

To the Honorable Members of the Environmental Committee -

I am attaching a recently published article in the NY Journal News concerning the prohibition of spreading of fracking brine waste on roads in Westchester County. As you may know, Westchester County recently prohibited the spreading of such brine on any roads within the County or the treatment of fracking wastes at any Wastewater Treatment Plants within the County. As your neighbors, we are hoping that you will institute equally effective safeguards in the State of Connecticut.

Thank you for your consideration.

Respectfully,
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HB-5335



Community View

Bans on using, treating fracking waste welcomed

By Marian H. Rose

The Westchester County Board of Legislators and County Executive Robert Astorino are to be congratulated for unanimously signing into law a prohibition against spreading brine from oil/gas fracking wells on any roads in the county for de-icing or dust control purposes, or for allowing the effluent (flowback/produced water) from these wells to be sent to any wastewater treatment plants within the county, all of which are ill-equipped to treat it.

Ulster County has already passed a similar law that prohibits the spreading of fracking brine on county roads or treatment by any county-owned or private wastewater treatment plants. Towns are urged to next pass similar prohibitions for town roads and municipal treatment plants.

All counties within New York would be wise to pass similar legislation. The brine and flowback/produced water from vertical gas drilling is already being spread, facilitated by the

state Department of Environmental Conservation issuing beneficial-use determinations to municipalities. More would be coming from wells in New York if horizontal hydrofracking is approved. Both are known to be highly contaminated with salts, heavy metals and radioactive materials.

For example, according to a 2011 U.S. Geological Survey report that focuses on New York and Pennsylvania, "Analyses of the water produced with the gas commonly show elevated levels of salinity and radium." These elevated levels of radium, specifically radium-226, have been confirmed by the DEC in 11 wells that showed levels of radium-226 that exceeded the maximum contaminant level for water.

This highly radioactive water mixed with heavy-salinity brine from the wells will be a threat to our future health if spread on our roads. Ra-226 has a half-life of 1,600 years, or about 80 generations. According to the USGS report, it takes an additional 10 half-lives "for a radioactive element to decay to negligible quantities." From a human point of view, this is forever! As an illustration, the lab notebooks used by the Curies,



People gather outside Village Hall in Mount Kisco, Gov. Andrew Cuomo's hometown, in August, 2012, to protest hydraulic fracturing, or fracking. FRANK BECERRA JR./THE JOURNAL NEWS

the discoverers of radium, still cannot be safely handled over 100 years later.

Spreads everywhere

This dangerous material, if used on our roads for de-icing purposes, will be further spread through car and truck tires onto neighboring roads, irrespective of town or county limits, and onto private driveways and into garages. Road brine runoff during storm events can enter our streams, wetlands, recharge areas, aquifers, lakes and ponds. From there, it can easily

enter our water supplies and food chain. Numerous pathways to human ingestion via public or private water supplies, livestock, or agricultural use have been well documented in a Summary Report prepared by Grassroots Environmental Education.

The report's conclusions are supported by the aforementioned USGS report that states: "Chemically, radium behaves in a manner similar to calcium and is capable of bioaccumulation in plants and animals. According to the Environmental Protection Agency documents, Ra-226

is a carcinogen and, when ingested or inhaled, concentrates in the bone and can cause leukemia.

If Gov. Cuomo allows high-volume horizontal hydraulic fracturing, it is unlikely that the brine from future wells in New York will be any less radioactive than the 11 wells previously analyzed. According to geologists, the reason is straightforward. The state's Marcellus shale, so-called "black shale," contains unusually high levels of organic matter, formed some 300 million years ago from algae in the existing seas that covered this region. U-238, of which Radium-226 is a decay product, preferentially bonds to organic material. The high radioactive levels already encountered in the brine and flowback/produced waters are, therefore, not merely aberrations but are likely to be the norm.

All municipalities in New York must prohibit any spreading of fracking brine on their roads, or "treatment" of flowback/produced water by their wastewater treatment plants.

The writer is president emeritus of the Croton Watershed Clean Water Coalition, Inc.