Environment Canada Environnement Canada

Draft for Consultation

Performance Indicators and National Targets Code of Practice for the Environmental Management of Road Salts

November 2013

Canada

Code of Practice for Environmental Management of Road Salts

Environment Canada is pleased to provide proposed national targets for the Code of Practice for Environmental Management of Road Salts (the Code) for a 60-day public consultation period.

An assessment report, published in 2001, concluded that high releases of road salts were having an adverse effect on freshwater ecosystems, soil, vegetation and wildlife, and that road salts that contain inorganic chloride salts were therefore "toxic" as defined in section 64 of the *Canadian Environmental Protection Act, 1999*. As a result, the Code was developed with the objective of reducing the environmental impact of road salt while maintaining roadway safety.

A review of the Code (Five-year Review), published by Environment Canada in April 2012, concluded that national targets should be developed to encourage ongoing implementation and to provide individual road organizations with clear targets and timelines to improve on best management practices. The national targets represent basic best practices that can be achieved by most organizations and will form the basis of a future evaluation of the Code. The proposed national targets for the Code of Practice are now being distributed for comment and public consultation. Please send your comments by January 24, 2014.

Environment Canada will consider your comments before the national targets are finalized.

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Context

The Code of Practice for the Environmental Management of Road Salts was developed in 2004 to assist municipal and provincial road authorities to better manage their use of road salts in a way that reduces the harm to the environment while maintaining roadway safety. The Code requires road organizations that use over 500 t/year of salt or who have salt-vulnerable areas in their territory to review their existing winter maintenance operations to improve practices and reduce adverse impacts of salt releases in the environment. In addition to developing and implementing salt management plans, road organizations are asked to provide, voluntarily, annual reports to Environment Canada on the progress achieved. A further requirement of the Code was completion of a five-year review to measure effectiveness of the Code. The Five-year Review of Progress was published in April 2012 and is available online.

Based on the review, Environment Canada recommended maintaining the Code and encouraged road organizations to continue improving their salt management. However, the review identified several actions that could be considered for the continued improvement in road salt management. One of these actions is to set national targets for the implementation of best practices against which performance of the road organizations and the success of the Code can be evaluated.

Why national targets?

The main objective for setting national targets is to increase environmental protection. National targets will help monitor progress in specific areas of the Code.

At the time of the review, the lack of targets created challenges in determining whether the objective of the Code had been achieved. As such, it was recommended that the list of performance indicators for future evaluations be examined to ensure that they reflect key components of the Code and current techniques in winter maintenance. National targets would then be established against which performance could be measured.

National targets are a set of common goals that all organizations should reach. The Code is voluntary, and goal setting in the salt management plan remains the responsibility of individual road organizations to allow for flexibility, according to an organization's size, resources and capability. This approach has resulted in a wide variability in progress between individual road organizations. Almost 10 years after the implementation of the Code, sufficient time has been allocated for road organizations to phase-in the required investment. All road organizations are expected to reach a minimum level of progress in best practices to prevent and reduce negative impacts from road salts; however, leadership to surpass these targets is encouraged.

Setting national targets offers transparency in expected performance level from road organizations for the future and provides a basis for conducting a second review five years after the national targets are established. National targets will assist road organizations in planning priorities and should improve the ongoing efforts of the provinces and municipalities in their salt

management efforts. Road organizations are encouraged to continually improve even if they have met the national targets.

Performance indicators and national targets

Seven performance indicators were chosen under four main activities of the Code (adoption of the Code, salt storage, salt application and salt-vulnerable areas). Table 1 describes the performance indicators, unit of measurement, national targets for the next review and status as of the five-year review (2009).

National targets will evolve over time. Data for several other best practices are being gathered during annual reporting. Data collected over the next five years will be used to establish a baseline for future performance indicators that reflect the future best practices.

Table 1. Performance Indicators and National Targets

Performance Indicators and Units	Target	Status in 2009
Adoption of the Code Purpose: To preserve a high level of participation in the Code and to inform on best practices in road salt management. **1) Submission of annual report** Ø *number of road organizations reporting regularly*	220 road organizations reporting regularly	· 8 provinces and 1 territory · 201 municipalities reported regularly · 9 national parks and 4 private businesses
Review of salt management plans Purpose: To ensure planning is current and allow for continuous improvement. This is a key component of the Code, and all organizations are expected to conduct annual reviews. **2) Annual review of salt management plan** Ø *% of road organizations that annually review their salt management plan*	100%	This is a new performance indicator
Salt storage – Road salts site Purpose: To ensure that all road organizations in Canada have committed to managing their material storage facilities and to ensure best practices at point sources **3) Road salts are stored under a permanent roof and on impermeable pads** Ø *% tonnes of road salts that are stored under a permanent roof and on impermeable pads*	100%	· 96% of the road salts used by municipalities are covered; 93% on impermeable pads · 100% of road salts used by 8 of 9 provinces and Yukon are covered and on impermeable pads

Performance Indicators and Units	Target	Status in 2009
Storage sites – Treated abrasives Purpose: To ensure that all road organizations in Canada have committed to managing their material storage facilities and to ensure best practices at point sources. Case studies have illustrated an elevation in the quantity of salt leached through uncovered piles of abrasives. **4) Treated abrasives are covered** Ø *% tonnes of treated abrasives covered*	95%	· 52% of treated abrasives used by municipalities are covered · 62% of treated abrasives used by provinces are covered
Salt application – Electronic controllers Purpose: Groundspeed-oriented electronic controllers on salt spreaders help to ensure that salt is applied at the proper rate regardless of the speed of the truck being used to spread the salt, and that salt stops discharging when the truck is stopped. Adoption and use of technologies are expected to increase and become a core practice for all organizations. **5) Spreaders are equipped with groundspeed electronic controllers** Ø *% of vehicles with groundspeed electronic controllers*	95%	· 82% of municipal fleet · 88% of provincial fleet was equipped with groundspeed controllers (7 provinces with more than 82%, the 2 other provinces with 50% and 60%)

Performance Indicators and Units	Target	Status in 2009
Salt application – Optimization of de-icers Purpose: To encourage use of advanced salt application. Several studies show significant reductions in salt use with the introduction of new technologies including pre-wetting. Further, pre-treated material is now offered on the market as a cost-effective alternative that can provide similar results. **6) More organizations are adopting practices that optimize the salt application either by increasing their pre-wetting capacity *or* using pre-treated salts** (a) *% of organizations pre-wetting **or** using pre-treated salt* (b) *% of vehicles equipped for pre-wetting*	(a) 95% of road organizations (b) 75%[1] of vehicles	· Number using pretreated salt is unknown · 52% of municipal vehicles equipped for pre-wetting · 47% of provincial vehicles equipped for pre-wetting with a wide variation between provinces (from 0 to 100%) · Progress was made in the capacity for pre-wetting between 2007 and 2009: municipal and provincial fleets increased the number of vehicles equipped for pre-wetting by 10%
Salt vulnerable areas Purpose: To improve progress in identifying, monitoring and protecting areas that may be particularly sensitive to road salts. **7) Salt vulnerable areas are identified, and an action plan is prepared to prioritize areas where best available techniques economically achievable are considered.** (a) *% large road organizations where salt vulnerable areas are identified, and an action plan is prepared* (b) *% small road organizations where salt vulnerable areas are identified, and an action plan is prepared*	(a) 95% of provinces and municipalities with population greater than 50 000 (b) 50% of municipalities with population less than 50 000 **for 2024**	· 5 provinces identified salt vulnerable areas · One third of municipalities identified salt vulnerable areas

[1] The % calculated in 2009 is based on the total number of vehicles from **all** road organizations. When reporting for the national target, the total number of vehicles will exclude organizations **not** pre-wetting. In addition, the optimal % of vehicles equipped for pre-wetting will be calculated and the progress made toward it reported.

www.**ec.gc.ca**

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