

**INFORMATION PACKET
MEMORANDUM**

TO: Mayor Susan Osborne and Members of City Council

FROM: Jane S. Brautigam, City Manager
Paul J. Fetherston, Deputy City Manager
Maureen Rait, Executive Director of Public Works
Tracy Winfree, Director of Public Works for Transportation
Felix Gallo, Transportation & Utilities Maintenance Coordinator
Jeff Arthur, Engineering Review Manager/Interim Code Enforcement Supervisor
Cris Jones, Transportation Planner

DATE: September 15, 2010

SUBJECT: **Information Item – Snow and Ice Control Program and Sidewalk Snow Removal Enforcement**

EXECUTIVE SUMMARY:

This year, the city's official "snow season," in terms of operational response preparation, begins Sept. 13, 2010 and lasts through the end of April 2011. With the onset of winter, questions regularly arise from the public regarding the city's snow removal procedures. This memorandum provides City Council with information on the city's snow and ice control program, sidewalk snow removal enforcement and the city's snow information brochure.

The city's goals are to:

1. Keep primary and secondary streets, on-street bike lanes and the off-street path system open.
2. Respond with enhanced levels of service in the event a significant snowfall impedes the mobility of the public in and around residential roads, sidewalks and bus shelters.
3. Use materials and equipment efficiently and effectively to help reduce the dangers of traveling in inclement weather.
4. Enforce the sidewalk snow removal regulations (section 8-2-13, B.R.C. 1981) that require all owners or residents of private property to have the ice and snow hazards cleared from public sidewalks or walkways abutting their property by noon the day after a snowfall (or snowdrift).
5. Communicate any delayed opening or early release decisions in advance for city functions before impending severe weather impacts the ability for citizens or city employees to safely arrive at their destination within the city.

Snow and ice program information is made available each year in news releases, a utility bill insert, in the city's snow brochure and on the city's website under "Winter Tips" at www.bouldercolorado.gov. The city's snow brochure, which is provided to residents who request additional information, includes information on the snow program and answers commonly asked questions about snow operations. A copy of this year's brochure is included in

the 2010-2011 City of Boulder Snow & Ice Control Information packets that have been distributed to council members.

FISCAL IMPACT:

Snow and ice control operations for normal weather patterns and events are accounted for in the Transportation Division's budget each year. Snow control on city streets is affected by the amount of snow and length of the storm, time of day, temperature and traffic conditions. The adopted 2010 budget for snow and ice control is \$834,000. The City of Boulder does not normally plow residential streets both because most snow melts within a day or two in Boulder's climate and because plowing costs would increase by 200 percent.

COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS:

- Economic: Mobility of workers, residents and consumers is essential to the overall economic health of Boulder. The inability to maneuver impassable roads, unshoveled sidewalks and/or bus stops affects the overall economic health.
- Environmental: Snow and ice control operations and sidewalk snow removal efforts support travel choices, which directly impact the environment. The city's sweeping program and selection of environmentally sensitive products also help achieve air quality and water quality goals for the city and region.
- Social: Mobility is key to independence, particularly for those with disabilities, seniors and school children who are adversely impacted when roads are impassable and sidewalks, bus-stops and multi-use paths are not adequately cleared of snow. The involvement of these populations in our community activities, including employment, is essential.

SNOW AND ICE CONTROL PROGRAM:

The snow and ice control program goals are achieved by having full crews available, equipment maintained and ready when needed, and providing a safe environment for employees. Each year, crews are provided with education and training on the use of snow removal materials and equipment, and plow operators are re-certified on the equipment used to perform snow control operations.

In September of each year, two snow crew rosters are developed. During the snow season, mid-September through the end of April, each crew rotates on a weekly basis as the "first call" crew. A Transportation Maintenance snow standby person is on call 24-hours-a-day, seven days a week to track weather conditions and to respond to notification of snow events. Working with the Boulder Police Department patrol officers and dispatchers, the snow standby person is notified when snow conditions occur after normal work hours or on holidays and weekends. Crews are expected to respond as quickly as possible. Crews work rotating 12-hour shifts throughout a storm event.

A standard operating procedure guides communication and assists the City Manager's Office with decision-making regarding city facilities and programming. When an incoming weather event is forecasted to be severe enough to possibly impact the transportation system, the Transportation and Utilities Maintenance Coordinator assesses local roads, investigates the response of other agencies and informs the City Manager's Office with a recommendation if a delayed opening or early release of city functions or public meeting postponement is warranted. The decision to alter city function or facility hours is made by the City Manager's Office.

An enhanced snow control response will be triggered when snow accumulation is in excess of 12 inches (defined as a “significant” snowfall event). Available Transportation Maintenance staff will be directed to inspect both residential roads and bus shelters for the public’s ability to drive vehicles out of residential areas and safely load and unload onto buses.

During snowstorms, there are 16 plow trucks on Boulder streets. Fifteen trucks drive predetermined routes while one “floater” truck responds to problem areas and complaint calls. Six trucks distribute a liquid deicer and four spreader trucks distribute traction materials. Seven trucks have dual systems to distribute either liquid or traction material. The floater truck is either a liquid or a spreader truck depending on the type of storm and type of material needed. Two plow trucks and operators cover the multi-use path system between 4 a.m. and 4 p.m. One plow truck and operator covers the path system between 4 p.m. and 4 a.m. when path use is decreased.

The Transportation Maintenance workgroup utilizes a “real time” Automatic Vehicle Location (AVL) system to track the actual location, speed and plowing operation of the main route snow fleet. This Global Position Satellite (GPS) system allows supervisors to track and verify snow and ice control operations for dispatching efficiency adjustments and for liability purposes.

In order to minimize environmental impacts of snow and ice control, the city uses alternative deicing and traction materials. No sand is used unless alternative deicing materials are not available from the supplier and public safety is an issue. The liquid deicing agent is a magnesium chloride solution. Magnesium chloride, a plant nutrient and soil stabilizer, is less corrosive than other deicing products. In 2008, the city switched to a different formulation of magnesium chloride (“Meltdown Apex”). Meltdown Apex costs a few cents less per gallon than traditional magnesium chloride, is more readily available from the supplier, and continues to be effective at lower temperatures. New and less corrosive liquid deicers continue to be tested.

The traction material used is a crystallized deicer, made up of complex chlorides, that dissolves over time (it does not need to be swept); however, in keeping with the city’s commitment to the Regional Air Quality Council (RAQC), the entire snow system is swept within four days of a major storm event. Several years ago, the material used and its impacts on water quality were reviewed and analyzed by city water quality staff and found to have no significant impact on Boulder’s water sources and distribution system.

Streets are sometimes pretreated with liquid deicer before a storm (depending on weather conditions) to help reduce the buildup of snow and ice. The material or combination of materials used during a storm event depends on existing and predicted weather conditions (i.e., amount of precipitation and humidity) and pavement temperatures.

As noted under the Fiscal Impact section of this memorandum, the amount of snow and length of the storm, time of day, temperature and traffic conditions affect the operational response to snow. The City of Boulder does not normally plow residential streets for the following reasons:

- most snow melts within a day or two in Boulder’s climate,
- plowing residential streets blocks driveways and parked cars with snow piles, and
- snow plowing costs would increase by 200 percent.

Standard operating procedures provide for the proactive application of deicing materials on streets that have certain factors such as steep grades and significant shading, which contribute to more challenging conditions and typically generate a high number of resident requests for attention.

OPERATIONAL EFFICIENCIES

The Public Works, Parks and Recreation, Parking Services and Open Space and Mountain Parks departments continue to investigate operational efficiencies and potential areas of overlap, including snow removal work. To date, some changes in operational responsibilities have been made. For example, because some of the bikeways are in the city's parks, Parks & Recreation maintenance staff is able to efficiently maintain the mowing, pruning and snow removal along adjacent bikeways in the parks. The Bear Creek bikeway heading north from Martin Street underpass, formerly maintained by Public Works, is now maintained by Parks and Recreation (landscaping and snow removal). Public Works, in turn, has assumed responsibility from Parks and Recreation for maintaining the full length of Elmer's Two Mile path from the Goose Creek bikeway to the north limits at Juniper, in coordination with other related maintenance work in the area.

Staffing efficiencies are another important aspect of budget management. An operational efficiency was implemented between Transportation and Utilities maintenance crews by requiring some Utilities positions to participate in snow response. Participation had previously been voluntary. This change allows the city to "staff up" for larger events and to have smaller, more efficient crews during off-event periods.

Transit shelter maintenance continues to be a challenge for the city and for RTD, with RTD divesting itself from transit shelter maintenance by transferring responsibilities to advertising companies. Based on the city's sign ordinance and feedback from the community and organizations, it is unlikely that transit shelters supported through off-site advertising is feasible in Boulder. Transportation planning staff has proposed transit stop maintenance beyond current levels as one possible service that could be funded through a transportation maintenance fee. Council will continue to consider this possibility further at a November 2010 study session. The maintenance fee would allow the city to perform the day-to-day maintenance (including snow removal) of major transit stops that aren't currently maintained by RTD staff. RTD's Adopt-a-Stop program also utilizes community volunteers to remove trash and snow from designated stops. Maintenance (e.g. glass replacement, graffiti and trash removal) at non-RTD stops is performed on an as-needed basis. Specifically, snow removal is performed on a limited basis, typically by request only.

SIDEWALK SNOW REMOVAL ENFORCEMENT:

Section 8-2-3, BRC, 1981 requires that sidewalks adjacent to both residential and commercial properties be cleared of snow and ice by noon on the day following a snowfall or snowdrift. Property owners, tenants, and property managers can all be held responsible for failure to remove snow under the ordinance. Violation of the ordinance can result in a municipal court summons and fine (\$100 for first offense) or abatement in which the city hires a contractor to clear the sidewalk at the property owner's expense.

The sidewalk snow removal ordinance is enforced by the Environmental and Zoning Enforcement workgroup in Public Works. The group consists of three officers and a part-time administrative support person. Feedback indicates that response time and effectiveness has not met community expectations in previous snow seasons. Staff is currently working on both potential ordinance changes and a corresponding enforcement plan to more effectively utilize existing enforcement resources. Proposed code changes have been tentatively scheduled for City Council consideration (first reading) on Sept. 21. A public hearing and second reading are tentatively planned for Oct. 5 at which time the proposed enforcement plan and potential regulation changes will be discussed.

PUBLIC INFORMATION:

Snow and ice program information is made available each year in news releases, a utility bill insert, in the city's snow brochure and on the city's website under "Winter Tips" at www.bouldercolorado.gov. The utility bill insert with snow information will be distributed through the utility bill mailing in October. The city's snow brochure, which is provided to residents who request additional information, includes information on the snow program and answers commonly asked questions about snow operations. A copy of this year's brochure is included in the 2010-2011 City of Boulder Snow & Ice Control Information packets that have been distributed to council members. Also included are detailed snow route maps and snow operations information.

For more information about the snow and ice control program, please contact Felix Gallo at 303-413-7180 or e-mail to Gallop@bouldercolorado.gov.

For more information on the transportation planning effort regarding bus shelter maintenance, please contact Cris Jones at 303-441-3217 or jonesc@bouldercolorado.gov.

For more information on enforcement efforts, please contact Jeff Arthur at 303-441-4418 or arthurj@bouldercolorado.gov.