



City of Troy's Snow and Ice Control Procedures

Background

Snow and ice that accumulates on road and sidewalk surfaces create hazardous conditions for motorists and pedestrians. Because these conditions surpass a safety threshold, snow and ice accumulation creates an emergency situation requiring the city to respond accordingly. These emergency situations require thoughtful planning because of the required staff overtime and the unpredictability of winter weather. Winter snow storms become unpredictable because of various accumulations, moisture content of the snow, ambient and wind chill temperatures, timing, duration, and wind direction and velocity. These factors suggest that no two storms are identical, creating a unique plan to mitigate the hazardous conditions for each individual snow storm.

The City of Troy will implement a developed plan to mitigate the hazards created by accumulating snow and ice on road and sidewalk surfaces. Mitigation efforts shall include but are not exclusive to plowing and/or salting of road and sidewalk surfaces. Conditions may require the use of special abrasives, ice cutting equipment, and/or special chemical treatment to the road and sidewalk surfaces.

Goals and Objectives

The City of Troy's goal is to abate the hazardous conditions created from snow and ice accumulation on major roads, city operated facilities, secondary roads, and city maintained sidewalks. Motorist and pedestrians should continue to use caution while operating and functioning on roads and sidewalks during the winter months because of the potential hazards created by snow, ice, wind, and freezing temperatures.

The City of Troy will develop and implement a plan in attempts to make streets accessible for vehicles properly equipped for winter driving conditions during and after each storm, in accordance with the guidelines set herein. This plan includes attempts to clear all primary routes to bare pavement within twelve (12) hours from the end of the snow storm, designated as Priority "A". Secondary routes may be snow packed but passable during and after snow storms with less than four (4) inches of accumulation. When accumulations exceed four (4) inches from a single snow storm and weather forecasts suggest continual freezing temperatures, the City of Troy will begin plowing subdivision streets, designated Priority "E". The subdivision streets have a completion objective of 24 hours from the time the snow stops when the accumulation range is from four (4) to eight (8) inches. This completion objective increases to 36 hours when snow accumulation ranges between eight (8) to twelve (12) inches, and a completion objective of 48 hours when accumulations exceed twelve (12) inches. This objective will result in removed snow accumulating on areas adjacent to roads creating additional sight hazards for motorists and pedestrians. These objectives will also likely leave areas where pavement is not bare because of snow pack. The City of Troy advises continued caution to motorists and pedestrians during these conditions.

The City of Troy will implement the developed plan using in-house resources and contractors to mitigate snow and ice hazards at city owned facilities including parking lots and sidewalks during and after a winter snow storm, designated Priority “D”. The developed plan will include maintaining access to parking lots and facilities to abate hazards during facility operating hours. During facility non-operating hours the available resources will clear parking lots and sidewalks to bare pavement once the snow storm has stopped. The City of Troy has developed an objective to have parking lots and sidewalks clear within twelve (12) hours of the snow stopping. The City of Troy advises participants to take additional caution during facility operating hours because of the inability to clear parking lots and sidewalks completely.

Hills, intersections, and curves (HIC’s) require additional hazard mitigation when conditions are present. The City of Troy has predetermined these areas as special caution areas, designated Priority “E”.

The City of Troy will plow gravel roads only and when necessary apply a liquid deicer in efforts to abate hazards, designated Priority “E”. Motorist and pedestrians should expect to have snow pack on the gravel roads and not plowed to bare gravel. Motorist and pedestrians should exercise caution during and after snow storms when traveling on gravel roads.

The City of Troy Parks and Streets Division determine the priority and level of service for each area.

Department of Public Works Priority List

Priority "A"	Major City and County Roads	Primary
Priority "B"	City Industrial Roads	Primary
Priority "C"	School Entry Roads	Primary
Priority "D"	City Hall, Fire Stations, Community Center, Library, Nature Center, Museum, Camp Ti	Primary
Priority "E"	City Local Roads (Subdivision Roads), Hills, Intersections, Curves	Secondary
Priority "F"	City and DDA Sidewalks, Parks, Cemeteries	Tertiary

The City of Troy will accomplish these goals and objectives using the available resources and implementing a unique plan to each snow and ice event. The sophisticated snow and ice removal operation will mitigate hazardous conditions following the outlined priority list. The City of Troy recognizes the demand for an efficient and effective operation and will deploy the necessary resources indicative of the snow storm, which can range from one individual and one truck to a combination of city and contractor equipment totaling over fifty-seven (57) individuals and over forty-nine (49) pieces of equipment.

General Snow and Ice Procedures

Departments will receive notification of an impending and/or occurring snow and ice event predicted to or causing hazardous conditions on city streets, parking lots, and/or sidewalks. The City of Troy will develop a unique plan and implement the procedures set forth herein to mitigate hazardous conditions created by snow and ice.

Property owners abutting roads receiving snow plowing can expect to have windrows of snow encroach his or her driveway approaches and sidewalk ramp approaches of various accumulation, depending on the characteristics of the snow and location. This is normal of any city plowing operation. Plow truck operators will be cognizant of where snow is pushed and attempt to avoid excessive amounts of snow and ice to driveway and sidewalk approaches.

Local Streets Priority Plowing

Specific sections of the City of Troy require expedient service because of road topography. The City of Troy has predetermined these sections to receive subdivision plowing first when accumulations exceed four (4) inches and weather conditions suggest continual freezing temperatures. These sections include section 4, 5, 6, 7, 8, 17, and 18. The City of Troy will provide snow and ice removal to the remaining sections by rotating which section receives this service first. Areas that receive excess snow accumulation from plowing operations that cause additional hazards, such as sight distance obstructions at intersections will receive additional attention after all streets are abated of hazards created by snow and ice.

Snow and Ice Control Materials

Commonly used products by the City of Troy to mitigate hazardous conditions created by snow and ice include salt and deicing agents. A large salt dome at the Department of Public Works facility stores the salt and the deicing agent is stored in a large above ground storage container. The Michigan Department of Environmental Quality regulates these storage units and both are compliant.

After every snow and ice control operation the salt and deicing agent is inventoried and replenished as necessary. To minimize the storage of these products during non-winter months, The City of Troy allows inventory to decrease without reordering towards the end of the winter season.

Combining salt and deicing agents maximize their effectiveness on snow and ice. An automated system on the salt trucks applies the deicing agent to the salt, which provides lower temperature melting abilities and reduces the bounce and scatter of the salt. The City of Troy will use the deicing agent as a preventative measure before a snow and ice event to hazardous areas such as bridge decks and hills. In addition to these materials, the City of Troy may use additives such as corrosion inhibitors and anti-caking agents when appropriate.

No Salt Zones

Specific storm drains flow directly to lakes within the City of Troy creating the necessity to deem areas "No Salt Zones". This effort is to minimize the environmental impact salt can have to

waterways such as lakes. These areas will receive snow plowing but only receive deicing alternatives such as natural brine or sand when necessary. Because of these reasons, achieving bare pavement is unlikely during the winter months and requires motorists and pedestrians to use additional caution while traveling on these roads.

These streets include; Alfred, Atkins, Chancer, Crescent Way, Diane, Donegal, Dublin Fair, Edith, Emerald Lake, Emerald Shores, Erin Way, Galloway Bay, Jandale, Killarney, Lake Charnwood, Lakeside, Limerick, Little Creek, Lyster, Northpoint, Sandshores, Sandy Point, Shoreline, Smallbrook, Southpointe, Three Lakes, Walker, and Westlake

Department and Personnel Responsibilities

The Department of Public Works and its designee will receive notification from the Troy Police Department when impending safety threshold of city roads and facilities is in jeopardy from snow and ice conditions during non-regular operating hours. During normal operating hours, the Department of Public Works' staff will monitor the safety threshold of city roads and facilities. The Department of Public Works will receive specific concerns of hazardous conditions at (248) 524-3392 during normal working days and hours. Staff will determine the intensity of each snow storm and dispatch crews appropriately to ensure an effective and efficient operation.

Snow storms are divided into twelve (12) hour shifts and personnel assigned to these shifts will rotate shifts until the mitigation of the hazardous condition is achieved. The City of Troy will use qualified personnel from all departments in efforts to abate hazards in an efficient and effective operation. This operation is ready for deployment 24-hours a day, 7 days a week.

- **Public Works Director-** The Director's primary responsibility is to facilitate all snow and ice removal operations between the involved departments. This position also ensures efficient and effective operations to mitigate hazardous conditions created by snow and ice. The Director will communicate operational progress to the City Manager and/or his or her designee.
- **Superintendent of Parks, Streets, and Drains-** Under the direction of the Public Works Director, the Superintendent's responsibilities include the development and implementation of the hazardous condition mitigation operation created by snow and ice. This includes determining and deploying available resources, which include City of Troy employees and equipment from other departments, and contracted firms. In the absence of the Public Works Director, the Superintendent of Parks, Streets, and Drains assumes the authority of the Director and will act as his or her designee.
- **Superintendent of Fleet Maintenance-** Under the direction of the Public Works Director, the Superintendent's responsibilities include mobilization of the necessary resources to abate hazardous conditions created from snow and ice. This includes ensuring personnel are available to maintain the necessary equipment before and during a snow and ice event. He or she will provide an updated equipment status list to the Director during a snow storm.
- **Public Works Office Coordinator-** Under the direction of the Public Works Director, the Office Coordinator's responsibilities include receiving public communication and transferring this communication to the appropriate department(s). These departments include the Manager's Office, Community Affairs Department, Police Department, and Fire

Department. The Office Coordinator will communicate the operation's status at 8 a.m., 12 noon, 4 p.m., and other intervals deemed necessary by the Public Works Director, which includes updating the Audex Message System for the public.

Mutual Aid Agreement

The Road Commission for Oakland County maintains the state owned I-75 Interstate. The Troy Police Department may request additional maintenance by City of Troy crews on the interstate if necessary. These requested operations include plowing and/or salting of on and off ramps and/or other specific sections of the interstate.

Emergency Requests

The City of Troy provides the Police Department with the authority to request additional snow and ice control for medical or fire emergencies. These requests will follow the standard communication guidelines provided in "**Department and Personnel Responsibilities**". The Police Department will provide the exact location and/or route that require additional service for proper personnel and equipment dispatch.

The City of Troy Police Department will evaluate special individual request from residents to provide an additional or elevated service to lessen hazardous conditions created from snow and ice. These requests include resident's request to have his or her subdivision street mitigated of hazards created by snow and ice for medical in-home services or regular medical visits. The City of Troy Department of Public Works will act only on these types of requests from the Troy Police Department.

Assistance to Private Property

The City of Troy prohibits its employees from using City of Troy equipment to push, pull, or tow a standard private vehicle. City of Troy employees will assist the motorist if a hazardous situation exists by calling the Troy Police Department by radio. The City of Troy prohibits its employees from using City of Troy equipment to remove snow and/or ice from private property.

Property Damage

Unintentional damage may occur to public and private property during snow and ice removal operations. The City of Troy will follow the listed guidelines for repairing said damaged property.

Right-of-Way

- The City of Troy will provide turf restoration when weather permits.
- Whenever possible the City of Troy will attempt to repair the turf area with the existing turf if it is rolled or flipped by a plow.
- If the damaged turf area is less than nine (9) inches wide the City of Troy will provide topsoil and seed to the damaged area.
- If the damaged turf area is greater than nine (9) inches wide the City of Troy will provide sod to the damaged area.

Mailbox Damage

- The City of Troy will replace mailboxes when ground conditions permit.
- The City of Troy will place a temporary mailbox if ground conditions do not permit a permanent repair.

- The City of Troy will replace a damaged standard mailbox caused by the City of Troy's snow removal operation with a standard generic mailbox at no cost to the property owner.
- The City of Troy will offer property owners with damaged standard mailboxes to upgrade to a Rubber Maid mailbox including a 4"x6" wood post.
- The City of Troy will reimburse owners of designer mailboxes to a maximum of \$250.00, which requires cost verification by an original receipt.

Required Certifications

City of Troy equipment operators are required to obtain and keep current a Commercial Drivers License (CDL) through the State of Michigan. The City of Troy enforces State of Michigan regulations that require all CDL drivers to maintain an up-to-date medical certification and comply with all other regulations.

Departure from Procedure

The general procedures and guidelines presented herein do not predict every circumstance regarding snow and ice control. The intent of these general procedures and guidelines is to provide snow and ice removal operations to abate hazardous conditions. Therefore, unexpected circumstances may require the City of Troy to deviate from the presented general procedures and guidelines. The City of Troy's Public Works Director and/or his or her designee has the authority to deviate from these general procedures and guidelines to meet the intent of mitigating a hazard caused by snow and ice.

(Last updated December 2011)