ICE CONTROL/DEICING

Deicer Usage Requirements

The use of deicer products is regulated by the City/County Health Department in accordance with Ordinance No. 3154 adopted by City Council June 19, 2000. Ordinance No. 3154 amended Chapter 13.26 of the Missoula Municipal Code, in particular, Section 13.26.040 Subparagraph M.

Deicer shall be used within boundaries identified by the City/County Health Department. Please refer to the regulation and map in Appendix B of this Plan.

Application

Deicer application will begin as the streets start to get slippery and vehicles are having difficulty getting traction. Pre-application of deicer will be used in circumstances where advancing storms can be accurately predicted.

Deicing will begin with the Priority 1 streets, unless an emergency request from the Police Desk is received. When such a request is made, the employees assigned to that area shall proceed to sand/de-ice the location requested according the sanding section of this Plan and then return to the priority system they were working on.

Liquid deicer application methods are regulated by ground speed controllers (see Appendix M) and are intended to:

1. Control rates of application
2. Apply deicer products at a rate not to exceed thirty (30) gallons per lane mile

Use of deicers with respect to effective temperatures and freezing point:

1. Below 10° Fahrenheit, Ice Slicer Elite®, chips or sand may be applied in lieu of deicer in accordance with this Plan.
2. With snow accumulations of two (2) inches or more, deicer shall be applied only after plowing.

Intersections

Deicing will be limited to intersections and approaches to intersections, approaches to school crosswalks, in front of schools, and middle turning lanes in Winter Assignment Areas C, D, E, F and G, unless specifically requested to do otherwise by a supervisor or the Police Department.

1. Deicing at traffic signal intersections, major traveled intersections and school crosswalks will be done on the approach for a minimum of 200 feet except for the following:
   a. Brooks/Reserve intersection will be deiced:
      - North on Brooks from Old Highway 93 to Reserve
      - South on Brooks from the entrance of Vann's to Reserve
2. Russell/Broadway intersection will be deiced north on Russell from the bridge to Broadway
3. Broadway/Russell intersection will be deiced west on Broadway from Burns to Russell
4. 3rd/Russell intersection will be deiced 500 feet at all approaches
5. Brooks/South/Russell intersection will be deiced one (1) full block minimum at all approaches
6. Brooks/Stephens intersection will be deiced north on Brooks from Central to Stephens
7. Mullan/Reserve intersection will be deiced 500 feet at all approaches
8. Broadway/Madison intersection will be deiced west on Broadway from Monroe to Madison
9. Deicing at intersections of residential and non-major traveled intersections will be 50 to 100 feet of that approach depending on traffic volumes.

Speed Cushion

Both lanes shall be deiced 50 to 100 feet prior to the speed cushion located on Pattee Creek Drive.

Curved Streets

Deicing of curved streets will be limited to curves with advanced warning signs of the curve.

Record Keeping

The Street Maintenance Division will keep records of the amounts of deicer applied throughout the season.

Yearly amounts of deicer usage shall be provided to the City/County Health Department by June 1 of each year.

Anti-Icing Methods

The Street Maintenance Division shall anti-ice with liquid deicer under the following conditions:

1. An imminent snow or ice storm is predicted in the Missoula deicing area specified on the maps in Appendix B of this Plan.
2. The incoming storm will be verified by computer satellite systems and/or State of Montana Department of Highway's Missoula division.
3. All anti-icing efforts will be accomplished by snow teams with approval and authorization of the Street Maintenance Division management personnel. (Superintendent/supervisors.)
4. All Priority 1 streets identified on the maps in Appendix F of the Plan will be anti-iced with specific emphasis on the following:
    a. Russell, Orange, Higgins, and Madison Street bridges and the Scott Street overpass
    b. Approaches to the Orange Street underpass
    c. Reserve Street
    d. Junction of Brooks, South and Russell
    e. Downtown intersections
    f. Van Buren and Broadway
    g. Broadway to Easy Street
    h. Broadway Street, Orange Street, Russell Street, Brooks Street, Higgins Street, South Avenue, 39th and Southwest Higgins, and South 5th and South 6th Streets
    i. Remaining Priority 1 streets identified on the maps in Appendix F

Ice Slicer Elite® Usage

The Street Superintendent or Supervisor on-call may authorize use of Ice Slicer Elite® on Priority 1 streets in deicing zones when liquid deicer is no longer effective if one or more of the following conditions are met (See

Appendix N for Missoula Valley Water Quality District letter dated June 10, 2003):

1. When a police officer requests sanding of a roadway to eliminate an unsafe traffic situation when deicer would be inadequate or cannot be applied within a reasonable period of time.
2. During uninterrupted snow accumulation (exceeding one hour in duration) which dilutes liquid magnesium chloride to the point of creating hazardous driving conditions.
3. Application to areas having excessive ice build-up where liquid deicer would not be effective and would create hazardous driving conditions.
4. When weather conditions are such that the effective temperature is below 10° Fahrenheit including wind chill.

When Ice Slicer Elite® use has been authorized; Street Division personnel will apply Ice Slicer Elite® per the following procedures:

1. Ice Slicer Elite® will only be applied on Priority 1 streets and intersections or in response to Police officer requests at the specific locations and conditions described above in Items 3 and 4.
2. One conventional sander truck will be used with the spreader gate opening set to 1-inch.
3. If additional trucks are needed other sand trucks may be downloaded and used with the gate opening reset to 1-inch. Other trucks may only be used with supervisory approval.
4. Due to a history of accidents and police officer requests, the following intersections may also receive Ice Slicer Elite applications:
    a. Kemp Street and 14th Street
    b. East Pine Street and Madison Street
    c. 3rd Street and Johnson Street
    d. Wyoming Street and Catlin Street
    e. Mullan Road and Great Northern Avenue
    f. Greenough and Vine Street

Deicing Parking Lots

Street Maintenance Crews are responsible for deicing eight (8) downtown parking lots during the snow season after all other priorities are met (see Appendix O). These lots are:

1. Woody Lot (between Spruce, Ryman, Pine and Woody)
2. Courthouse Lot (between West Broadway, Ryman, Pine and Higgins)
3. Museum Lot (between East Broadway, Higgins, Pine and Pattee)
4. North Higgins Lot (between Higgins, Spruce, Pattee and Market Square)
5. Caras Park Lot (between Higgins, Front, Ryman and the river and east of the Caras Park Entrance at Ryman and Front)
6. Caras Park Lot (between Higgins, Front, Orange and the river and west of the Caras Park Entrance at Ryman and Front)
7. Riverside Lot (between Higgins, Front Street, Pattee and the river and east of the Higgins Avenue Bridge)
8. Old Town Lot (between Pattee, Front, Clay and the river)