Risks posed by spreading oil and gas wastewater on roads

September 13 2018

(HealthDay)—Spreading oil and gas (O&G) wastewaters on roads may

pose human and environmental risks, according to a study recently published in *Environmental Science & Technology*.

Travis L. Tasker, from Pennsylvania State University in University Park, and colleagues examined the potential environmental and human health impacts of the practice of spreading of O&G wastewaters on roads for deicing or dust suppression.

The researchers found that salt, radioactivity, and organic contaminant concentrations were many times above the drinking water standards in analyses of O&G wastewaters spread on roads in the northeastern United States. These wastewaters contained organic micropollutants that affected signaling pathways, consistent with xenobiotic metabolism; in addition, they caused toxicity to aquatic organisms such as *Daphnia magna*. Experiments have demonstrated that nearly all of the metals from these wastewaters leach from roads after rain events, probably reaching ground and surface water. The release of a known carcinogen (e.g., radium) from O&G wastewater-treated roads has largely been ignored. Spreading O&G wastewater on roads released more than four times more radium to the environment than O&G wastewater treatment facilities and 200 times more than spill events in Pennsylvania from 2008 to 2014.

"Spreading O&G wastewater on roads can harm aquatic life and pose health risks to humans," the authors write.

One author disclosed financial ties to INDIGO Biosciences.

More information: Abstract/Full Text (subscription or payment may be required)