

Snow and Ice Control Plan



2022-2023

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The purpose of the City of Columbus Snow and Ice Control Plan is to allocate trained personnel, proper equipment and adequate materials to provide Passable Roadways that allow for safe traveling conditions on roadways.

***Passable Roadways** are defined as roadway conditions that allow for traffic movement on a safe driving surface, with a reasonable amount of inconvenience due to current and recent weather conditions.*

A passable roadway should not be mistaken for a “bare pavement” goal.

The plan’s major objectives are:

- Safe traveling conditions
- Safe passable roads and school bus routes
- Efficient snow and ice control service



Each snow and ice control event is different and is accompanied by challenges that can impact areas of the city independently. Columbus covers approximately 225 square miles, and localized conditions in different areas means that different forms of precipitation may be occurring.

The Columbus Climate Action Plan identifies the two major climate hazards that are likely to have the most impact on the city: rising temperatures and increasing precipitation. These changes present additional snow and ice control challenges as sudden temperature swings occur and affect precipitation type and the freeze/thaw cycle.

City Roadway Types:

Arterial Roadways (Priority 1)

- The city is responsible for several non-interstate freeways, including portions of US 33 and State Routes 315, 104 and 161. Arterial roadways provide a high degree of mobility by servicing major activity centers, carry higher traffic volumes, interconnect and provide continuity for major corridors throughout the city. These roadways also serve intra-area travel for the Downtown area and outlying residential areas. Arterial routes cover approximately 1,550 city lane miles.
- When Columbus City Schools is in session, streets around schools are serviced as a top priority.

Residential Collector Roadways (Priority 2)

- Residential Collector roadways funnel traffic from the local residential roadways in neighborhoods to the arterial network. They typically are longer, have higher speed limits and traffic volumes, and include more signalized intersections. Collector routes cover approximately 1,200 city lane miles.

Residential Roadways (Priority 3)

- Remaining roads are classified as Local and/or Residential roadways. They carry little to no through movement and have lower traffic volumes. P3 routes cover approximately 1,950 city lane miles.

The city manages snow and ice control activities for more than 4,700 lane miles of Columbus roadway. Since each winter weather event is different, each may require a different approach and techniques to service Arterial and Residential Collector roadways. These roadways are given the highest priority because they service critical infrastructure and the largest volumes of traffic.

Residential streets (Priority 3) are plowed when significant snowfall of 4 inches or more occurs. *The city is piloting a program that will deploy trained auxiliary city staff to treat or plow these neighborhood streets as soon as snow starts to fall when approximately 4 or more inches is forecasted.*

Residential streets (Priority 3) are serviced by plow only and no salt is used. The city strives to be environmentally sensitive in using salt to treat roadways. Minimizing usage helps to protect our community’s waterways, infrastructure, plants and wildlife.

***Note:** Freeways within the city are treated by the Ohio Department of Transportation (ODOT). Columbus has service agreements with some neighboring jurisdictions to assist in efficient snow and ice control on roadways within each other’s jurisdictions. The city does not treat private roadways.*

What to Expect During a Winter Weather Event

The Snow Warriors' snow and ice control efforts begin on Arterial roadways, and they continue to service them as needed throughout an event. When Arterials are in good condition, Collector roadways are serviced. Next, Residential streets are serviced when warranted by a significant snow/ice event.

To ensure our Snow Warriors can safely and efficiently service city roadways, please give their plows room to work, park off street if possible and drive at speeds appropriate for conditions.

- The focus on Arterial and Residential Collector streets is to reduce the ability for ice to bond to the pavement and to control accumulation on the roadway to maintain passable roadways. Once snow has ended, the city services these streets until they generally achieve bare/wet pavement conditions.
- When 4 or more inches of snow is forecasted, Residential streets will be serviced when snowfall begins by a city pilot program that deploys additional plow-equipped pickup trucks operated by trained auxiliary city staff.

The city continues to monitor roadways for icy spots, areas where winds redeposit snow in travel lanes and roadways where refreeze potential is high after a winter event ends. Crews may also clear catch basins so that melting snow can run off.

Note: It is common for Snow Warriors to service sections of a lower priority street as they drive them on their way to the next section of a higher priority roadway. Lower priority roadway sections may also be serviced when a plow travels across them to return to a city maintenance outpost to resupply or refuel.

Winter Weather Event Equipment, Materials and Staffing

Equipment

The city's frontline snow fleet features tandem and single axle dump trucks equipped with snow plows and salt spreaders with a wetting system; they are used primarily to service Arterial and Residential Collector roadways.

The fleet's F550 dump trucks are equipped the same as the axle dump trucks and are used to service Residential and Collector streets. The F350 pickup trucks are equipped with snow plows and salt boxes with a spreader, and the F250 pickups are equipped with snow plows only. Both are used to service Residential streets.

- For minor, or nuisance, winter precipitation of 1 inch or less, the Snow Warriors will service roadways with up to 45 tandem and single axle dump trucks, depending on localized conditions.
- For moderate events of approximately 1 to 3 inches, a minimum callout of 55 tandem and single axle dump trucks and 15 plow-equipped pickup trucks will service roadways.
- For major events of approximately 4 or more inches, a minimum callout of 55 tandem and single axle dump trucks and 15 or more plow-equipped pickup trucks will service roadways. This will be supplemented by the pilot program's auxiliary staff operating additional plow-equipped pickups to service Residential streets when snowfall begins.

Our snow fleet also includes tractors equipped with snow plows, front-end loaders, road graders, belt loaders and skid loaders for tasks such as loading and removing large amounts of snow.



Materials

The city uses various materials to melt snow and ice, depending on current and predicted weather conditions and possibly the roadway type being treated, such as its pavement or grade.

Each of the five Department of Public Service street maintenance outposts located around the city stores supplies of salt, Brine (salt brine), Liquid Calcium Chloride, and Beet Juice for use to initially clear roadways. Four of our outpost also manufactures salt brine to help coat the road and make it less susceptible to ice bonding to the pavement. Salt and salt brine are most effective when used before snow or ice falls and when temperatures are above 15 degrees.

Prior to a forecasted winter weather event, the Snow Warriors treat city roadways with anti-icing liquids to help prevent or lessen snow and ice from bonding with the pavement. Anti-icing is not performed during rain because the liquids are washed away and ineffective. Deicing is performed to help melt snow and ice that has accumulated on roadways.

Staffing

The city's Street Maintenance crews are trained Snow Warriors who are assigned winter shifts from late November through March to staff winter weather events as needed 24 hours a day, seven days a week. If warranted by a winter weather event, the Department of Public Service will request assistance from trained staff in other city departments to service roadways.

In addition, the pilot program's trained auxiliary city staff will be called in to assist in servicing Residential routes when snowfall amounts warrant. A spotter at each outpost travels roadways in their area to monitor conditions.

The city's snow operations team participates in extensive classroom and hands-on training annually about our snow and ice control fleet and equipment, and the materials and weather forecasting system we use on roadways.

Warrior Watch and Social Media

The city's Warrior Watch program allows residents to see when the Snow Warriors last serviced a street. Visit Warrior Watch at <https://warriorwatch.columbus.gov> for updates and to learn if your street is in an Arterial P1, Residential Collector P2 or Residential P3 street.

Follow the Department of Public Service on **Facebook** @ColumbusPublicService and **Twitter** @ColumbusDPS for updates during winter weather events.

Frequently Asked Questions

Q: Every year the street next to mine gets plowed and my street is passed by. Why?

A: The City follows a priority plowing strategy that clears priority 1, 2 and then 3 in that order. Depending on your street type and those around you, the timing of snow removal may vary.

Q: The truck plowed my street but there is still snow on it. Is there something wrong with the plow?

A: No. In most cases the snow is "hard packed" in the residential areas and the plows do not scrape down to the pavement. The City's goal is to make your street passable to traffic.

Q: Why can't the plow driver lift the plow when going past my driveway?

A: If a driver raises or turns the plow when approaching any given driveway, the snow in front of the plow will be dumped into a pile in the street. The result would be an even greater amount of snow piles at the end of the driveway and packed snow/ice on the pavement. Shoveling snow at the end of a driveway is not a fun job, but unfortunately, there is no way for the plow trucks to avoid depositing snow there.

Q: How do I find out more information about Snow Emergency Levels?

A: Contact your local county's website.

Q: What is the City's salting and deicing protocol?

A: Salt is applied at a rate that balances optimum deicing performance with environmental and cost control factors. Salt alone is effective to 15 degrees Fahrenheit. The City treats salt with a brine and/or beet juice solution making the salt product effective down to a road temperature of (5) degrees Fahrenheit. The ability to melt snow and ice with chemicals is not unlimited and a combination of tire traffic and/or sunshine is needed to enhance the effectiveness of deicing treatments.

Q: Why don't I ever see a plow truck on my street?

A: Residential Plowing commences when snow accumulation is forecast to exceed approximately 4 inches. In smaller winter weather events, residential street plowing may not commence until both Priority 1 and Priority 2 routes have been serviced, depending on the complexity of the event. Therefore, plowing could begin in the late hours of the evening or early hours depending on the timing of the snow. The City's Warrior Watch website can be used to identify which streets have been serviced. Warrior Watch shows service information within the last 72 hours while an event is active.

Q: Can I blow, shovel, or plow snow onto the street?

A: No. For residential or commercial property, it is against City Code Section 902.03 (a) to place any snow into the city roadway.

Q: Where should I put my trash container during a snow event on my collection day?

A: Your trash container should never be placed in the street during any season. You should always place it on the curb or at the bottom of your driveway, out of the street.

Q: Can my neighborhood's Homeowner's Association contract with a private snow-plowing company instead of having the City plow our residential streets?

A: The Department of Public Service discourages HOAs and residents from taking on this immense responsibility themselves and does not endorse private companies to provide snow-plowing services within the City's rights-of-way due to liability for damage to both public and private property. (For example, if a private property owner's car is damaged, the HOA would be held responsible for the cost.)