

CITY OF DECATUR
SNOW & ICE CONTROL PLAN



Department of Public Works
Municipal Services Division
2011

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CITY OF DECATUR SNOW & ICE CONTROL PLAN 2011

I. GENERAL PURPOSE

The City's primary objective during the winter season is to provide for safe travel to support education and commerce during adverse weather conditions. By implementation of the City's Snow and Ice Control Plan, with the traveling public's cooperation and assistance, the City crews will be able to maximize the effectiveness of snow and ice control operations.

II. OBJECTIVE

The responsibility for providing snow and ice control for the City's 814 lane miles of streets, over 150 cul-de-sacs and 150 streets with no outlets, rests entirely with the Department of Public Works and is accomplished through the work of staff assigned to the Municipal Services Division with assistance from the Water Services Division of the Water Management department. Coordination of snow and ice control activities is the responsibility of the Municipal Services Manager. **Snow and ice control is considered emergency work, in that the streets must be cleared any time, day or night.** Because of the potential hazard to the motoring public and high incidence of overtime involved in this activity, careful planning and preparation must be done prior to the snow and ice season.

The objective of the snow and ice control plan is to provide maximum service to the public during periods of snow and ice while exercising wise management of the City's resources and protecting the environment.

The City's goal is to have priority streets plowed within 12 hours from the time that the snow stops falling. The goal on the priority streets is to achieve bare pavement. After finishing the priority streets, the City's goal is to plow the neighborhood streets within 18 hours of the completion of the priority streets. The goal on the neighborhood streets is to make the streets passable and provide good traction at stop signs, hills and curves. It is not practical to remove all snow and/or ice to bare pavement on neighborhood streets.

III. GENERAL PLAN

A. Snow Fence

In order to prevent the drifting of snow on streets which are exposed to high winds from the west and north, snow fence will be erected on certain non-developed property adjacent to the following streets:

1. Airport Road – Route 36 to Beacon Drive (Park District Property).
2. Woodford Street – Hays Avenue to Running Reds (Decatur School District).
3. Jasper Street – Illinois Terminal Railroad to K-Mart (private property).
4. West Grove Road – Route 51 to Wildwood 1st Addition (Park District Property).
5. North Oakland – Hickory Point Road to Interstate 72 (private property).
6. Camelot Drive – Northern most portion (private property).
7. William Street – North side of 27th Street intersection (private property).
8. 27th & Pershing – Around the curve (private property).
9. Hubbard Avenue – West of Brush College Road at the “S” curve (private property).
10. L & A Industrial Drive – North side of road from 3690, East 1000 feet (private property).

The general installation procedure is to place the fence approximately 100 feet from the roadway surface on the west or north side.

The Municipal Services Division will contact the property owner or their designee for each location prior to erecting the fence. The target completion date for installation is November 30th each year. The snow fence should be removed by April 1st.

B. Preseason Equipment Preparation

Each year between October 15th and November 15th all snow and ice related attachments will be reinstalled on the snow fighting equipment and thoroughly inspected for proper operation and calibration. It is the responsibility of the Fleet Maintenance Supervisor to schedule and affirm the completion of this work.

Prior to November 30th it shall be the responsibility of the Street Supervisor to assign crews to mount plows and check each truck for the proper salt distribution from the salt spreader. Any defects shall be noted and given to Fleet Maintenance for proper response.

C. Snow Route Inspection & Preparation

Prior to November 30th, the Street Supervisor shall assign crews to drive all streets in each snow route to look for obstructions (low hanging limbs, high manhole frames, etc.) that could impede snow removal operations. The obstructions shall be logged and reported to the Street Supervisor so appropriate action can be determined. The Street Supervisor will install reflectorized delineator posts to identify potential obstructions that may be hit and damaged during snow removal operations. Examples include the leading edges of medians on streets or locations where the design of street curbing may not be clearly visible to snow plow drivers.

D. Personnel Training

Prior to November 15th, training will be completed with all personnel that respond to winter weather activities. The training shall include the review of those policies and procedures that pertain to snow and ice control and the operation and maintenance of snow and ice equipment.

E. Weather Forecasting and Subsequent Planning for a Winter Storm

Each year, prior to snow season, the Municipal Services Manager will review and renew the contact with the City's weather forecasting service. The basis for the review will be cost and the ability of the service to provide the City with vital planning information. The information shall include 24/7 alert notification, the opportunity to consult with a meteorologist, air and pavement temperatures, precipitation type, storm arrival time, storm duration, and expected rate of snowfall accumulation.

During snow and ice events, the Municipal Services Manager or designee will use the weather forecasting information provided by the weather forecasting service to determine the proper equipment and crews necessary to respond to each individual weather incident.

F. Anti - Icing

Guidance based on experience for the preparation and use of anti-icing mixtures has been developed and provided by the American Public Works Association and the Salt Institute. Experience shows that a brine (water and salt) solution consisting of 23% salt is an effective and economical anti-icing mixture.

During the period between November 15th and March 1st, or whenever weather conditions warrant, the Municipal Services Manager may direct that salt brine solution be sprayed on bridge decks and main arterial streets. The 23% salt water solution will help minimize frost and icing on paved surfaces. The solution

also acts as a barrier to prevent ice and snow from sticking, aiding in snow and ice removal operations.

It is the responsibility of the Street Supervisor to monitor sprayed locations for effectiveness and the need for reapplication.

G. Snow Routes and Street Designations

The City is divided into twelve (12) snow routes. These routes have proven to be effective in providing systematic snow and ice control. Snow route maps are maintained by the Municipal Services Division with assistance from the Engineering Division. They are utilized by snow plow operators to effectively perform their duties while in snow and ice operations. The maps are reviewed each year to be certain they reflect any required updates. The maps designate which streets are “Priority Streets” and which are “Neighborhood Streets”.

“Priority Streets” are streets which meet the following criteria:

1. Have an estimated average daily traffic (ADT) count of 1,000 or more; or,
2. Serve as a major collector or higher classification as designated by the City of Decatur’s Roadway Systems Plan (Highway Functional Classification System); or,
3. Serve as an access point to emergency services facilities (examples: hospitals, fire stations, police headquarters, ambulance bases, etc.); or,
4. Serve as the only outlet for a subdivision; or,
5. By not designating it as a priority street, residents would have to travel a distance of greater than the equivalent of four city blocks to reach a priority street.

“Neighborhood Streets” are City streets that do not meet the priority street criteria.

Adding a neighborhood street to the list of priority streets would have to be based on a compelling case. Examples may include:

1. Including the street would provide a sensible turnaround point for a snow plow and would prevent an unsafe condition or maneuver such as backing up, or it improves the overall traffic flow of the area, or
2. The street serves as a Mass Transit route.

H. Plowing and Spreading Operations

Due to the varied nature of winter storms, the City of Decatur must react to each individual winter storm in a manner that utilizes our resources in the most effective and economical way.

Guidelines and training information from the American Public Works Association and the Salt Institute are used as a foundation for our plowing and spreading operations. These guidelines are not mandatory instructions for action. The guidelines are based on experience and best practices of numerous other agencies engaged in snow and ice control. The Municipal Services Manager or designee shall exercise local judgment in determining appropriate snow and ice control methods for the specific weather condition expected in each winter precipitation event.

Plowing and Spreading Operation Basic Guidelines		
Condition	Priority Streets	Neighborhood Streets
Snow or Ice in the Forecast	Anti-Ice selected areas with brine solution.	
Ice	Salt, based on pavement temperatures and ice accumulation. Carefully monitor conditions for retreatment.	Check hills, stop signs and curves for salt treatment.
Less than 2" of fallen snow.	Salt, based on pavement temperatures and forecast to achieve clear pavement.	Check hills, stop signs and curves for possible salt treatment.
Greater than 2" of fallen snow.	Plow/Salt to achieve clear pavement. Stay on priority streets until snow has stopped and streets are cleared.	Plow streets to achieve passable condition. Check hills, stop signs and curves for possible salt or sand treatment to provide traction.

(See Attachment "A" for spreading operation guidelines.)

The Municipal Services Manager and snow shift supervisors will closely monitor weather service forecasts and storm development to best plan for and respond to winter weather conditions. Rising and falling air and pavement temperatures, wind, type of precipitation, anticipated accumulation and predicted start and end times are all factors that must be considered when scheduling response. The number of snow crews and support personnel will be assigned to best achieve the desired results.

Numbers of crews can range between 2 trucks to monitor and respond to reports of slick spots and may increase to full snow and ice control operations which

require all plow operators and support staff to work in twelve hour rotating shifts to provide around the clock storm response.

During larger scale storm response, a tandem plow team may be assigned to work on multi-lane priority streets having the highest Average Daily Traffic (ADT) (Attachment "B"). During the period when the snow is falling, the emphasis will be to keep the tandem team on North and South Main, North Water, North and South Franklin and East and West Eldorado until these streets are substantially clear. The team should then continue with the list of Tandem Plow Streets in the order they appear on the list until all are predominantly clear.

It is the City's policy **to not plow alleys**. There is not sufficient room in alleyways to deposit plowed snow and the potential for damage to private property, City equipment and the alley driving surface is far too great to risk plowing operations. If, however, there is a need for police, fire or ambulance emergency service vehicles to enter a specific alleyway during snow operations, every effort will be made to clear the snow to allow access based on a request from the Police Chief, Fire Chief, or other responding emergency personnel.

When snow and ice operations are underway and schools are in session, special consideration will be given to the streets around the schools to help assure safe travel for students going to and from school.

The City does not plow private streets such as the streets in mobile home parks. It is the responsibility of the property owner or neighborhood association to maintain private streets. There are numerous private firms available to offer snow and ice control service on private streets.

I. Emergency and Special Needs Response

Whenever the Municipal Services Division is notified by emergency response providers, including Police, Fire and Emergency Medical Personnel, of the need for special assistance during periods of ice and snow, snow removal crews will assist those agencies by clearing road and streets to permit access to their destinations.

Physicians or case workers of medically fragile patients can request, in writing, that the addresses of those individuals be added to the Medical Alert Locations list that is maintained by the City's Street Supervisor. If those addresses are not already on a Priority Street, they will receive service just as soon as possible after the Priority Streets are cleared.

Medically fragile individuals are those who have chronic medically intensive needs. Their chronic health-related dependence, continually or with unpredictable periodicity, necessitates the ready availability of skilled health care treatment. Further, if the technology, support and services being received by the

individual are interrupted or denied, he or she may, without immediate health care intervention, experience irreversible damage or death.

J. Emergency Snow Routes

Emergency snow routes have been established in order to make it possible for the City to safely place the snow behind the curb during heavy snow falls by the removal of all on street parking. Emergency Snow Routes exist on the following streets:

North and South Main – Washington to Johnson Avenue

North Water Street – Marietta Street to Garfield Avenue

West Main Street – South Main Street to Oakland Avenue

Wood Street – South Main Street to U.S. Route 36

The emergency snow routes were established by the Decatur City Council, Ordinance Nos. 99-123, 79-155, 82-105, and 82-106 (Attachments “C”, “D”, “E”, & “F”).

Three specific codes (Attachment “G”) are used to administer and control the use of emergency snow routes and they are as follows:

Code #1 - Alert

Code #2 - Declaration of Snow Emergency

Code #3 - End of Snow Emergency

The Municipal Services Manager will provide an explanation of each code to the news media yearly in November. It will be the responsibility of the Municipal Services Manager to notify the various news media, when directed to do so by the Director of Public Works, when a snow emergency exists.

K. Winter No-Parking Restrictions

The City Manager or designee (Attachment “H”) may declare a winter no-parking condition when it is determined that new snow or ice has accumulated in, on or along any winter no-parking zone in the City such that vehicular movement has become difficult or dangerous, and further to declare such condition to be ended when it is reasonably deemed the same has exhausted its purpose.

Winter no-parking signs will be erected on designated narrow streets where it is very difficult to safely allow snow removal operations when vehicles are parked on them. The designated winter no-parking streets are:

Burtschi Court
Cantrell Court
East Court Manor
East Main Street (East Ave. to U.S. Rte. 36)
East Prairie Avenue (East Ave. to U.S. Rte. 36)
Home Avenue (North of Main)
Medial
Shady Crest
Webster Court
West Court Manor
West Prairie Street (Haworth to West Dead End)

The winter no-parking streets were established by the Decatur City Council, Ordinance No. 2003-43 (Attachment "I").

Three specific codes are used to administer and control the use of winter no-parking streets and they are as follows:

- Code #1 - Alert
- Code #2 - Declaration of Winter No-Parking Condition
- Code #3 - End of Winter No-Parking Condition

An explanation of each code will be provided to the news media yearly in November. It will be the responsibility of the Municipal Services Manager to notify the various news media, when directed to do so by the Director of Public Works, when a winter no-parking condition exists (Attachment "J").

L. Crisis Routes

In the event of a major snow storm, it may be impossible to maintain all of the established priority routes. It is, therefore, necessary to compile a list of "Crisis" routes. These routes were established with consideration given on access to hospitals, fire and police stations, and major business centers.

A crisis situation will be declared by the Director of Public Works or his authorized representative when:

1. Eighteen (18) inches or more of snow has fallen in a 24 hour period or snow has fallen to the extent that City forces are unable to keep normal priority routes open.
2. A major ice storm occurs.
3. When, in the opinion of the Director of Public Works, the travel of emergency vehicles is severely restricted.

Attachment “K” contains a description of the crisis routes. All of the available manpower will be distributed on these routes until the crisis situation has ended or these routes are made passable. The Municipal Services Manager shall be responsible for the distribution of equipment and manpower on these routes.

In the event that City forces are unable to handle the snow removal solely with City-owned equipment, the City may elect to call upon private contractors to assist in the removal. A list of available contractors will be kept by the Municipal Services Division and updated yearly.

M. Calcium Chloride

When temperatures fall below 20 degrees Fahrenheit, salt alone is ineffective for controlling snow and ice. Liquid calcium chloride solution is sprayed on the salt at a rate of 8 – 10 gallons per ton when temperatures fall below 20 degrees to increase its effectiveness. Treating the salt will increase its effectiveness to temperatures of approximately zero degrees. Below zero, there are no economical deicers which are effective.

When spreading pre-treated salt, the application rates can be decreased and still be effective. Shift supervisors and foremen will monitor application rates for effectiveness.

IV. EQUIPMENT

The Municipal Services Division’s and Lake Section’s equipment for snow and ice control is detailed in Attachment “L”.

V. LABOR

During snow and ice control operations, the Lake Section’s classified personnel are temporarily assigned to and work under the supervision of the Municipal Services Division. These temporary assignments will be coordinated with the Lake Maintenance Supervisor.

If a shortage of available personnel exists due to unfilled vacancies, prolonged illness or job injuries the Municipal Services Division may request additional personnel from the Water Distribution Section or the Engineering Division on a temporary basis. Requests for temporary personnel from these three work units should be coordinated with the manager of the division from which employees are being requested.

Prior to each winter season, the Municipal Services Manager shall review the anticipated availability of City employees that respond to snow and ice control situations. If, in the MSM’s opinion, there may be a shortage of responsive personnel, then the MSM shall recommend to the Public Works Director that a list of Auxiliary Plow Operators from qualified personnel outside of current City employees be established.

This list will be created through hiring coordination with the City of Decatur Human Resources Division. These auxiliary operators shall only be used in the event that all internal snow and ice overtime lists have been exhausted in accordance with the conditions defined in the A.F.S.C.M.E. Collective Bargaining Agreement.

During the winter season, the Municipal Services Division supervisors should review weather forecasts and predictions prior to granting employee leave requests. In the event a snow emergency crisis is in effect the Municipal Services Manager may cancel approved leave for the period of time the snow emergency exists.

For the purpose of snow and ice control, and to increase efficiency, safety and productivity, the Municipal Services Manager can call twelve hour shifts when conditions warrant and/or a prolonged storm has been forecasted.

When twelve or more trucks are in snow operations, a clerk should be on duty to answer the telephone, monitor the City's 2-way radio, record customer service requests and log the trucks' operations. The supervisor on duty will keep the clerk on duty advised on how to handle requests for snow removal or spreading. The supervisor will have the authority to make decisions involving the request for special service in unique situations. The supervisor should take care to not deviate from City policy. In the event that a clerk is not on duty, the shift foreman shall monitor radio calls.

There will be a one-half hour overlap of supervisors and foremen at the change of each shift. This time will be spent with the supervisor and foremen from the previous shift briefing the oncoming supervisor and foremen on the status of operations.

When twelve or more trucks are out for a period of eight hours or more, Fleet Maintenance should have at least two mechanics on duty. Exceptions can be made to this staffing if approved by the Municipal Services Manager. It will be the responsibility of the Fleet Supervisor to check with the snow and ice control staff during a storm to see if additional mechanics are needed and to ensure that the mechanics are called out if necessary.

The following is a summary of the positions currently shown in the City of Decatur's annual budget that are designated for snow and ice control:

1. Municipal Services Division

<u>Budgeted Position</u>	<u>Number</u>
Municipal Services Manager	1
Supervisor	3
Foreman	5
Crew Chief	9
Equipment Operator	17
Service Worker	15
Administrative Secretary	1

Clerk Typist	<u>1</u>
	52

1. Municipal Services Division/Fleet Maintenance

<u>Budgeted Position</u>	<u>Number</u>
Supervisor	1
Lead Mechanic	3
Auto Mechanic I	3
Parts Person/Dispatcher	1
Senior Clerk Typist	<u>1</u>
Total	9

2. Water Services Division/Lake Section

<u>Budgeted Position</u>	<u>Number</u>
Crew Chief	1
Equipment Operator	<u>2</u>
Total	3

Note: Numbers of personnel listed are based on the positions that are shown in the City of Decatur's Annual Budget. The actual number of positions may vary from year to year based on the budget approved by the Decatur City Council. The number of actual personnel, who are available to respond to snow and ice control, may be lower due to injuries, illnesses or unfilled vacancies.

VI. MATERIAL USAGE

The use of all snow and ice control materials (salt, calcium chloride, etc.) shall be recorded at the end of each shift on each operator's time card. This information shall be turned in to the Administrative Secretary and a running total shall be kept for each storm event as well as a grand total for the winter season. The Administrative Secretary will update this total within four hours after reporting for his/her designated shift and report these totals to the Municipal Services Manager.

VII. DOCUMENTATION AND REPORTING PROCEDURES

It will be the responsibility of the Municipal Services Manager or his/her designee to prepare a report of the previous day's snow removal activities containing the following information:

1. Equipment and personnel deployed.
2. Type of work performed (i.e., spreading, plowing, hauling, etc.).
3. A brief narrative outlining any significant issues or problems that were encountered.

This report shall be emailed to the Director of Public Works.

In lieu of these reports, the Municipal Services Manager or designee may provide ongoing storm response reports to the City Manager and the Public Works Director via email.

VIII. HAULING SNOW FROM THE CENTRAL BUSINESS DISTRICT

It is the intent of the City to haul snow from the Central Business District (CBD) when the snow has fallen to a depth greater than four inches in a single snow storm or when the build up of snow stockpiled at the curb exceeds six (6) inches higher than the back of the curb.

The removal of snow from the CBD will take place after all of the streets in town have been opened and are passable. This will be accomplished at night when traffic is at a minimum. The City Manager or the Director of Public Works may order the removal of snow from the CBD, at any time, if they consider it is in the best interest of the community.

IX. DUMP SITES

Locations to dump hauled snow will be confirmed yearly by the Municipal Services Division. Potential sites include:

1. City owned property within close proximity to the Downtown Business District.
2. Lake Decatur Sites – Must be confirmed with the Lake Maintenance Supervisor.
3. Decatur Industry Technology Center (Incubator) – Requires prior approval and the permission of the Director of Public Works.