

Jefferson County Highway Department

Snow Removal and Ice Control Policy

*Adopted by the Jefferson County Board
on May 23, 2011*

Preface

Each year as the Illinois winter approaches, the public's concern about access to work, school, and business increases. The safety and convenience of the traveling public is a primary concern to the Jefferson County Highway Department. The goal of the Highway Department is to have all County highways passable as soon as possible after the snowfall has stopped. The Jefferson County Highway Department currently operates with one main crew in a single shift format.

One of the maintenance responsibilities is snow removal and ice control. While every highway authority provides snow removal in some form, they all provide very different level of services depending on who the authority is. This variation in level of services is due to the availability of resources, or lack thereof. For example, the State has enough resources to run snow plows 24 hours a day, if necessary, by using temporary employees. On the other hand, the county has a far more limited number of maintenance employees, making a 24-hour per day snow removal operation impossible under the current limitations. Townships often have even fewer resources than the county, which limits their operations as well.

It is the intent of the Jefferson County Highway Department to provide safe and reasonable winter driving conditions on County Highways for the general public. It is the policy of the Jefferson County Highway Department to remove snow from the County roads safely and quickly, and to provide reasonable ice control, while taking into consideration the availability of labor, equipment, and funding. This document includes general policies followed by the Jefferson County Highway Department and its' operations pertaining to snow removal and ice control.

The Jefferson County Highway Department is responsible for the maintenance and repair of County roads and bridges throughout the County. The Highway Department has no greater challenge than during the winter snow and ice season when it is charged with attempting to provide passable roads for travel and emergency services during and after a snow or ice event. To accomplish this, the County utilizes three tandem trucks/operators with plow attachments, one single axle truck with plow, and two motorgraders/operators with plow attachments. All trucks are equipped with salt/sand spreader attachments.

Snow removal operations are under the direction of the County Engineer. Due to the variable nature of snow removal and ice control work, Jefferson County's Snow and Ice Control Policy is not all-inclusive. The County Engineer's experience and judgment will ultimately dictate decisions made regarding snow removal and ice control on a case by case basis.

Introduction

The purpose of this snow removal and ice control policy is to promote consistency and uniformity of winter maintenance operations in Jefferson County. Achieving a consistent and uniform level of service throughout the county should provide drivers with a more accurate idea of roadway surface conditions during and after snow and ice events. The more accurate the driver's expectations are, the safer winter driving habits the driver should exhibit. Accurate driver expectations of road conditions should result in fewer accidents related to winter roadway conditions.

The policy is also intended to provide the motoring public and emergency service agencies and personnel with general information regarding snow and ice removal operations, level of service, how the public can help and to serve as a guideline and training tool for Highway Department employees.

Hours of Operation

In order to minimize overtime expenditures, the County tries to perform snow-plowing operations during normal business hours (7:00 A.M. to 3:30 P.M.) However, there are times when that is not feasible without compromising the safety of the public.

Snow and Ice Control Goals

The efficient removal of snow and ice from the roadways of Jefferson County is one of the most important functions of the County Highway Department. Safety of the motorists, safety of the Highway Department employee, and financial constraints must and will be the priority considerations when determining timing of winter roadway maintenance operations.

- Maintain County roads in a passable driving condition for the motoring public in a safe, cost effective manner with motorist safety, budget constraints and Highway Department personnel safety in mind.
 - Clean one lane in each direction. This usually involves the placement of sand and salt.
- Widen the lanes to edge of shoulders and apply sand/salt mixture.
 - The County will perform sanding/salting operations at problem areas, including: curves, hills, intersections, and bridges. *The County does not assure a completely bare road within a specified timeline due to numerous factors.*
- Clean up.
 - Remove ice and slush off roadway after salt and sun have been allowed to work.
 - Operations will be halted when: (a) desired service levels are reached, (b) coverage time has elapsed, (c) conditions are too hazardous, or (d) reasonable accomplishments cannot be made.
- Continually monitor weather and road conditions to enable the Highway Department to determine an effective response to an approaching winter storm event or a storm that has arrived.
- Monitor ongoing and past snow and ice control operations, strategies and costs.
- Educate the public with regard to what levels of service can be expected during and after a storm and how the public can help the Highway Department best perform its snow and ice removal duties.

Dispatch of Equipment

- The start of snow and ice control operations for any snow or ice event is dependent on the immediate and anticipated weather conditions. Upon visual inspection of the existing conditions on various roads and monitoring weather predictions of anticipated conditions, the County Engineer will initiate snow and ice control operations by notifying the Road Foreman who will call in the necessary personnel and dispatch/coordinate personnel and equipment as required. The response time will be as soon as possible depending on how fast the existing road conditions allow personnel to report to work. The County Engineer or his designee(s) has the authority to dispatch County equipment to any operator's residence to provide transportation to the operator.
- For emergency vehicles responding to emergency situations, necessary equipment and personnel will be dispatched as soon as possible. The request for assistance must be received directly from the Jefferson County Office of Sheriff or a Fire Department officer at the scene.

Snow Control Policy

Snow removal operations should generally begin when snow accumulation reaches a point where it inhibits traffic flow from maintaining a reasonable speed, or snow is starting to compact on the roadway surface. Snow removal operations generally begin after an appreciable accumulation of snow has occurred, but toward the end of the event. Removal operations will typically continue until all roads have been sufficiently cleared. If weather conditions result in poor visibility and hazardous conditions or continued attempts to clear the roads are futile, the plow crew may be called back to the shop until weather conditions improve. Although the safety of the traveling public is of foremost concern, reduced levels of service may be appropriate on weekends and holidays based on traffic volumes and roadway conditions.

The County Engineer will decide when the plowing is necessary, depending on weather conditions and the safety of the traveling public. Once the determination is made to dispatch the snowplows, snow and ice control operations are directed by the Road Foreman under the guidance of the County Engineer. This includes the crew's plow routes and rate and application locations of salt/sand.

This is not a bare pavement policy. The decisions made by the department concerning snow and ice control are based on providing the public with the best possible service while taking into consideration available funding, manpower, and equipment.

Local weather forecasts should be used when considering timing of snow removal operations. The effects of wind speeds, snow fall intensity, and cold temperatures typically dictates the start and stop times of plowing operations as determined by the road foreman in consultation with the County Engineer. Safety concerns regarding the interaction between snowplow operators and the traveling public, and snow removal efficiency as a result of these weather conditions will be primary considerations in determining plowing operation times. The effects of wind may cause drifting, low visibility, life threatening wind chills, and low efficiency snow plowing operations. If the combination of wind speed and snow reduce visibility to 1/8 mile or less, snow plowing operations may be suspended. Snowplowing operations may be delayed after daylight hours when temperatures drop below -25 deg. F. If snow removal operations are discontinued or delayed due to unsafe or inefficient plowing conditions and roads remain generally impassable, the following radio stations should be notified:

-WMIX – 94.1 FM

Coverage time for all routes varies depending on the current weather conditions, snow loads, and road surface conditions. Generally, truck route total coverage time on paved surface roadways is approximately 4-5 hours. Snow removal operations will continue until roadways are clear for reasonably safe motor vehicle operation. Areas susceptible to snow drift blockage or areas where wind cannot naturally clear snow from roadways shall be inspected by the Road Foreman regularly to assure the roadway surface is functioning efficiently.

In general, salt/sand operations will consist of only applying salt/sand materials to curves, hills and stop condition type intersections. If severe icing conditions develop, a continuous application of salt/sand materials may be done on higher volume primary routes at the discretion of the County Engineer.

Dispatching Snowplows

Normal work hours are 7:00 a.m. to 3:30 p.m. For the purpose of snow removal, hours may begin as early as 4:00 a.m. and if conditions exist, end at 8:00 pm. It is the intent of the Jefferson County Highway Department to never have an individual work more than a 16 hour shift without a minimum of 8 hours time off between shifts.

Snow removal operations should occur primarily during the typical work day (7:00 a.m to 3:30 p.m). Predicted overnight snow accumulation of 4" or more may initiate snow removal operations to begin at 4:00 a.m. or earlier the following morning. If the predicted work day snow accumulation is expected to dissipate in the early evening, work day snow removal operations may continue through that work day evening (after 3:30 p.m.), with touch-up work continuing the following work day. The Road Foreman may verify these exceptions, at the request of the operator.

Each plow operator is assigned a designated route to plow. In general, heavier traveled primary (paved) roads are plowed first followed by plowing the less traveled secondary (gravel) roads. During a snow event, the priority is to have travel lanes plowed in each direction on all roadways.

Priority

- The higher traffic volume roads will receive higher priority for snow and ice control operations.
- Snow removal priority will be as follows: high volume paved highways, low volume paved highways, high volume gravel roadways, low volume gravel roadways.
 - Due to gravel-loss prevention – plow trucks will not plow on gravel surfaced roads until they are adequately frozen.

Levels of Service

Jefferson County does not have a bare pavement or bare road policy and roads may not be free of snow or ice.

The following are general snow and ice removal policies:

- Snow and ice removal may be limited to daylight hours, depending upon current weather conditions and the snow from the road will be removed as best as possible.
- During conditions of 1-3 inches of snow, with manageable wind, plowing will normally begin at 6:00 a.m. with the intent to have all roads open by nightfall.
- During conditions of 4 or more inches of snow, with manageable wind, plowing will normally begin at 4:00 or 5:00 a.m. with the intent to have all roads open by nightfall.
- Sanding/salting of the roads will be done at critical intersections, hills, curves and other hazardous areas. Snow and ice removal equipment may not be operating when wind velocities exceed 25 miles per hour.

Operations in Adverse Conditions

It is the position of the Jefferson County Highway Department that there can and may exist conditions that may require the suspension of snow removal operations for the safety of both the Jefferson County Highway Department employees and the general public. Such conditions could be: sustained high winds with blowing snow, limited visibility, or a prolonged ice storm. Work will resume when conditions subside to allow for the safe removal of snow and ice. If operations are halted for more than 24 hours the County Engineer will notify 94.1 WMIX to notify the residents of Jefferson County.

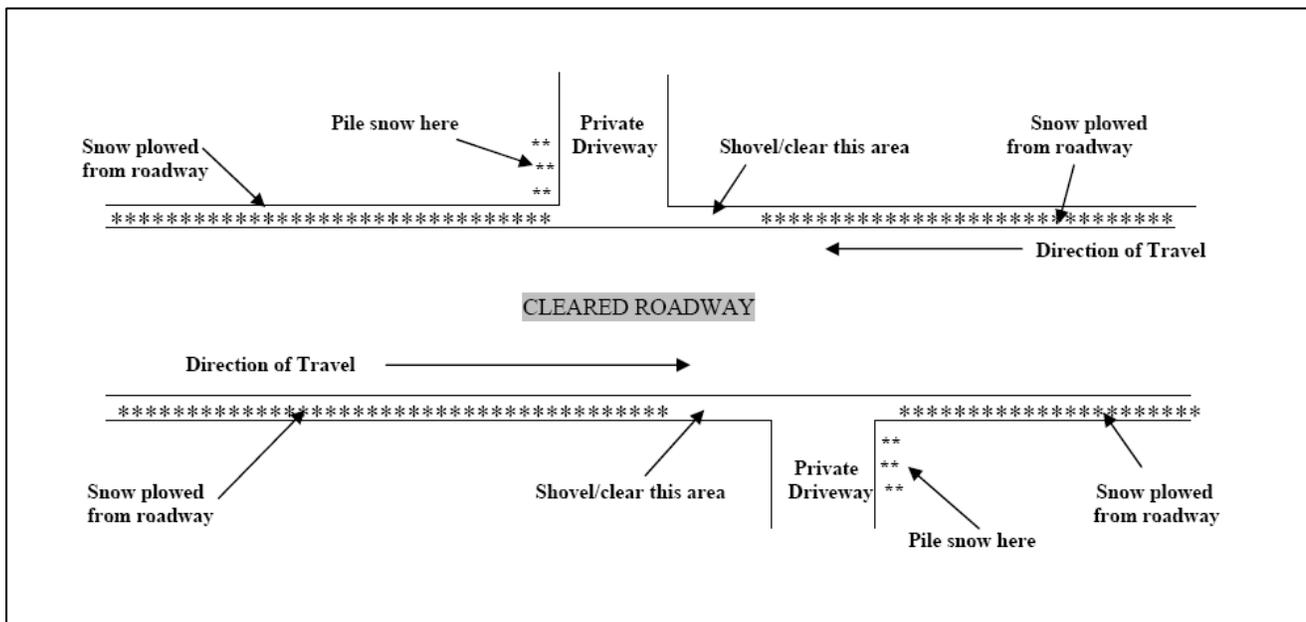
Equipment will not be dispatched when, in the judgment of the County Engineer, low visibility or other conditions are such that the risk to operators and other motorists outweighs the benefits. The general guideline is that equipment will not be dispatched when the estimated visibility in open areas is less than 500 feet. In the event of police, fire, or medical emergency, vehicles may be dispatched at the direction of the County Engineer.

Snow Placed on Roadway

County residents are to avoid adding to the hazards of wintertime driving by not placing snow from their driveway onto public roads and right of way. Snow dumped, plowed, pushed, or blown onto the roadway can create a serious hazard not only for motorists but also for snowplow equipment. Piles of snow left on or near the road can freeze into a solid mass creating a hazardous situation for vehicles and snowplows. Accidents and damages caused by snow piles placed in the roadway may result in liability to the property owner. Piles of snow increase the chances of drifting snow onto the roadway. Property owners found in violation will be given notice and shall remove the snow. If the snow is not removed within a reasonable time, the county will remove the snow and the property owner will be billed.

Driveways

During snow removal operations, the accumulated windrow of snow being pushed and carried by the plow inevitably gets deposited to the trucks' right side shoulder and/or ditch along its route. Driveways along the route may also fill in. The Highway Department assumes no responsibility for the removal of snow deposited in driveways as a result of normal snow removal operations. The Highway Department cannot provide exact times that a certain road will be plowed and it is not possible to change the angle of the blade to avoid depositing snow into private driveways. The recommended way to minimize the amount of snow that gets plowed into a private driveway is shown in the sketch below.



Snow fences

Snow fences and ridging operations placed in strategic locations outside of the County highway right-of-way may be implemented on an as-needed basis. The ability to trap blowing snow outside of the highway R/W may reduce the buildup of snow on the roadway. The placement of the snow fences and/or ridging operations shall be approved by the County Engineer. Written authorization from the landowner is required prior to the placement of snow fences and/or ridging operations on private property.

Private Road

Snow removal on private roads is prohibited unless requested by the Sheriff's Department.

The County will not operate snow removal equipment on private roads. Normal County removal operations may result in snow or ice being deposited in driveways adjacent to public roads. The County will try to limit the amount of snow placed in private drives but when the snow on the roadway is heavy, the amount of snow left in a driveway may be heavy.

Stranded Motorists

Jefferson County personnel may assist stranded motorists by contacting law enforcement/emergency personnel. The Highway Department will not attempt to remove stuck vehicles unless: (a) directed by law enforcement, (b) it poses a danger to the traveling public, or (c) it hinders snow removal operations.

Obstructions

Obstructions on the road right-of-way such as vehicles or fences which might cause drifting shall be removed by the owners.

The County shall not be liable for damage to stalled or stranded vehicles on the traveled portion of the roadway or other obstructions which will interfere with snow and ice removal and abrasive placement. The owners of stalled or stranded vehicles should immediately notify the Sheriff's Department. A stalled or stranded vehicle blocking the road needs to be moved as soon as possible, or the vehicle may be towed at the expense of the owner.

Vehicles shall also not be parked on the roadway surface or shoulder. If a vehicle is parked on a personal driveway, it should be outside of the roadway clear zone, which is typically 15 to 20 feet from the edge of the roadway.

Mailbox/Fence/Landscape Damage

Mailboxes and fences damaged during snow removal will be evaluated on a case-by-case basis. ONLY those mailboxes and fences that were properly located and installed, and which were damaged by actual contact with County equipment, will be repaired at the County's expense.

Mailbox

The Highway Department will replace mailboxes damaged by direct contact with the plow or wing with a generic "swing-away" type that consists of a standard size, metal mailbox attached to a "swing-away" arm that is mounted on a 4" x 4" post. Mailboxes that require replacement will be replaced up to a maximum cost of \$25.00. If a decorator type mailbox and/or post is damaged and requires replacement, the Highway Department

will reimburse the resident for up to a maximum of \$25.00 for the cost of materials and it shall be the responsibility of the resident to purchase and install the decorator mailbox and post.

Every effort is made by plow operators to remove snow as close to mailboxes as possible to provide access by US Postal Service delivery vehicles. However, it is the responsibility of the resident to provide final cleaning and access adjacent to their mailboxes.

Landscaping/Lawn Damage

Landscaping and lawns, including but not limited to; shrubs, trees, inanimate objects, etc. installed by a property owner within the ROW will be the responsibility of the owner and the owner assumes all risk of damage to such items. Furthermore, the County cannot reasonably control drift or discharge of snow and/or shoulder materials from the snowplow into roadside ditches and lawns. Unless there is lawn or landscaping damage off the ROW due to direct contact with the plow or wing, the County will not be responsible for the removal/repair of any gravel, stone or other aggregate shoulder materials inadvertently cast into adjacent lawn areas by the plow or wing.

Ice Control Policy

In addition to the removal of snow using plow trucks, the County also actively applies ice control materials to prevent the formation of ice on the road or to remove ice that has already formed. Currently the County uses a mixture of salt and sand. The salt melts and/or prevents ice or snow on the road. The sand provides an abrasive for better traction with the road surface. It is important to note that salt does not work at extremely low temperatures and there are times in which ice may be on the road where we do not apply salt for this very reason. Also, if high winds are present, ice control materials are often not applied. When the wind is blowing at a high rate and the temperature is cold enough, snow will often times blow across the road rather than build up on the road. If ice control materials are on the road they tend to catch the snow and start the process of drifting.

Temperature is a major component affecting the ability of the crew to remove compacted snow and ice from the roadway. When temperatures are warmer the decision is typically to remove as much of the compacted snow as feasible before it becomes a problem.

Continuous application of salt/sand may be required if severe icing conditions develop. Typically this would be applied only to the higher volume primary routes.

The continuous application of salt/sand materials shall be at the discretion of the Road Foreman.

Jefferson County's ice control policy should generally provide the following level of service:

- As mentioned, Jefferson County does not practice a bare pavement policy. Ice control will focus on high risk areas such as curves, intersections and railroad crossings. The intent is to provide improved traction for stopping and turning driving maneuvers.
- Tandem trucks should be traveling no faster than 35 mph when placing winter salt mixture to road surface. Salt spreaders should be calibrated accordingly.
- Material is available at the Jefferson County Highway Department. The Road Foreman will keep a running total of loads by completing necessary form.

- Melted ice and snow pack (slush material) should be bladed off when conditions warrant. Slush material should not be left on the road top for extended periods, as it may freeze at cooler temperatures.
- Generally, a reduced level of service regarding ice control on all County roadways is appropriate on weekends and holidays. Unless the ice has created an unusually hazardous condition at a high risk area, ice control operations will generally be delayed until the next normal working day. The County Engineer must approve prior to performing ice control work on weekends and holidays.
- If ice control operations begin prior to 7:00 a.m., the employee will end the workday after eight hours of being on duty, or after necessary ice control work is complete, whichever is later. The County Engineer must approve any hours of work beyond eight hours if the work is not directly related to ice control operations.
- Only extreme cases of severe ice conditions would warrant winter sand placement on continuous tangent sections of paved roadways. The operator should receive approval from the County Engineer or road foreman prior to placement of winter sand material to this high of a degree.

Materials and Plowing Procedures

Jefferson County Highway Department currently uses straight rock salt on County roads. During exceptionally cold periods, a mixture of 50% sand and 50% salt may be used. Sand alone does not have ice-melting capabilities but does provide some limited traction for a very short period of time until traffic displaces the sand off the roadway. The mechanical action of tires running over the salt combined with the moisture in the air and snow provides ice-melting capabilities by creating a brine solution that has a lower freezing temperature than the temperature of the surrounding ice. Limited or no salting is done during periods of heavy snowfall or during blowing and drifting conditions because falling or blowing and drifting snow covers the material and the salt gets scraped off on subsequent plowing passes. Plowing typically ends when the storm ends and roads have been made passable for travel. Drift plowing and pushing back accumulated snow along the roadside will continue after the storm as necessary.

Snowplow operating speeds shall be fast enough to throw snow beyond the shoulder point, but slow enough to minimize any damage to private property adjacent to the roadsides. Snow removal speeds shall also be that which is recommended by the manufacturer of the snow plow and wing assemblies being used. These recommended operating speeds shall be followed to insure snow removal equipment warranties will not be void, safety of the snowplow operator and traveling public are insured, and private property adjacent to the roadways are not damaged by heavy snow being thrown by the snow removal equipment. This speed should not typically be greater than 35 to 40 mph nor less than 20 mph.

Winter Road Maintenance Goals

It shall be the goal of the Jefferson County Highway Department to keep people and products moving safely, with minimal cost, and with regards to safety of the plow operator and the traveling public.

Emergencies

The Sheriff's Office should be contacted for all emergencies requiring plowing. Plows will not be dispatched from regular routes or called in for extra duty unless it is a Fire or Medical Emergency coordinated through the Sheriff's Office. Icing bridges or snow drifting on roads are expected aspects of winter travel and generally are not adequate justification to dispatch plow crews.

No Travel Advisory

No travel advisories issued by the State Patrol and/or Sheriff's Office apply to all County snow and ice removal crews. When a No Travel Advisory is issued, the local radio stations (FM: WMIX 94.1) and Sheriff's Office will be contacted, then all plows will be pulled from their respective routes.

Exceptions

Each snow or ice event has individual characteristics such as rate of accumulation, temperature; wind velocity and direction, visibility, time of day, etc. associated with it and therefore must be dealt with accordingly. The County Engineer and/or his designee reserve the right to alter operational strategies, deviate from these standards or terminate ongoing snow and ice control operations at any time, if it is determined that various factors including but not limited to, the need to rest snowplow crews, equipment failure, extreme snowfall accumulation and conditions which make snow and ice control operations unsafe, unnecessary or ineffective.

Service Requests, Inquires and Complaint

All requests, inquiries or complaints about snow and ice control service/operations should be directed to the Jefferson County Highway Department office at (618) 244-8031. Normal office hours during the winter snow and ice season are 8:00 AM - 5:00 PM, Monday through Friday. Highway Department personnel will respond as soon as possible.

During any given severe snow or ice event, the Highway Department is extremely busy and committed to clearing the roads as quickly as possible and to the best of their ability for the traveling public. It should be noted that at the start of or during a snow or ice event, the County Engineer, road foreman and plow operators will either be en route or already on duty. During the typical snow and ice control hours of **4:00 a.m. to 8:00 p.m.**, if it is snowing heavily and/or the roads are icing over, the Department is well aware of that fact and is out doing all they can at that particular time. The Highway Department recommends patience and due caution if travel is required.

Summary of the Policy

This Policy was developed to provide general guidelines for both County personnel and the traveling public. This policy intends to cover the majority of situations normally encountered in winter storm events. If certain situations arise that are not part of the above Policy, the County Engineer will deal with them on a case-by-case basis. Each decision to mobilize the snow plow crews is a judgment call made by the County Engineer based on the particular weather conditions combined with past experience, along with the resources available at the time and therefore may not adhere strictly to this general policy.

- This policy supersedes all previously written documents, and unwritten policies, on the subject of snow removal and ice control.
- This policy is in effect and in operation during any snow and ice conditions unless the normal policy is superseded by a decision of the County Board and/or County Engineer or as a change in policy by resolution.
- This policy will be in effect by resolution and adoption by the County Board.

Review of Policy

The Highway Department will keep on file comments and complaints regarding this policy. In addition, the Highway Department continues to review operations and research new methods to find the most economical ways of providing snow/ice control activities for the taxpayers of Jefferson County. This policy will be reviewed periodically and will consider comments received since the last review.

How the Public Can Help

There are several things that motorists and the public can do to help the Highway Department best perform their snow and ice control duties.

- Be patient and be assured that during a snow or ice event every reasonable effort will be made to keep the roads open.
- Allow extra time for traveling to and from destinations
- Be considerate of the snowplow operators.
- Do not attempt to stop a snowplow or obstruct its path. Plow trucks, when loaded with sand and salt weigh approximately 31 tons. That is a lot of weight and responsibility for the driver to deal with and the trucks simply are not as maneuverable and agile as a passenger vehicle. They require extra time and distance to stop or avoid trouble.
- When approaching snow removal equipment from the rear, travel a minimum of 200 feet behind the equipment allowing for sanding and abrupt movements.
- Use extreme caution when passing snow removal equipment. Before you pass please flash your headlights and/or honk your horn to alert the operator of your intentions.
- Do not park along the roadway during a snow or ice event. Parked vehicles are a hazard not only to the snowplow operators but the traveling public as well. Any cars parked along the roadways that are interfering with snow removal operations will be called in to the Jefferson County Office of Sheriff for removal at the owner's expense.
- When clearing driveways put the snow on the "down" side relative to the direction of travel by the snowplow so when the plow blade does deposit its windrow of snow back into the driveway there will be less snow for the homeowner to remove. **(see sketch above in the Driveway section)**
- During times of severe storms or blizzard conditions, tune to WMIX (94.1 FM) for information on travel advisories or road closings.

Winter Driving Tips

Winter driving can be very dangerous and requires motorists to be fully alert and aware of their surrounding conditions. There are some things that can be done by motorists to improve their chances for a safe driving experience. Some of the following tips can help.

- Don't drive unless you have to.
- If you must drive, drive defensively, wear your seatbelt, turn your headlights on if conditions warrant their use, be alert and exercise extreme caution. Driving on snow and ice packed roads requires your full attention and demands your best driving skills.
- Be informed of the current and predicted weather conditions for your area and know your employers' inclement weather policy. The fewer cars on the road, the more effective the plowing operations.
- Prepare your vehicle in advance of inclement weather. Regularly check the battery, antifreeze, windshield wipers, heater and defroster. Have at least a half a tank of fuel and have adequate snow tires or chains on your vehicle.
- Clean all snow and ice from your vehicle including all glass areas, headlights and taillights before driving.
- Carry some basic equipment and extra clothing in your vehicle in case of an accident, long delay or mechanical problems. Some useful items to have are a flashlight, jumper cables, first aid kit, a hat, gloves, boots, blanket, ice scraper and possibly a small shovel.
- Allow yourself extra distance between your vehicle and the vehicle in front of you. This is especially true at intersections where other motorists may be skidding and having difficulty in stopping their vehicle.
- Remember to brake slowly to avoid skidding
- Allow yourself extra time to get to your destination, as you will likely be travelling at a slower speed than normal. This is especially true of vehicles that are travelling behind a snowplow.

Policy examples used...

Boone County, Illinois
Clay County, Minnesota
Iroquois County, Illinois
Kendall County, Illinois
McLeod County, Minnesota
Rock Island County, Illinois
Wadena County, Minnesota
Ward County, North Dakota
Wright County, Minnesota
Yates County

Brandon J. Simmons
Jefferson County Engineer

Robert Knutson, Chairman
Highway Committee

Jefferson County Board Approval

This policy was approved by the Jefferson County Board at its regular meeting on the 23rd day of May, 2011.

In Witness Whereof, the County have caused this policy to be signed and executed on this 23rd day of May, 2011.

Bob White, Chairman
Jefferson County Board

Connie Simmons
Jefferson County Clerk