



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Department Source: Public Works

To: City Council

From: City Manager & Staff

Council Meeting Date: December 5, 2022

Re: Report: Winter Weather Response for the 2022/2023 Winter Season

Executive Summary

Staff has prepared for Council information a report concerning snow priority routes for winter 2022/2023. Due to factors such as staffing, equipment and fuel costs there are no revisions to the 691 miles of first, second, and third priority lane routes.

Discussion

While the efficiency of winter weather response operations in Columbia continues to improve, similar to last year, due to overall staffing concerns for the Street Division and other Divisions that assist with winter response operations, no additional priority lane miles are recommended.

Street Division (44 FTE) is the lead agency for Columbia's winter weather response with a combined fleet of 21 tandem and single axle trucks, 11 one-ton trucks, three Class 5 trucks and a dedicated motor grader with a wing plow. Three backhoes and 2 skid steer loaders are available as well. Class 5 trucks are a relatively new addition and testing last year proved successful and promising for future fleet consideration. The Class 5 trucks are slightly smaller than single axle dump trucks but heavier duty than one-ton trucks while not requiring a commercial driver's license to operate. Staff believes they will add an efficient approach for portions of the fleet. Two new Class 5 trucks are scheduled to be delivered by mid next year replacing two one tons (approved in a previous budget). This will increase the Class 5 trucks to a total of five available trucks and reduce the number of 1-ton trucks by two.

There are six current vacancies for Street Division, two fewer than last year at this time. Long term recruitment and retention continue to cause concern. During the FY23 budget, an option was added to allow us to underfill some CDL positions with a Laborer position that does not require a CDL. This has helped recruitment for people that we can now train for future CDL required positions. However, staffing shortages throughout the City has meant that availability of resources from other departments along with difficulties in filling open positions for Street Division remains a significant constraint for winter weather response.

The Missouri Department of Transportation (MoDOT) has indicated that some changes to MoDOT operations will occur this year statewide. After discussing the changes with them, it appears that general conditions within the City are likely to be similar to last year, although there could be some reduced service for lettered routes such as WW east of town, KK and K south of town, TT/ZZ west of town and PP towards the northeast. While our ability to assist with those types of roads is limited due to both material and worker constraints, we will continue our practice of lowering plows when on those roads as we reach our response locations as



City of Columbia

701 East Broadway, Columbia, Missouri 65201

operation conditions dictate. The biggest impact with MoDOT changes is likely to be for lower volume letter routes in the outlying areas as response to them will be delayed from previous years.

While each storm is different and operational response depends on weather conditions before, during and after the event, crews typically report for duty for 12 hour shifts, typically with 22 to 28 person crews for each shift. For larger storms or unusual circumstances, additional resources from other departments and contractor haul off may be pursued or changes in shift reporting may occur.

Generally, for first and second priority routes, the outcome for 4" or less of snow is to have near normal, prudent winter weather driving conditions within 24 to 36 hours of event's end (no change from previous year). Staff also seeks to maintain at least one (1) bare wheel path (may still be wet, see attached photo examples) as much as possible throughout the event, though during portions of active snow, some roads may become overwhelmed and totally snow covered. This requires continuous operations during the events as well as focused attention after the end of the event. If there is between 4" – 6" of snow, crews will also methodically plow within neighborhoods with a targeted goal of getting all streets to a passable condition within 80 hours of the event's end (no change from previous year).

Passable condition is defined as passable by a front wheel drive vehicle at slow speeds utilizing prudent winter weather driving. Extenuating circumstances such as extreme cold that can lead to re-freeze or added precipitation might require shifting resources back to first and second priorities.

For events between 6" – 10", additional time is typically necessary to get non-first or second priority streets to passable condition. First priority streets should be passable to near normal within 24-36 hours of event's end (no change), and second priority streets to a minimum of passable within 40 hours (no change from previous year), with all streets to passable conditions by 104 hours after event's end (no change from previous year).

For storms greater than 10", focus is on getting first priority routes to passable condition within 36 hours (no change from previous year), but specific conditions, such as temperature, dictate response and the state of the street.

The City currently maintains 1,430 total lane miles and 691 priority lane miles (337 First, 205 second, 149 third). Information regarding priority routes, routes maintained by MoDOT and the County and other information is available on the www.comosnow.com website. During active winter events, updated information is provided regarding anticipated conditions and response via social media and from links on the website.

For clarification, third priority routes were developed with the thought to provide better response with one-ton trucks assisting with first and second priority routes. Although the path may not be entirely free of snow, it should help to decrease the amount of snow pack on those streets, easing snow removal operations once plows have moved onto neighborhood



City of Columbia

701 East Broadway, Columbia, Missouri 65201

streets, and provide some relief to the neighborhoods. Vehicles will be allowed to continue to park on the third priority streets during larger snow events, although staff will continue to encourage residents to move vehicles off the street via public outreach. Third priority routes have been based on factors such as grades and proximity to other routes for operational turning movements. In order to be more methodical with the evaluation process, Staff examined the distances for each parcel utilizing GIS data. A small percentage of the community are more than approximately 800 feet from a first, second or third priority route.

After examining the situation, staff believes that some form of parking restriction along third priority streets could be beneficial. A possible policy or ordinance such as establishing a park only on even or odd numbered address sides might be the preferred approach, but due to adjacent property impacts, that is not yet recommended. Staff will continue to analyze the situation and make a recommendation in the future regarding what approach will lead to the best overall results that might allow for the addition of priority streets or other changes.

There has been some discussion of Homeowner's Associations (HOA) performing their own winter weather response for snow and ice control. To date, no HOA has formalized this type of approach; however, if a HOA has a firm desire to commit resources for a defined area, staff would recommend a pilot with just one HOA working with Street Operation's staff to test the feasibility of this concept.

The Priority Neighborhood concept continues to be beneficial, even though there are some challenges. The Priority Neighborhood concept allows for a local contact to help coordinate local residents to remove parked cars from streets. Parked vehicles significantly slow down response and having a local resident coordinate and communicate that they are removed improves efficiency. An example of previous correspondence with past Neighborhood Priority representatives is attached. At some point, we may not be able to add additional neighborhoods to this process and will monitor the situation.

Due to current limitations in staffing and equipment, if additional priority routes are desired, staff would recommend caution and would want to examine what mileage would need to be removed from the current list, as well as examine the street. First and second priority routes are required to comply with the no parking requirements when snow is more than 2" deep, so the impact to adjacent property owners should be considered. It may be possible to add additional routes if staffing levels can be stabilized and/or some form of parking restriction is added to third priority routes. For next year, Staff's intention is to continue to focus on proximity to priority routes as a key factor when recommending future additions.

Fiscal Impact

Short-Term Impact: For information purposes

Long-Term Impact: For information purposes



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Safe Neighborhoods, Secondary Impact: Reliable Infrastructure, Tertiary Impact: Resilient Economy

Comprehensive Plan Impacts:

Primary Impact: Mobility, Connectivity, and Accessibility, Secondary Impact: Livable & Sustainable Communities, Tertiary Impact: Environmental Management

Legislative History

Date	Action
11/01/2021	REP86-21 Winter weather response for the 2021/2022 winter season
10/05/2020	REP61-20 Winter weather response for the 2020/2021 winter season
11/04/2019	REP101-19 Winter Weather Response for 2019/2020 Winter Season
11/05/2018	REP96-18-Winter Weather Response for 2018/2019 Winter Season
12/04/2017	REP100-17-Winter Weather Response for 2017/2018 Winter Season
10/07/2013	Ord. 21841-Prohibiting parking on priority routes when there is 2" or more of snow
10/18/1993	PR174-93A-Establishing a snow removal policy

Suggested Council Action

For information only.