areas that require additional coverage or attention due to unpredictable weather and roadway conditions. For citizen requests, a snow email will be provided for reporting. Additionally, the citizen portal within the workflow management system is available as well as the Public Works landline phone. The Field Operations Manager will create work orders as needed. City Hall will maintain Facebook and report issues to Public Works.

Messages may be left on the Public Works office phone to include the address and location of any specific concern. This phone number may not be attended at all times as City staff will be in the midst of snow and ice control operations.

Each request will be evaluated and an appropriate response will be determined by the Field Operations Manager. The timing of any response will be weighed against the overall winter weather activities throughout town. The goal of the snow and ice control policy is to allow for safe and efficient movement of emergency vehicles and the traveling public. That goal will take precedence over service requests.

## **CONTRACTORS**

Currently we plan to limit using contractors but based on weather that could be called into action if needed.



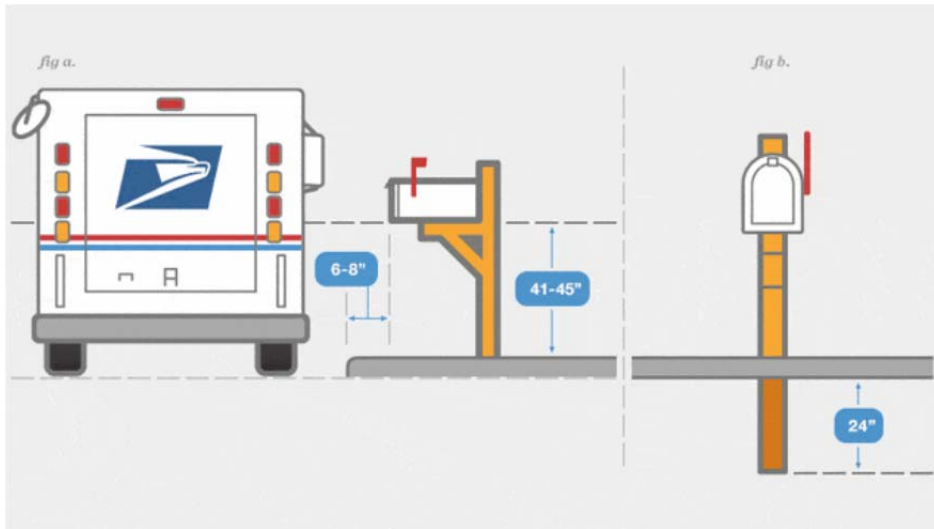
## **PRIVATE PROPERTY/DRIVEWAYS/MAILBOXES**

City of Grimes snow and ice control operators will not remove snow from private property. Snow removal on private property is the responsibility of the property owner. At no time should snow from private property be deposited on or pushed into or across public streets.

The City of Grimes will repair any turf that is damaged from plowing operations only. Damage due to deicing chemical will not be repaired by the City. The City will not repair damage to any landscaping (hardscaping, plants, irrigations systems, or accessories such as lighting) that is within the right of way.

During snow and ice control procedures by the City it is common for plowed snow to be pushed and/or thrown back onto sidewalks, driveways, and aprons especially around corners. This unfortunate event results from the need to maintain certain speeds and plow angles to provide efficient and safe snow and ice control. While the City strives to minimize the effects of this thrown snow, it is inherent to snow and ice control activities. Removal of this additional accumulation of material on sidewalks, driveways, or aprons is the responsibility of the abutting property owner.

Property owners are also responsible for clearing of snow around their mailboxes to ensure proper delivery of mail. Mailbox installation within the City of Grimes should comply with United States Postal Service (USPS) guidelines. Proper installation of mailboxes is the responsibility of property owner. Mailboxes should be placed 8" behind the face of curb and should be constructed to be able to withstand snow and ice control efforts by the City. City staff may perform pre-season route inspection and identify hazards, including mailboxes that do not comply with regulations. If a mailbox is found to not comply with the minimum clearances or if improvements to the structural integrity of the mailbox need to be made, the property owner or resident will be notified by City staff. It will be the responsibility of the property owner or resident to properly relocate or improve the structural integrity of the mailbox prior to winter snow and ice control operations. The City will document the mailbox locations that have been notified for improvements. The City will not be responsible for damage to mailboxes which have not been relocated or repaired after the notification has occurred. The City of Grimes will not be responsible for repair of mailboxes due to drifting or the weight of snow. The City of Grimes will repair damage to mailboxes as a result of direct contact of City equipment and the mailbox only. Any necessary replacement or repair of a mailbox will be made with similar materials and construction in relation to the original mailbox.



Courtesy of [https://www.usps.com/assets/images/manage/usps\\_mailbox\\_guide\\_635x358.gif](https://www.usps.com/assets/images/manage/usps_mailbox_guide_635x358.gif)

## FIRE HYDRANTS

During snow and ice control operations, fire hydrants tend to get buried under snow. Residents are asked to review the location of fire hydrants near their properties. If the hydrant is covered, clearing an area three feet wide around the hydrant will ensure that the Johnston-Grimes Fire Department can locate the hydrant quickly during an emergency. If you need assistance clearing snow around the hydrant, please call City of Grimes Public Works at 986-9636.

## DISCLAIMER

Levels of service may be affected by any one or more of the following events which could delay or alter snow and ice control by the city.

1. Equipment breakdown
2. Vehicles disabled in deep snow
3. Weather so severe as to cause snow and ice control to be stopped for the safety of all personnel
4. Unforeseen conditions and emergencies
5. Significant medical related emergencies

## REPORTING

At the completion of each storm, a written record of the weather event, City response, including time, materials used, road conditions, and other pertinent information will be recorded. We will track storm totals and annual totals for forecasting future needs and budgets.

## **OTHER CITY FACILITIES AND PARKING LOTS**

Responsibility for snow and ice control at City facilities and City owned and maintained parking lots are shown below:

### **Priority 1**

Fire Station  
GCC  
City Hall  
Main Street  
Library  
Cemetery

### **Priority 2**

Public Works  
Wallace Farm  
North Sports Complex  
South Sports Complex

### **Priority 3**

All other parks

Water Plant – maintained by water plant staff.

## **EQUIPMENT**

The City will utilize many different types of equipment during snow and ice control operations. The equipment will be chosen to best fit the requirements of the operations at that time.

The City will utilize primarily reversible plows, “V” Plows, underbody plows, and wing plows during plowing operations on City streets. The City will utilize loaders with boxes or plows in areas that require smaller equipment to plow snow.

The City will utilize spreaders mounted to its fleet of dump trucks. These spreaders will be used for ice control during snow and ice events. Dump truck mounted spreader units will be equipped with a pre-wet system to allow for more efficient use of deicing materials.

## **EQUIPMENT MAINTENANCE**

Minor routine maintenance can be performed by snow and ice control crews during events. In the case of major equipment failures, we are not currently staffed with mechanics.

## **LABOR**

The City of Grimes Public Works will handle the primary responsibility for snow and ice control with the City of Grimes. All staff is assigned to equipment with the exception of Field Operations Manager, Office Manager and Public Works Director.

As weather forecast and timing dictate, the department will request assistance from other City departments to provide personnel in covering major snow and ice events. A focus on cross-training and building into other department job descriptions is recommended.

## **QUESTIONS REGARDING SNOW AND ICE REMOVAL**

[snow@grimesiowa.gov](mailto:snow@grimesiowa.gov)