

Recent scientific reports indicate that City of Sudbury suggested solutions to mitigate KED salt from entering environment by use of storm water retention ponds will not be effective and may be more harmful.

The city has indicated in their documentation with respect to the Kingsway Entertainment District (KED) that “directing water towards stormwater catchments can prevent it from entering the subsurface or nearby watercourses leading to Lake Ramsey. Stormwater catchments onsite, will direct precipitation and runoff to an onsite stormwater management pond” according to city resources, Dillion Consulting.

However, researchers at Virginia Tech and Towson University in Maryland say that the types of chemicals used to treat roads in winter, particularly road salts, are not being effectively absorbed as intended by mitigation measures and may be reaching waterways. Stormwater management practices are designed to intercept water runoff from roads and parking lots before pollutants reach surface waters where they may harm wildlife and human health. <https://phys.org/news/2017-06-stormwater-retention-ponds-surface-road.html#jCp>

The research team recently completed a study, published in *Environmental Science and Technology*, to determine how well current stormwater management practices mitigate the effects of road salts and how those salts might be impacting both the surface and groundwaters

The researchers tested water samples from stormwater ponds to compare the concentrations of sodium and chloride ions in groundwater between stormwater ponds and streams. Water in the ponds gradually soaks into the ground and moves downslope toward streams. If the stormwater ponds were working little sodium chloride would be found because it would have been retained in the ponds.

In fact, the opposite seemed to be true. The researchers discovered that routing runoff contaminated with road salts to stormwater ponds actually resulted in plumes of highly contaminated groundwater moving from the ponds to streams. In addition, high levels of contamination were not only present during winter months but in the summer months as well, meaning that some of the road salts are being retained within the groundwater close to the surface and released to streams little by little.

On top of that, the road salts are entering these bodies of water in a fashion that causes salt levels in streams to remain elevated year-round. Elevated salt levels in groundwater and surface waters can have negative impacts on wildlife and humans. If salt levels continue to increase in freshwater areas, many fish and amphibians will stop breeding and eventually die. On the human side, added salt in the water system can change the taste and color of water and eventually stop providing potable water.

"People may end up drinking water containing sodium levels that exceed those recommended for people on low-sodium diets. Municipal water supplies may also become contaminated

These findings confirm other reputable sources that salt cannot be effectively or economically removed from the environment and Ramsey Lake should not be subjected to the tons of additional salt that would enter the lake from the large parking areas and related road and pedestrian walk ways in the KED. Ramsey Lake already has sodium levels three times the limit for those on salt restricted diets and chloride levels approaching levels harmful to aquatic life

This is the environmental reason for the appeal to the LPAT by the Minnow Lake Restoration Group  
John Lindsay, President, Minnow Lake Restoration Group – 705-607-6037

Read more at: <https://phys.org/news/2017-06-stormwater-retention-ponds-surface-road.html#jCp>