

## Road salt contributing to hike in sodium chloride levels in Merrimack drinking water, says expert

By Kimberly Houghton Union Leader Correspondent Feb 20, 2020



Kimberly Houghton/Union Leader Correspondent

The Merrimack Village District drinking water has seen a significant increase in sodium chloride levels in the past two decades, and is now suggesting that town officials prohibit the use of salt on roadways within some local wellhead protection areas.

**MERRIMACK** – With so much attention focused on filtrating PFOA from the local water system, concerns about sodium chloride are now being raised.

“Over the past 30 years, sodium chloride levels have increased in all of the (Merrimack Village District) production wells,” said James Emery, principal, district manager and senior hydrogeologist with Emery & Garrett Groundwater Investigations.

In one of the MVD wells, there was a dramatic hike from 2011 -- up 25.2 milligrams per liter of chloride, according to Emery.

"That is a 250 percent increase just in the last eight years," he said. " ... These are stark and difficult numbers to see."

Much of the contamination is in the region of Continental Boulevard and Industrial Drive, resulting from salt used to de-ice roads, parking lots and driveways.

The most recent data from 2019 reveals the highest level of chloride at well three, which is 379 milligrams per liter, and the highest level of sodium at 191 milligrams per liter, which Emery said is more than a 700 percent increase since 1992 when the levels were at 54 and 26, respectively.

"All of these numbers are bad. All of these numbers have to go in a different direction," he stressed.

Although the public works department is trying to make adjustments in its salt usage as a de-icing agent, there are still concerns about private restaurants and businesses using excessive amounts of salt in their parking lots during winter storms, according to Emery.

Local public works employees are being trained on salt applications, and have calibrated their spreaders, however more work should be done to perfect the appropriate application rates, he said, specifically in wellhead protection areas.

"The MVD relies exclusively on groundwater, and they supply nearly 1 billion gallons of water annually to over 9,300 connections," he said, explaining Merrimack doesn't have a lot of other choices for water - - aside from its existing seven public wells, some of which are not currently in operation because of PFOA contamination.

Eileen Cabanel, town manager, questioned how much of the problem can be controlled by the town, especially since some of the roadways in these environmentally sensitive areas are owned by the state, adding the businesses and their parking lots are privately owned.

Still, Emery said the data doesn't lie, and salt levels continue to increase.

"I also think we are probably at a point where we have to define no salt areas," he recently suggested to town officials, arguing that if salt remains in the roadway or in parking lots once a storm ends, an excessive amount of salt was utilized.

Barbara Healey, town councilor, maintained that some of the MVD wells are directly next to state-owned roads.

“There are some safety concerns,” she said, explaining business owners are understandably concerned about pedestrian and customer safety while driving and walking on stairs and in the parking lots of their developments.

While she agrees that the salt usage is a problem, she questioned what would be a good alternative.

There could be automated signs posted in wellhead protection areas notifying plow drivers of the sensitive groundwater recharge area, said Emery, who also suggested pre-storm and post-storm meetings to review salt usage, as well as the use of weather forecasting services.

MVD also plans on mailing letters to customers explaining concerns with salt usage, however it acknowledged that residential use was not the major culprit.