



## WINTER WARNING: NEW YORKERS COULD BE DRIVING ON TOXIC, RADIOACTIVE WASTE

New York Allows Spreading of Oil & Gas Industry Waste on Roads for De-icing, Threatening Our Water, Health and Environment

Despite New York's ban on high-volume hydraulic fracturing, or "fracking," 33 cities, towns and private entities are allowed to spread liquid waste from oil and gas drilling and storage sites onto roads in the state. Since 1988, there have been 119 approvals for road spreading issued by the Department of Environmental Conservation in Central and Western New York, including ones for state Department of Transportation offices in Syracuse and Rochester.<sup>1</sup>

Oil and gas drilling and production waste can be highly toxic and contain radioactive material. New York banned fracking in part because of the toxicity of the waste and the impossibility of safe disposal of fluid wastes. However, New York allows oil and gas waste from drilling sites to be spread on roads for de-icing in winter, as well as for dust control in summer and fall. Any waste generated through the extraction of oil or natural gas can contain a number of pollutants, such as toxic chemicals, metals, excess salts, and carcinogens like benzene and radioactive materials.<sup>2</sup>

Spreading oil and gas waste on roads is a direct threat to water quality, public health, and the overall environment. Once this waste has been spread on roads, contaminants can remain a long lasting issue.

**SPREADING OIL AND GAS WASTE ON ROADS IS A DIRECT THREAT TO WATER QUALITY, PUBLIC HEALTH, AND THE OVERALL ENVIRONMENT.**

In 2016, the Department of Environmental Conservation rejected calls to prohibit the spreading of liquid waste from oil and gas drilling and production sites on the state's roads. This winter, we are urging Governor Cuomo to ban the spreading of oil and gas waste on roads.

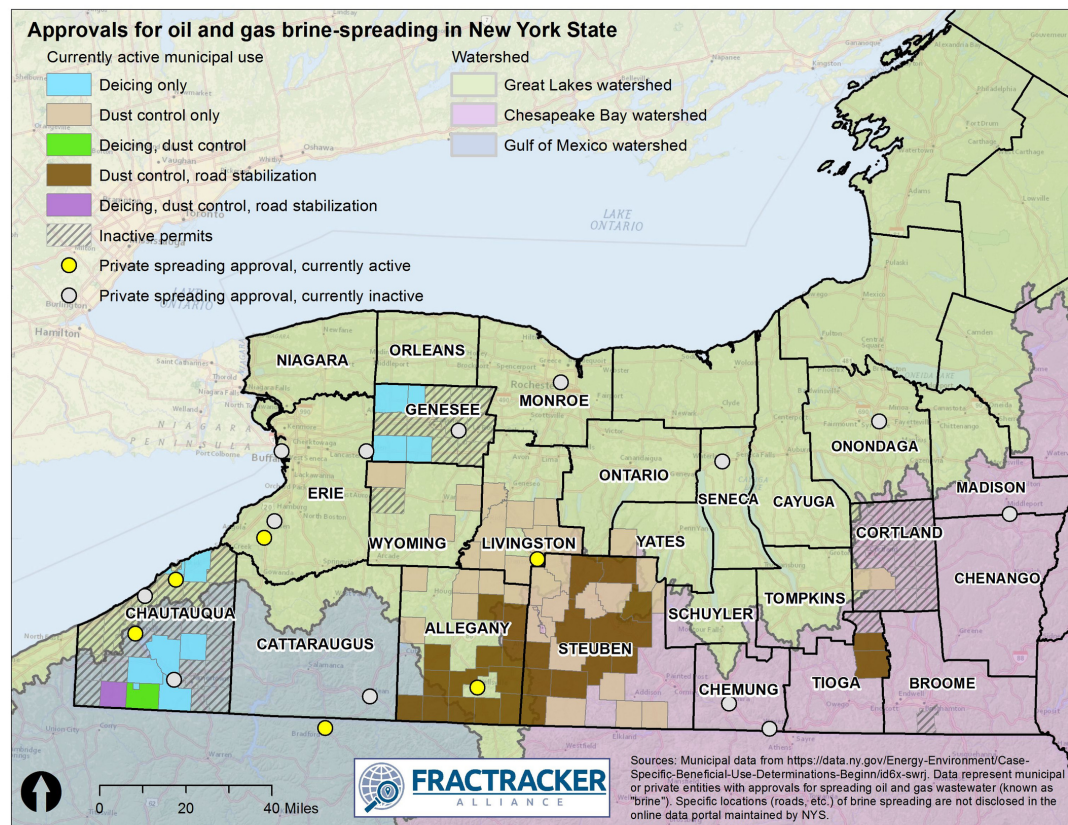
<sup>1</sup> New York State Office of Information Technology Services, "Case-Specific Beneficial Use Determinations: Beginning 1988," Accessed 12/13/20: <https://data.ny.gov/Energy-Environment/Case-Specific-Beneficial-Use-Determinations-Beginn/id6x-swrj>

<sup>2</sup> Robert B. Jackson et al., The Environmental Costs and Benefits of Fracking, 39 ENVIRONMENT AND RESOURCES 327 (2014); U.S. GEOLOGICAL SURVEY, RADIUM CONTENT OF OIL AND GAS FIELD PRODUCED WATERS IN THE NORTHERN APPALACHIAN BASIN (USA): SUMMARY AND DISCUSSION OF DATA (2011), available at <http://pubs.usgs.gov/sir/2011/5135/>.



## WHERE TOXICS ARE SPREAD ON ROADS

According to public data from New York State, at least 119 approvals for road spreading of oil and gas wastewater, also called “brine,” have been issued since 1988 in Central and Western New York. Permits were issued in the past in Syracuse and Rochester, as well as Seneca, Chemung and Broome Counties. Permits may remain valid for up to five years and can be renewed at any time.



## WHAT IS BEING SPREAD ON OUR ROADS?

The Department of Environmental Conservation (DEC) maintains the inaccurate position that oil and gas industry wastewater — in this case, specifically the “brine” — contains nothing dangerous. As a result, the DEC has persisted in issuing Beneficial Use Determination (BUD) permits for road spreading and insisting that proper scientific analysis has been conducted to determine that the practice is safe.

At a legislative hearing in 2016, DEC Commissioner Basil Seggos claimed that the BUD process required for road spreading approval involves “extensive, scientific analysis of the what and the where and the volumes to determine if

it’s appropriate.”<sup>3</sup> But this “extensive” analysis does not include testing for many chemicals, heavy metals such as arsenic and chromium, or radioactive materials such as carcinogenic radium, which is well-documented to be found in oil and gas waste from conventional drilling operations.<sup>4</sup>

When “brine” waste runs off roads due to rain or snow melt, contaminants can migrate into our waterways and soil, in turn threatening human health, farmland, livestock and wildlife. Radioactive materials and other chemicals do not dissipate when they are released into the environment – they remain active and bioaccumulate in the food chain.<sup>5</sup>

<sup>3</sup> NY State Legislature Public Hearing: Water Quality, September 12, 2016, accessed December 18, 2018. Quoted at 04:02:23 in YouTube video: <https://youtu.be/Qpget2EX4qc?t=14653>

<sup>4</sup> New York Oil & Gas Waste Report, Earthworks, July 2019. <https://www.earthworks.org/publications/new-york-waste-report/>

<sup>5</sup> Consideration of Radiation in Hazardous Waste Produced from Horizontal Hydrofracking, Ivan White, National Council on Radiation Protection, October 2012 <http://www.grassrootsinfo.org/pdf/whitereport.pdf>

Radium is a known carcinogen found in oil and gas waste with a half-life of 1,600 years that increases the risk of bone cancer, lymphoma, leukemia and other illnesses.<sup>6</sup>



Road Spreading Brine Parameters	Criteria mg/L
Total Dissolved Solids	>170,000*
Chloride	>80,000*
Sodium	>40,000*
Calcium	>20,000*
Iron	<250
Barium	<1.0
Lead	>2.5
Sulfate	<2500
Oil/Grease	<15
Benzene	<0.5
Ethylbenzene	<0.5
Toluene	<0.5
Xylene	<0.5

- According to a Duke University study released in January 2018, even though “conventional oil and gas wastewater is treated to reduce its radium content,” this has not prevented “high levels of radioactive build-up in the stream sediments” over time. The researchers concluded, “While restricting the disposal of fracking fluids to the environment was important, it’s not enough...Conventional oil and gas wastewaters also contain radioactivity, and their disposal to the environment must be stopped, too.”<sup>7</sup>
- Scientists at Pennsylvania State University and University of Alberta found, “Release of a known carcinogen (e.g., radium) from roads treated with O&G wastewaters has been largely ignored. In Pennsylvania from 2008 to 2014, spreading O&G wastewater on roads released over 4 times more radium to the environment (320 millicuries) than O&G wastewater treatment facilities and 200 times more radium than spill events.”<sup>8</sup>

**NEW YORK MUST BAN THE USE OF OIL AND GAS WASTE FOR ROAD SPREADING!**

**DEC SHOULD STOP ISSUING PERMITS FOR THE SPREADING OF OIL AND GAS WASTE ON ROADS!**

Whether for de-icing, dust suppression, or road stabilization, there is nothing “beneficial” about spreading oil and gas wastewater on roads. Chemicals used in oil and gas operations are not disclosed, and liquid waste “brine” is not tested for known heavy metals and carcinogens. The science is clear – New York must ban the use of oil and gas waste for road spreading!

<sup>6</sup>U.S. EPA Radiation Protection webpage: Radium <http://www.epa.gov/radiation/radionuclides/radium.html>, Accessed August 16, 2019.  
<sup>7</sup>“Sources of Radium Accumulation in Stream Sediments Near Disposal Sites in Pennsylvania: Implications for Disposal of Conventional Oil and Gas Wastewater,” N. Lauer, N. Warner, A. Vengosh, Environmental Science and Technology, Jan 4, 2018, DOI: 10.1021/acs.est.7b04952  
<sup>8</sup>“Environmental and Human Health Impacts of Spreading Oil and Gas Wastewater on Roads,” T. L. Tasker, W. D. Burgos, et al., Environmental Science & Technology, May 30, 2018, 52 (12), 7081-7091 DOI: 10.1021/acs.est.8b00716

