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Wastewater from gas drilling being used for area road maintenance

Ithaca firm questions practice; DEC says it's safe

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Several New York municipalities -- including communities in Chemung, Broome and Tompkins counties -- are using contaminated wastewater from natural gas drilling operations as part of their road and highway maintenance programs, according to an Ithaca-based environmental activist.

The state Department of Environmental Conservation sanctions the use of the wastewater, with restrictions, through a "beneficial use determination" program.

The wastewater is the fluid that flows back to the surface through a well bore along with natural gas. The fluid often contains brine, heavy metals and radioactive materials, said Walter Hang, president of Toxics Targeting in Ithaca.

"The attitude is that it's just salty water that comes up with the gas, but people are just going to be shocked that they were being exposed to the contaminated wastewater through DEC-sanctioned dumping programs without any comprehensive health assessment," Hang said.

The DEC contends the use of the wastewater is safe for purposes such as keeping dust levels down during road construction and as a de-icer in winter.

The wastewater it approves for "beneficial use" comes from non-shale vertical wells that are drilled in New York, which rules out the brine produced in out-of-state wells that have been subjected to high-volume hydraulic fracturing.

"We consider the source, the potential use, the characteristics of the water itself, and where it would be applied," said DEC spokesman Michael Bopp.

"Where the designation has been used, it's been granted for conventional vertical wells. We don't give the designation for produced water from out-of-state."

For use on roads

According to documents released by Hang's firm, Toxics Targeting, wastewater generated by hundreds of natural gas production wells, along with brine generated by gas storage facilities and gas pipelines, have been approved to be spread on roadways in Chemung, Broome, Tompkins, Tioga, Chenango, Steuben, Cayuga, Cortland, Madison, Genesee, Chautauqua, Cattaraugus, Allegany, Wyoming and Otsego counties.

Hang has posted to his website, www.toxicstargeting.com, detailed information mapping the roads where the wastewater is used, the municipalities that have applied to the DEC for permission to apply the wastewater to road surfaces -- usually by spraying -- and the DEC's approval of the [applications](#).

For example, Hang says, Chautauqua County reportedly spread 1,322,450 gallons of "gas well production brine" in 2010-11.

Restrictions in place

According to preliminary information released to this newspaper by Hang, A.D. Call & Sons Excavating, of Stafford, N.Y., submitted a beneficial use determination [application](#) to the DEC for production brines from gas wells in Medina, Theresa and Queenston wells in February and March 2010. The DEC approved the request, with certain conditions, in April of the same year.

The conditions include requirements that the vehicles transporting or spraying the brine have the appropriate permits and spray bars must have shut-off mechanisms in the cabs of the [trucks](#). Furthermore, the road spreading plans must be conducted in a manner that minimizes the chances of the brine running off into streams, creeks, lakes and other bodies of water.

Chemung County roads to be treated by A.D. Call & Sons include 30 miles of dirt road maintained by the Baldwin Town Highway Department and 41 miles of dirt road maintained by the Erin Town Highway Department.

Hang's material also included letters sent to the DEC in August 2009 from the respective town highway department heads asking that A.D. Call & Sons be allowed to use the well production brine on their roadways.

The highway superintendants from either town could not be immediately reached for comment.

"There's been a lot of focus on the flow back water, but there should be an equal concern on the produced water brine," Hang said. "The lynchpin issue is what to do with the gas drilling wastewater, which has high levels of total dissolved solids, chlorides and heavy metals."

Website logs use

Toxics Targeting has also made available a free map on its website that allows residents to type in their addresses or town names to see if gas drilling wastewater has been approved to be spread near their homes or sources of drinking water. The maps can be accessed at www.toxicstargeting.com/MarcellusShale/interactive_map.

The documents approving the use of the wastewater can be found at toxicstargeting.com/sites/default/files/pdfs/foil-hl-110718.pdf.

State routes through Tompkins identified for brine use

Ithaca - A [New York](#) State Department of Transportation official said in 2008 that several highways passing through Tompkins County are among the state routes that may be treated with salt brine.

Routes 13, 34B, 38, 79, 89, 96, and 96B were named by NYSDOT Maintenance Environmental Coordinator Tim Baker in a letter written in December 2008. Baker said, "At the time of need the material will be added to the following routes as necessary."

The material would be purchased from Teppco Inc. "as an anti-icing/de-icing agent" and delivered by a NYSDOT vehicle to a facility in Cortland for [storage](#).

- Liz Lawyer