

ISSUE: 05. OPERATIONAL APPROACHES, EQUIPMENT AND PRODUCTS FOR WINTER CONDITIONS

SUB-ISSUE: Impacts of deicing products

Session: 04/02/2014 (17:15 - 18:45 h) **Poster:** 05/02/2014 (09:30 - 12:30 h)

Room: C

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Presentation title:

TRANSFER DYNAMICS OF ROAD DEICING SALTS IN A RETENTION POND FOR ROAD WATER TREATMENT

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Summary:

Deicing products such as sodium chloride are known to have adverse effects on the environment. Every environmental compartment is concerned: groundwater, surface water, soil and ecosystems. After being applied on road either in its solid form, as a brine or as humidified salt, NaCl is transferred into the environment directly or after passing through various treatment and retention systems. Today, the concentration of chlorides rejected into the environment can only be regulated by controlling the water output flow of these systems. However, retention ponds, which aim to collect seasonal, chronic and accidental pollutions, are not designed to treat any kind of deicing products. Furthermore, on top of their direct environmental impacts, several studies showed that road salts increase the mobility of heavy metals. The relationship between road salt applications and heavy metals discharge in the outflow of retention and treatment ponds is hence of an undeniable importance.

