



Snow and Ice Control Plan

Chapter 27: Snow and Ice Control – 10th Edition

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Date

Snow and Ice Control Plan

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1. Snow Removal Objectives and Priorities

a. Statement of Objectives

One of the primary objectives of the Department of Public Works is to provide for the safe and orderly movement of traffic in the City of Fishers during snow and/or ice events. This Snow and Ice Control Plan outlines the procedures used by the Department of Public Works for snow removal operations.

Additionally, the Department of Public Works will strive to meet the following objectives:

- Inspect and maintain all vehicles and equipment used for snow and ice control prior to and during the winter season
- Train personnel on the Snow and Ice Control Plan
- Train personnel in the operation of equipment and in understanding winter control measures in the use of equipment and application of materials
- Select resources to accurately identify approaching storms

b. Snow Removal Priorities

All roads in the City of Fishers are prioritized into groups for conducting snow removal operations, and snow plowing routes are also color coded for easy identification. The Department of Public Works and the Department of Engineering collaborate each year to create a snow plow map. The map includes all dedicated streets in the City of Fishers. The following summarizes the snow removal priorities:

Priority 1: Primary Roads (Blue)

Primary roads facilitate traffic coming into and through the City of Fishers. This roadway network must be kept open to provide a transportation system that connects public safety facilities throughout the city. Hospitals, fire stations, police stations, and schools are located on blue priority roads.

Priority 2: Secondary Roads (Green)

Secondary roads are feeder roads that distribute traffic towards subdivision main roads and subdivision roads. These higher traffic roads may have schools, parks, businesses, and be the primary road within a subdivision.

Priority 3: Subdivision Main Roads (Red)

Subdivision main roads are connector roads that make up a residential neighborhood.

Priority 4: Subdivision Roads (Purple)

Subdivision roads are primarily cul-de-sacs and dead-end roads within a residential neighborhood.

Other Roads (Not Highlighted)

Any road that is not highlighted is not incorporated in the City of Fishers or is identified as a private road. These roads are not serviced by the City of Fishers.

The basic roadway network consisting of priority one (Blue) roads and most priority two (Green) roads will be maintained at the highest service level depending on the

conditions. Priority three (Red) roads and priority four (Purple) roads will be maintained as the winter storm conditions allow.

2. Snow and Ice Control Operations

a. Operations Policy < 27.1 > < 27.3 > < 27.8 >

- i. When a snow and/or ice event is predicted, snow removal personnel will be mobilized to staff equipment. Equipment and labor will be assigned to all eight areas in the City of Fishers on the snow plow map. The weather forecast and the predicted intensity of the storm will dictate the required level of staffing. Equipment and personnel from all divisions within the Department of Public Works and personnel from other city departments (Engineering) will be used to staff equipment. If the snow and/or ice event is significant enough that all snow cannot be removed during normal working hours, city personnel shall be divided and placed on two twelve (12) hour shifts. The two twelve-hour shifts will remain in effect until all roads are accessible.
- ii. A variety of materials may be used for snow and ice control such as granular salt, sand, or liquid deicer. The Department of Public Works supervisor on-duty will determine the required materials and application rates to be used for anti-icing and/or de-icing operations. All equipment and personnel will use the required application rates.
- iii. The Snow Operations Command at the Eller Road, DPW Operations Building and the Emergency Operations Center in the Municipal Complex may be staffed depending upon weather conditions. Snow Operations will continue until the storm abates. During snow plowing, a reduced application of de-icing materials will be used on the roads. When the snow and/or ice event is over, cleanup operations will be performed.
- iv. Lesser priority roads may be dropped from plowing depending on snow conditions. The priority 4 (Purple) roads are dropped first, followed by priority 3 (Red) roads. The city will not plow new roads that do not have the final surface asphalt layer as they are not a part of the city inventory of roads.

b. Organizational Structure

All snow and ice control activities are under the operational jurisdiction of the Director of Public Works who is responsible for the development and execution of the City of Fishers Snow and Ice Control Plan. The plan establishes the following chain of command:

- i. Director of Public Works
- ii. Assistant Director of Operations
- iii. Superintendent of Street Maintenance
- iv. Snow Command
- v. Quality Control
- vi. Area Leaders
- vii. Equipment Operators and Drivers

c. Department Responsibilities

i. Department of Public Works

The Department of Public Works has overall responsibility for the development and execution of the Snow and Ice Control Plan. Several positions in the chain

of command of the department have key responsibilities for snow and ice control as described below:

1. Director of Public Works
 - a. Monitor weather conditions
 - b. Activate Snow Command or Emergency Operations Center
 - c. Staff the Emergency Operations Center
 - d. Establish snow and ice control policies
 - e. Review snow and ice control performance
 - f. Ensure Snow and Ice Control Plan is updated annually
 - g. Notify the Mayor's Office of the need to declare a snow emergency
 - h. Initiate any road closures
2. Assistant Director of Operations < 27.5 >
 - a. Implement policies and guidelines set forth by the Director of Public Works
 - b. Staff the Snow Command and/or the Emergency Operations Center
 - c. Monitor weather conditions
 - d. Establish snow and ice control policies
 - e. Ensure recovery planning and coordination is done
 - f. Review snow and ice control performance
 - g. Ensure we have appropriate equipment and material to accomplish the Snow and Ice Control Plan
3. Superintendent of Streets Maintenance < 27.2 > < 27.4 > < 27.5 >
 - a. Responsible for the implementation and coordination of the snow and ice control policies
 - b. Update the Snow and Ice Control Plan annually
 - c. Monitor weather conditions using certified meteorologist, public weather forecasting services or internet resources
 - d. Mobilize personnel to begin snow and ice control operations. Mobilization instructions are sent via email distribution list and/or cellular telephone.
 - e. Establish snow routes
 - f. Establish personnel and equipment requirements based on the plan
 - g. Direct and monitor overall snow and ice control operations
 - h. Initiate and report road closures to Public Safety and Public Relations
 - i. Staff the Snow Command and/or the Emergency Operations Center
 - j. Implement policies and guidelines as set forth by the Director of Public Works or Assistant Director of Operations
 - k. Keep Snow Command and/or Emergency Operations Center aware of snow and/or ice event conditions
 - l. Manage and schedule personnel assigned to snow and ice control including full-time and part-time personnel

- m. Ensure that equipment designated for snow and ice control operations is inspected and operable each year
 - n. Ensure the calibration of all spreading equipment prior to the winter season and during the season as needed
 - o. Coordinate the development and scheduling of operational training each year
 - p. Maintain the contact list for all snow and ice control personnel
 - q. Manage the inventory of granular salt, liquid deicer, sand and other materials needed during the winter season
 - r. Create appropriate reports using management data
 - s. Perform vehicle and equipment inspections prior to and during snow and ice control operations
 - t.
4. Snow Command
- a. Staff the Snow Command or Emergency Operations Center
 - b. Prepare for next operational period
 - c. Manage quality control and area leaders to accomplish Snow and Ice Control Plan
 - d. Responsible for the delegation of resources to accomplish the Snow and Ice Control Plan
 - e. Update staff in the field on expectations and status of the event
 - f. Direct snow and ice control operations within various geographical areas
 - g. Provide a status report to the Emergency Operations Center
 - h. Collect management reporting data for appropriate reports
 - i. Communicate with the public safety departments and fleet maintenance as needed
 - j. Initiate road closures and report to superintendent
 - k. Implement policies and guidelines as set forth by the Director of Public Works or Assistant Director of Operations
 - l. Ensure the calibration of all spreading equipment prior to the winter season and during the season as needed
 - m. Maintain the contact list for all snow and ice control personnel
 - n. Create appropriate reports using management data
 - o. Monitor weather conditions
 - p. Ensure work is completed according to expectations and the Snow and Ice Control Plan
 - q. Record management reporting data – granular salt, sand, and liquid deicer usage
 - r. Assist with training seasonal employees and new employees assigned to snow and ice control operations
 - s. Perform vehicle and equipment inspections prior to and during snow and ice control operations
 - t.
5. Quality Control
- a. Monitor staff and equipment in assigned area
 - b. Ensure work is completed according to expectations and the Snow and Ice Control Plan

- c. Responsible for the delegation of resources to accomplish the Snow and Ice Control Plan
- d. Monitor radio traffic
- e. Assist with fleet and equipment issues as needed
- f. Respond to damage reports and/or accident/crash scenes
- g. Assist with training seasonal employees and new employees assigned to snow and ice control operations
- h. Recommend road closures
- i. Perform vehicle and equipment inspections prior to and during snow and ice control operations
- j.

6. Area Leaders

- a. Responsible for carrying out the snow and ice control operations within the assigned area
- b. Primarily Commercial Driver's License Operators
- c. Responsible for area control and completion of tasks
- d. Manage a crew of staff assigned to their area
- e. Keep records of management reporting data
- f. Notify Snow Command of additional personnel or equipment needs or issues
- g. Perform vehicle and equipment inspections prior to and during snow and ice control operations
- h.

7. Equipment Operators and Drivers

- a. Perform vehicle and equipment inspections prior to and during snow and ice control operations
- b. Follow instructions of assigned supervisors concerning methods of treatment and assignments
- c. Provide status reports to supervisor and informing supervisor of any breakdowns, delays, damage, or difficulties
- d. Clean and inspect equipment during operations
- e. Clean and inspect equipment after operations and report any equipment service/repair needs
- f. Perform duties as assigned by supervisors

ii. Fleet Management Department < 27.6 >

The Fleet Management Department is responsible for the maintenance of all city vehicles and equipment throughout the year. Vehicles and equipment are scheduled for preventative maintenance, service, and inspection annually or as needed. Vehicles and equipment used for snow and ice control are inspected at a predetermined date in advance of the winter season.

The Fleet Management Department is responsible for staffing the fleet garage to keep vehicles and equipment operational during snow and ice control operations. This includes when snow operations are scheduled 24 hours per day until the conclusion of the snow and/or ice event.

d. Snow Command Centers

i. Snow Command

Snow Command is located on the first floor of the Department of Public Work Operations Building, 10212 Eller Road. Snow Command is furnished with the proper office and communications equipment to perform the various functions detailed below. The Operations Building provides a staging area for personnel assigned to snow and ice control.

Snow Command shall have three primary functions:

1. If the Emergency Operations Center is active, snow command staff will keep the EOC advised of the status of the storm and road conditions.
2. Develop, maintain, and provide support information and data relevant to snow and ice control operations.
3. Act as the communications and coordinating center for snow and ice control operations. Monitor equipment status, personnel, road conditions and all aspects of the field operation.

Snow Command will be operated by the Superintendent of Street Maintenance or a Street Maintenance Foreman. Other personnel may be assigned depending on the intensity, severity, and duration of the snow and/or ice event. In any snow and/or ice event where Snow Command is staffed, the center shall be under the administrative direction of the Director of Public Works or designee.

ii. Emergency Operations Center

The Emergency Operations Center (EOC) is located in the Fishers Fire Station in the Municipal Complex. Telephone and radio communications are available for department directors to have contact with various departments, as well as allowing EOC personnel to monitor the operation.

When the EOC is activated, it will be staffed by the following departments and/or personnel:

1. Mayor's Office
2. Public Relations
3. Public Works
4. Police
5. Fire
6. Parks

City maps showing all the snow routes will be maintained in the EOC. The public works representative will maintain a snow and/or ice progress report and will advise and coordinate with other city representatives.

e. **Detailed Operational Policy < 27.1 > < 27.10 >**

i. Snow and/or Ice Event Categories

Snow and/or ice events that occur in our area may be categorized into four basic types. The response to the event is different for each category. The following presents information concerning these categories, the service levels

maintained, the materials used, and the staffing response levels for each type of event.

Category 1

Predicted Snow Fall Amount: Trace – 2 inches

Service Level: Maintain primary (blue) and secondary (green) roads during the snow event. Subdivision main (red) roads and subdivision (purple) roads do not receive service until the accumulated snow level is 2 inches or greater on the road. Schools and fire stations receive the highest level of service.

Materials: Liquid deicer and granular salt as needed

Road treatment primarily consists of applying liquid deicer if necessary, prior to the onset of the snow and/or ice event. Liquid deicer may be applied only to bridges, cross pipes, and overpasses depending on weather conditions. Granular salt may also be used depending on the weather conditions. Typically, these storms move out of the City of Fishers within 24 hours. Materials are applied as needed to meet the highest level of service. This category does not typically require multiple work shift or the use of personnel from other departments.

The Department of Public Works does not apply granular salt in neighborhood subdivisions. The only exception will be predetermined roads with a significant curve, elevation change, or school bus route.

Category 2

Predicted Snow Fall Amount: 2 inches to 6 inches

Service Level: Maintain primary (blue) and secondary (green) roads during the event. Schools and fire stations receive the highest level of service. The subdivision main (red) and the subdivision (purple) roads are a lower priority and will be cleared after the snow event.

Materials: Liquid deicer and granular salt

Snow events in this category require all available snow and ice control vehicles, equipment, and personnel. Schools may be closed. Liquid deicer may be applied throughout the city including all four priorities of roadway prior to the snow event. Granular salt may be applied on primary (blue) roads. Plowing will be required as snow accumulates. The primary (blue) and secondary (green) roads will receive all available resources. Once cleared, subdivision main (red) and subdivision (purple) roads will receive plow resources. If snow accumulates again on the primary and secondary roads, resources will pull out of the neighborhoods to concentrate on the primary and secondary roads. The subdivision main roads and the subdivision roads will be cleared after the snow event. Multiple work shifts are usually required for this category and will continue until all roads are accessible in the City of Fishers.

The Department of Public Works does not apply granular salt in neighborhood subdivisions. The only exception will be predetermined roads with a significant curve, elevation change, or school bus route.

Category 3

Predicted Snow Fall Amount: 6 inches or more

Service Level: Primary (blue) roads will be our focus during the snow event. Secondary (green) roads are plowed after the primary roads are accessible. Schools and fire stations receive the highest level of service. Subdivision main (red) and subdivision (purple) roads are plowed after the snow event.

Materials: Liquid deicer and granular salt

This category includes storms with sufficient snowfall to cause a major disruption in the transportation system. Businesses and schools may be closed. Liquid deicer may be applied throughout the city including all four priorities of roadway prior to the snow event. Granular salt may be applied on primary (blue) roads. Plowing will be required for this snow event. The primary (blue) roads will be our focus during this category snow event. The primary (blue) and secondary (green) roads will receive all available resources. The subdivision main (red) and the subdivision (purple) roads will be cleared after the snow event. Multiple work shifts are required for this category and will continue until all roads are accessible in the City of Fishers.

The Department of Public Works does not apply granular salt in neighborhood subdivisions. The only exception will be predetermined roads with a significant curve, elevation change, or school bus route.

Category 4

Predicted Event Ice

Service Level: Primary (blue) roads will be our focus during ice event. Secondary (green) roads will be made accessible after the primary roads are accessible. Schools and fire stations receive the highest level of service. Subdivision main (red) and subdivision (purple) roads after the ice event.

Materials: Liquid deicer, sand, and granular salt

An ice event is likely to cause a major disruption in the transportation system in the City of Fishers. Businesses and schools may be closed. If conditions allow, liquid deicer may be applied throughout the city including all four priorities of roadway prior to the ice event. Granular salt shall be applied on primary (blue) roads, secondary (green) roads, bridges, cross pipes, and overpasses. Multiple shifts may be required for an ice event.

The Department of Public Works does not apply granular salt in neighborhood subdivisions. The only exception will be predetermined roads with a significant curve, elevation change, or school bus route.

ii. Snow and Ice Control Materials < 27.5 >

The Snow and Ice Control Plan prioritizes roads and categorizes the level of service for predicted snow and/or ice events. Using the plan, the Director of Public works manages the following guidelines established for the identification, acquisition, application and storage of snow and ice control materials.

1. Collaborate with local and national public works organizations to identify best practices and the best material for snow and ice operations in the City of Fishers
2. The Assistant Director of Operations will manage the operational budget to purchase all vehicles, equipment, and materials in advance of the winter season
3. The Department of Public Works will store the material following manufacturers guidelines. Storage will be monitored to avoid loss of material or contamination and confirm that safety guidelines are followed
4. Snow Command will determine application rates and what type of material is used during each snow and/or ice event based on the weather conditions, time of day, wind, pavement temperature, and intensity and form of precipitation

iii. Inspection and Calibration of Vehicles and Equipment < 27.6 > < 27.7 >

The Department of Public Works will coordinate inspections and service with the Fleet Management Department. Additionally, DPW personnel will inspect vehicles daily. At a predetermined date prior to the winter season, DPW personnel will inspect and install snow and ice control equipment on vehicles. Plows will be inspected and installed, deicing equipment will be inspected and installed, and granular salt spinners will be inspected and installed.

Snow and ice control equipment requiring calibration will be properly calibrated prior to and during the winter season. Supervisors will assign appropriate settings prior to and during a snow and/or ice event based on conditions at the time.

iv. Mobilization < 27.2 >

The Superintendent of Street Maintenance and Snow Command will monitor weather conditions and the weather forecast provided by certified meteorologists, public weather services, and/or internet resources. Based on the forecast and the current weather conditions, DPW will make the decision to mobilize a portion or all personnel assigned to snow and ice operations. Operational reporting times will also be assigned upon full deployment to 12-hour shifts. Personnel are notified by email, telephone, and/or iPad.

v. Loading Snow and Ice Control Material < 27.9 >

DPW vehicles designed to apply snow and ice control material will be loaded at a DPW facility. DPW personnel assigned to loading granular salt will utilize backhoes, skid steers and/or frontend loaders to place the material in vehicles. DPW loaders and drivers are trained to identify the Gross Vehicle Weight Rating.

The GVWR as specified by the manufacturer, includes the chassis, body, engine, engine fluids, fuel, accessories, driver, passengers, and cargo. Vehicles will not be loaded with material to exceed the GVWR.

vi. Spreading and Plowing Procedures < 27.10 >

1. Snow and ice control personnel are trained to do the following:
 - a. Receive vehicle and route assignment from a supervisor
 - b. Inspect vehicle, plow, and check engine fluids
 - c. Check communications radio
 - d. Check snow and ice control material levels – granular salt and liquid deicer
 - e. Verify calibration settings
 - f. Report to assigned section and plow/treat roads according to the priorities listed in the Snow and Ice Control Plan or as instructed by a supervisor
 - g. Monitor radio traffic, any radio traffic should contain short and clear language to keep channel clear for emergencies
 - h. Plow snow from center to right and clear curb to curb
 - i. On school days, school properties are considered high priority
 - j. Primary (blue) roads are treated prior to the A.M. and P.M. rush hour depending on the conditions
 - k. Walk around and inspect vehicle and plow once per hour during your 12-hour shift
 - l. Remove snow/ice buildup on windshield, windshield wipers, mirrors, and lights as needed
 - m. Check granular salt and liquid deicer levels once per hour, notify a supervisor if you need to reload
 - n. Provide status updates as requested
 - o. If tandem plowing:
 - i. Allow stopping distance according to road conditions
 - ii. Lead vehicle aligns plow edge at the center of the road
 - iii. Trail vehicle plows to the curb
 - iv. Rear driver shall assist lead driver when backing is necessary
 - p. If vehicle or equipment break down, become damaged or worn:
 - i. Inspect the plow blade hourly or after striking a manhole cover, curb, or any other object in the road
 - ii. Report equipment issues to a supervisor
 - iii. Report vehicle issues to a supervisor
 - iv. Transport vehicle to the Fleet Maintenance Garage or other facility as instructed by a supervisor
 - q. End of shift procedures include the following:
 - i. Report the status of the roads in your assigned area to a supervisor
 - ii. If weather permits, quickly wash the vehicle concentrating on the windshield, mirrors, and lights
 - iii. Inspect the vehicle for damage and worn parts
 - iv. Confirm vehicle has fuel, above half is required

- v. Check with supervisor before clocking out to determine next time to report for plowing
- vi. Report status and/or any issues to the next driver assigned to vehicle

v. Snow and Ice Control Damages < 27.12 >

1. Snow and ice control requires continuous service. Incidents where personal property is damaged may occur. Common damage includes yard/turf damage or mailbox/post damage. Other damage may include damage to parked cars, curbs, and/or other infrastructure.
2. Snow and ice control drivers are trained in the following procedures:
 - a. Report damage to private property to an on-duty supervisor
 - b. If in person, give the private property owner contact information to the Department of Public Works
 - c. Department of Public Works Policy on damage to private property
 - i. DPW will return when weather permits to repair yard damage caused by our plow blade. DPW will level the ground with new topsoil and apply grass seed. This will generally occur in early Spring. The property owner is expected to water the seed as necessary. If the sod can be replaced, it will be laid in place to continue growing
 - ii. DPW will repair and/or replace mailboxes and posts that are damaged by the plow blade or snow roll. DPW will match HOA design standards as required. A temporary mailbox will be used until the end of the snow season.
 - iii. Decorations or irrigation systems in the right-of-way will not be repaired or replaced. They are installed at the property owner's risk
 - d. Vehicle crash or damage to a parked vehicle
 - i. If a city snow and ice control vehicle is involved in a crash, the driver is trained to do the following: notify the Fishers Police Department, notify a DPW supervisor, and/or call 911 to report injuries
 - ii. If a city snow and ice control vehicle causes damage to a parked vehicle, the driver is trained to do the following: report damage to a DPW supervisor, attempt to contact the vehicle owner, and contact Fishers Police
 - iii. The Department of Public Works will work with the city insurance carrier to review claims of damage as needed

vi. Towing Procedures

1. Towing stalled or abandoned vehicles may be necessary so snow and ice control operations can be effective in keeping priority snow routes open for safe traffic flow. Drivers are trained to notify a DPW supervisor and/or the Fishers Police Department. The decision and authority to tow a vehicle is on the police department.
2. City owned vehicles shall not be used to tow another vehicle

vii. Snow Storage and Parking Limitations < 27.11 > < 27.13 >

1. The City of Fishers does not collect or store snow. DPW utilizes right-of-way areas along the road to push snow off the roadway
2. The City of Fishers does not have a parking ordinance restricting on-street parking during a snow and/or ice event

viii. After the Snow and/or Ice Event

The Street Division of the Department of Public Works shall prepare an After-Action Report of the snow and ice control operation that will contain the following:

1. Amount of material used to include cost
2. Number of miles
3. Total labor hours
4. After action information

The After-Action report is completed in the asset management/work order software and is available for review.

3. Training for Snow and Ice Control Operations < 27.1 >

a. Classroom Training

- i. City personnel assigned to snow and ice control operations are required to attend the training. A two-hour classroom presentation provides for a review of the Snow and Ice Control Plan as well as instruction on operations.

b. Practical/Hands-On Training

- i. All snow and ice control personnel are trained to inspect snow and ice control vehicles and equipment. Each piece of equipment and all areas of the inspection are explained, and the inspection process is demonstrated by a senior snow and ice control operator
- ii. All snow and ice control personnel ride with an experienced operator for 12 hours prior to being released on their own. New drivers will drive and operate the equipment during this 12-hour period. Additional training hours are scheduled as needed.