



## 1.0 General

The purpose of this guideline is to outline the level of effort that should be undertaken on the five different categories of roadway during a winter storm event. After the event has ended the effort will switch to cleanup with the intermediate goal of bare/wet pavement and finally the ultimate goal of bare/dry pavement. The time to achieve these goals will depend on the limitations imposed by climatological conditions, the availability of resources, and environmental concerns.

## 2.0 Level of Effort by Roadway Category

Category 1: Major urban freeways and most highways with six lanes and greater

(These highways are considered “high volume” and receive 24-hour coverage, during the winter storm event. See HMM 06-05-01.)

Highways in this category often have traffic congestion and snow storage problems, making typical plowing and deicing agent applications very difficult or inappropriate. Therefore, when traffic volumes and snow storage are problems on these highways it may be appropriate to use extraordinary efforts, such as chemical removal, so that snow does not pack on the roadways during the winter storm event.

On these highways service providers should maintain all lanes and ramps equally, during the winter storm event. Plowing is the first priority for snow removal, however extraordinary efforts (as described above) may be taken so that snow does not pack on the roadways during the winter storm event. The appropriateness of using extraordinary efforts shall be agreed upon with the region maintenance office. When extraordinary efforts are not deemed appropriate, de-icing application rates should be followed.

Category 2: High volume four-lane highways (AADT  $\geq$  25,000) and some four-lane highways (AADT  $<$  25,000), and some 6-lane highways.

(These highways are considered “high volume” and receive 24-hour coverage, during the winter storm event. See HMM 06-05-01)

Highways in this category typically do not have the traffic congestion and snow storage problems of those in category 1. However, they still have high traffic volumes that make it necessary to focus on more than just the driving lanes during the winter storm event.

On these highways service providers should maintain the driving lanes, ramps, and passing lanes equally during the winter storm event. Plowing is the first priority for snow removal. De-icing applications should be conducted according to HMM 06-05-01 of the Maintenance Manual. The service providers should strive to keep the snow from packing on the driving lanes, ramps, and passing lanes (if not needed for snow storage) during the winter storm event. Only enough de-icing agents should be used to keep the total accumulation workable, thereby minimizing bonding during the winter storm event. It is considered inappropriate to attempt to melt the snow as fast as it hits the ground or keep the highway wet so as to eliminate any accumulation or packing. If packing should occur, service providers should continue to plow and use sensible salting. When the winter storm event ends and conditions allow, service providers will remove any packed snow and continue working towards the goals of bare/wet and ultimately bare/dry pavement.

Category 3: All other four-lane highways (AADT  $<$  25,000)

(These highways may be considered either “high volume” or “all other” and should receive either 18-hour or 24-hour coverage, during the winter storm event. See HMM 06-05-01.)

Highways in this category have lower traffic volumes and do not fit into either category 1 or 2. Also some of the highways in this category do not receive 24-hour coverage. The typical cycle times in this category are long enough that it can sometimes be impractical to keep the snow “workable” in both the driving and passing lanes without excessive de-icing agent usage.

On these highways service providers should maintain the driving lanes and ramps equally as a first priority during the winter storm event. Plowing is the first priority for snow removal. De-icing applications should be conducted according to HMM 06-20-25 of the Maintenance Manual. The service providers should strive to keep the snow from packing on the driving lanes and ramps during the winter storm event. However, only enough de-icing agents should be used to keep the total accumulation workable, thereby minimizing bonding during the winter storm event. It is considered inappropriate to attempt to melt the snow as fast as it hits the ground or keep the highway wet so as to eliminate any accumulation or packing. If packing should occur, service providers should continue to plow and use sensible salting on the driving lane and ramps only according to the appropriate coverage (either 18 or 24 hours). When the winter storm event ends and conditions allow, service providers will remove any packed snow and continue working towards the goals of bare/wet and ultimately bare/dry pavement.

Plowing with minimal salting should be conducted on the passing lanes throughout the winter storm event but the majority of effort required to eliminate any packing conditions and eventually obtain bare/wet and ultimately bare/dry pavement conditions on the passing lanes should be done, as soon as practical, after the winter storm event.

Category 4: Most high volume two-lane highways (AADT  $\geq$  5,000) and some 2-lanes (AADT <5000)

(These highways may be considered either “high volume” or “all other” and should receive either 18-hour or 24-hour coverage, during the winter storm event. See HMM 06-05-01.)

On these highways service providers should maintain the driving lanes, during the winter storm event. Plowing is the first priority for snow removal. De-icing applications should be conducted according to HMM 06-20-25 of the Maintenance Manual. The service providers should strive to keep the snow from packing on the driving lanes during the winter storm event. Only enough de-icing agents should be used to keep the total accumulation workable, thereby minimizing bonding during the winter storm event. It is considered inappropriate to attempt to melt the snow as fast as it hits the ground or keeping the highway wet so as to eliminate any accumulation or packing. If packing should occur, service providers should continue to plow and use sensible salting. When the winter storm event ends and conditions allow, service providers will remove any packed snow and continue working towards the goals of bare/wet and ultimately bare/dry pavement.

Category 5: All other two-lane highways

(These highways are considered “all other” and receive 18-hour coverage, during the winter storm event. See HMM 06-05-01)

On these highways counties should maintain the driving lanes, during the winter storm event. Plowing is the first priority for snow removal. De-icing applications should be conducted according to HMM 06-20-25 of the Maintenance Manual. The counties should strive to keep the snow from packing on the driving lanes during the winter storm event. Only enough de-icing agents should be used to keep the total accumulation workable, thereby minimizing bonding during the winter storm event. It is considered inappropriate to attempt to melt the snow as fast as it hits the ground or keep the highway wet so as to eliminate any accumulation or packing if packing should occur, service providers should continue to plow and use sensible salting. When the winter storm event ends and conditions allow, service providers will remove any packed snow and continue working towards the goals of bare/wet and ultimately bare/dry pavement, during normal work hours (including Saturdays and Sundays).

During the time between the winter storm event ending and achieving the ultimate goal of bare pavement it is acceptable that only clear wheel tracks be provided when conditions warrant.

### **3.0 Exceptions**

Exceptions to this guideline will occur when subsequent winter storm events happen at a frequency where it is not possible to obtain passable roadway conditions and subsequently bare pavement between the events. The severity of a winter storm event, roadway temperatures, and availability of resources along with other factors will dictate how soon passable roadway conditions and subsequently bare pavement can be obtained. Also, it may be deemed appropriate to use extraordinary means when impending weather or an influx of traffic, such as traffic prior to a holiday, is anticipated.

Another exception can occur when the department, because of budget restrictions or unavailability of de-icing agents, has requested that service providers reduce the level of effort or passable roadway condition

expectations during the winter storm event. In such a case the department, after notifying and in cooperation with the service providers, may reduce level of effort expectations on one, several, or all five categories described above.

**4.0 Best Practices for Acceptable Roadway Conditions After the Storm has Ended (While Crews are on Overtime).**

If the following roadways conditions exist on the five categories of roadways after the storm has ended and while crews are on overtime hours, then it is desirable and acceptable to cease plowing and salting and to wait until the next day (on normal hours) to continue working towards the bare/wet and ultimately bare/dry pavement conditions.

The termination of plowing and salting at this time assumes that the weather forecast and other factors will allow this to happen.



**Category 1: Major urban freeways and most highways with six lanes and greater**



**Category 2: High volume four-lane highways (ADT  $\geq$  25,000) and some four-lane highways (ADT  $<$  25,000), and some 6-lane highways.**



**Category 3: All other four-lane highways (ADT < 25,000)**



**Category 4: Most high volume two-lane highways (ADT  $\geq$  5,000) and some 2-lanes (ADT < 5000)**



**Category 5: All other two-lane highways**