

Snow Removal Action Plan

The City of Lebanon's priority in snow removal is to enable emergency vehicles to respond, keep the schools in session, and allow citizen access to their workplace under the safest conditions possible with winter weather conditions.

City staff closely monitors weather conditions and communicates with the Office of Emergency Management and the National Weather Service prior to predicted winter weather events. Staff uses this information to plan for the upcoming storm event. As with all weather, winter weather events are sometimes unpredictable and evolve over time. In such cases action plans must be modified to fit the current conditions. The "Snow Fighter's Handbook" published by the Salt Institute states that it has been estimated that there are over 66,666 different storm conditions with different variables that affect the snow removal response and the effectiveness of the removal response. Pavement temperature, ambient temperature, pavement type, solar radiation, traffic volume, traffic speed, wind direction and velocity, topography, shaded areas, and wind chill factor are a few of the variables that affect these conditions. Action plans are intended to enable efficient and effective removal of winter precipitation from roadways while keeping labor and chemical costs within reason. Action plans and snow routes are intended to have positive impact on as many people in the shortest time possible.

Snow and ice removal is accomplished by both mechanical and chemical means. Rock salt coated with Geo-Melt, a 70% salt brine 30% beet juice solution, is used for both pre-treatment of streets and winter precipitation removal. The addition of Geo-Melt lowers the effective melting temperature of the salt reduces "bounce off" of the salt as it is spread on the street. Pre-treatment of the street surface is done in advance of the winter storm. Pre-treatment chemicals prevent the bonding of snow and ice to the pavement which allows for efficient and effective removal of snow and ice as the storm progresses.

The term "cleared" is defined in this plan as the snow removed with 75% of the pavement showing. The term "plowed" is defined as the majority of the snow removed from the driving lanes. The streets will be plowed and made passable. Salt will be applied in problem areas and in priority areas. A pea gravel/salt mixture will be applied when needed at intersections and in areas of excessive grade.

In all winter weather events, Phase 1 streets are addressed first before crews move in the Phase 2 streets. The Phase 1 streets are Principal Arterial, Major Arterial, Collector, and Residential Collector streets. Phase 2 streets are streets that lead to a collector street. The snow removal route is designed so that a person would only have to drive two blocks on a Phase 2 street before entering onto a Phase 1 street.

In most winter events with predicted accumulation, pre-treatment will take place on Principal Arterial streets, Hospital and School areas as needed.

In snow events less than 4", Phase 2 streets will only be plowed once in each direction. The windrows left by plows during these events are minor and will not be moved to the curb.

In snow events over 4", the Phase 1 streets will be cleared curb to curb first, then Phase 2 streets will be plowed curb to curb. A public announcement will be made through radio and social media advising against on-street parking and clearing driveways until the streets have been plowed.

The Airport runway, taxi way to fuel pumps, and a turn-around area will be plowed after 75% of the Phase 2 streets have been plowed. . This decision will be made by the Street Division Supervisory personnel.

Cul-de-sacs will be plowed with heavy equipment to avoid large windrows left in cul-de-sacs. Cul-de-sacs will only be addressed in snow events with over 2” accumulation.

Snow events with predicted accumulated amount < 2”

Pre-treatment of Principal Arterial streets, Hospital and School areas as needed prior to storm event. Start snow removal activities just prior to projected end of storm event or 4:00 A.M., whichever comes first.

Five trucks with salt spreaders starting on Phase 1 streets then moving to Phase 2 streets Hospital and School areas will be given the first priority.

Heavy equipment plowing City Hall/Police Station Parking, Fire Stations then Civic Center Area.

The Airport will be plowed after the Phase 2 streets.

All trucks will remain plowing until streets are considered to be in a reasonably safe traveling condition.

Snow events with predicted accumulated amount up to 4”

Pre-treatment of Principal Arterial streets, Hospital and School areas as needed prior to storm event. Start snow removal activities just prior to projected end of storm event or 4:00 A.M., whichever comes first.

Eight trucks, six of them with salt spreaders, starting on Phase 1 streets then moving to Phase 2 streets Heavy equipment plowing City Hall/Police Station Parking, Fire Stations then Civic Center Area, with City owned and maintained parking areas following.

Downtown parking areas will be cleared.

Road grader will be assigned to Principle Arterial streets then will help plow the airport area.

The snow plows will plow the airport after the Phase 2 streets.

All equipment will remain working until streets are considered to be in a reasonably safe traveling condition.

Snow events with predicted accumulated amount 4” to 12”

Pre-treatment of Principal Arterial streets, Hospital and School areas as needed prior to storm event. Prior to storm event, divide employees into two shifts and schedule 12 hour shifts utilizing employees from other departments as needed.

Start snow removal activities when accumulation reaches 2” to 3” or 4:00 A.M., whichever comes first.

Eight trucks, six of them with salt spreaders, starting on Phase 1 streets then moving to Phase 2 streets Heavy equipment plowing City Hall/Police Station Parking, Fire Stations then Civic Center Area, with City owned and maintained parking areas following.

Downtown parking will be plowed and snow hauled away after the storm event.

Heavy equipment will be assigned to clearing intersections, parking areas and any problem areas.

If conditions worsen, forces will be condensed to Phase 1 streets. Businesses that provide health care services and emergency response will be given priority treatment. Regular scheduled removal will resume as storm weakens.

The snow plows will plow the airport after the Phase 2 streets.
All equipment will remain working until streets are considered to be in a reasonably safe traveling condition.

Snow events with predicted accumulated amount > 12"

Pre-treatment of Principal Arterial streets, Hospital and School areas as needed prior to storm event.
Prior to weather event, divide employees into two shifts and schedule 12 hour shifts utilizing employees from other departments as needed.

Start snow removal activities when accumulation reaches 2" to 3" or 4:00 A.M., whichever comes first.
Eight trucks, six of them with salt spreaders, and a road grader will concentrate on Principle Arterial and Major Arterial streets, and then clear the Collector and Residential Collector streets as storm conditions allow. Phase 2 streets will be cleared after Phase 1 streets are in a reasonably safe traveling condition.
Heavy equipment plowing City Hall/Police Station Parking and Fire stations then Civic Center Area, with City owned and maintained parking areas following.

Downtown parking will be plowed and snow hauled away after the storm event.

Heavy equipment will be assigned to clearing intersections, parking areas and any problem areas.

After the storm lessens, normal operations will resume.

The snow plows will plow the airport after the Phase 2 streets.

All equipment will remain working until streets are considered to be in a reasonably safe traveling condition.