

What is Certifiably Green Denver?

The Certifiably Green Denver Program provides education and recognition for environmental achievement. Our free services are available to any business in the City and County of Denver.

Certifiably Green Denver offers:

- Assessments to identify water conservation and energy-efficiency options
- Information and assistance to meet your business needs
- Public recognition for your environmental efforts

Why Participate?

Compliance - Proper management practices help minimize wastes, reduce downtime, and keep you in compliance with regulations.

Cost Savings - Less waste means lower disposal and operating costs. Efficient use of materials, water, and energy saves money.

Public Image - Superior environmental practices affect your image with customers, the community, and regulatory agencies.

Public Recognition!

Certifiably Green Denver publicly recognizes certified businesses through free advertising. This includes Internet listings and advertising in the newspaper, magazines, radio, and water bill inserts. Certified businesses receive a framed certificate and window decal.

De-icing Products

Salt or alternative de-icing chemicals are used in winter maintenance to melt snow and ice to ensure pedestrian safety. When snow and ice melt, the water becomes stormwater runoff, which ends up in our streams, rivers and lakes via our storm drain system. As the runoff moves over paved surfaces, it collects sand, salt and other pollutants and deposits them into surface water causing contamination. De-icing can reduce oxygen demand levels and/or increase salinity in our surface waters. In addition, de-icers have the potential to cause building, pavement and interior flooring deterioration.

Follow product directions carefully to reduce the amount of de-icer used and choose environmentally preferable de-icing products to reduce your impact on the environment.

- Choose products with CMA or calcium chloride as the main ingredient.
- Avoid products with rock salt and urea (view table on following page).
- Avoid kitty litter, it is not a de-icer and can get messy when tracked inside.

Reclaiming Excess De-icing Products

Reduce your liability and save money by reclaiming your de-icer for reuse by sweeping or vacuuming the solids from the sidewalk after the storm. Only reapply de-icer in trouble spots that can ice up overnight due to snowmelt runoff. **Do not pressure wash sidewalks to remove de-icer without wastewater reclamation! It's the law!**

Put your sidewalk on a Low Salt Diet

1. Check the label and view the table on the following page to pick the safest de-icing products.
2. Shovel and scrape early and often – de-icers work best when there is only a thin layer to remove.
3. Know your salt risk zone – identify if you have salt-sensitive trees, plants or shrubs within 5-10 feet of your sidewalk.
4. Apply de-icer early, but sparingly. A little salt goes a long way – applying more salt won't speed up the melting process.
5. Remove slush; after snow and ice has melted to prevent refreezing.



Salting Our Streams

Chloride is the most common de-icer applied. Chloride is very soluble in water and it freely reaches surface waters through storm drain and groundwater systems. Below is a comparison of the various ice-melting chemicals available.

Helpful Resources

See the Certifiably Green Denver website for more helpful resource sheets:
www.denvergov.org/CGD

Visit us on Facebook!
facebook.com/cgdenver

Contact Information

Janet Burgesser

Program Manager

Certifiably Green Denver

200 W 14th Avenue, Dept 310

Denver, CO 80204

De-icing Chemical	Works To	Environmental Impact	Benefits	Downfalls	Cost	Notes
Calcium Chloride (CaCl ₂)	-25 ⁰ F	Less harmful than salt to vegetation	Releases heat when it dissolves, reduces the amount of salt by 10-15%	Leaves harmful residue on carpet, keeps pavement wet, corrosive to metal	3x more than salt	Must be covered and kept in dry place
Magnesium Chloride (MgCl ₂)	-13 ⁰ F	Less harmful to the environment than calcium chloride and sodium chloride	Competitive price	Corrosive, easily tracked inside increasing cost for floor cleaning and replacement	2x more than salt	Works well when mixed with sand or other de-icers
“Rock Salt” (Sodium Chloride) (NaCl)	15 ⁰ F	Can deplete the oxygen supply needed by aquatic animals and plants, leaches into ground and makes it harder for plants to survive	Low purchase price	Can be corrosive to concrete, buildings, structural steel and cars	-\$5 for 50lb bag	Contains cyanide as anti-caking agent (0.01% dry weight)
Carbonate Based Solution		Biological and environmentally safe	No adverse effects on infrastructure, corrosion inhibitor	Some products may have odor, liquid is thick	Low Cost	Works well when mixed with MgCl ₂
CMA (Calcium Magnesium Acetate)	22 ⁰ F	The most environmentally benign, high concentrations can reduce oxygen levels in surface waters, safe for vegetation	Low corrosion, safer than salt on steel, requires fewer applications	Not as effective in colder temperatures and acts slower than salt	20x more than salt	Use twice as much CMA as salt, keep dry for indefinite storage