Road salt can threaten freshwater streams

But storm didn't call for heavy usage

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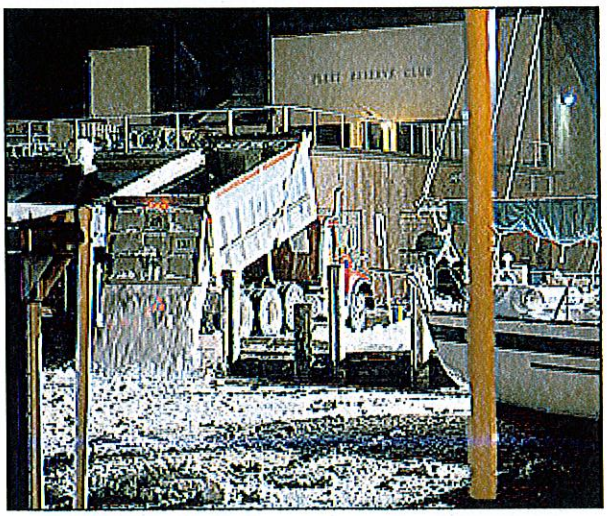
Road salt may help melt snow and ice and keep streets and highways clear, but it also can harm fish and critters in freshwater streams.



Courtesy of Bill Tongue

Snow is dumped into the water at Annapolis City Dock following the recent snowstorm. City officials have received calls and e-mails about the practice, although it does not run afoul of environmental laws. Snow laden with road salt is more of an environmental concern for freshwater streams than it is for waterways that are brackish or salty.

Though the cleanup from last weekend's monster snowstorm involved less-than-usual amounts of salt, the salt that was used could end up reaching streams and increasing their salinity.

Sujay Kaushal, an assistant professor at the University of Maryland Center for Environmental Science, studies streams and has looked at salt levels in freshwater streams. He found that when there's more pavement - roads, parking lots, sidewalks - there's a greater rise in salinity in local streams.

The paved surfaces act as a conduit, sending salt-laden rainwater and snowmelt into streams.

And even in less-developed areas, salt that washes off roads can soak into the groundwater, eventually ending up in streams.

"Some of these levels that we have seen have been almost ... a quarter of the salinity of seawater during certain times of the year," said Kaushal, who is based at the Chesapeake Biological Lab in Calvert County.

When salinity rises in freshwater streams, it can harm reptiles, fish and plants, Kaushal said.

Kaushal said he recognizes the need to keep roads ice-free, snow-free and safe for drivers. He suggested thoughtful application of road salt, as well as making careful planning and zoning decisions that reduce the amount of paved surface instead of increasing it.

"It's necessary for us to maintain safe roadways, but we need to think about where we place these impervious surfaces, where we build roadways and also how many that we build," Kaushal said.

David Buck, a spokesman for the State Highway Administration, said his agency tries to "strike a balance" between protecting drivers and protecting the environment.

He said the nature of the weekend storm meant relatively little salt was used compared to other storms, although he didn't yet have final numbers.

Highway crews pre-treated some roads before the storm hit. But once the snow began falling hard, it made no sense to use salt, especially since it would just get covered by many inches of snow and then pushed away by snowplows.

"We used very, very little salt in this storm," Buck said. "It wasn't a salting storm, it was a plowing storm. It makes no sense to put down something that you'll plow up in the next pass."

Jay Apperson, a spokesman for the Maryland Department of the Environment, said he didn't know of any laws regulating the use of road salt. He acknowledged, however, the detrimental effect of road salt making its way into freshwater streams.

"We should be concerned about reducing and minimizing the use of road salt consistent with road safety," he said.

Apperson said homeowners as well should be careful about what they put down on private driveways and sidewalks.

He cautioned against using urea-based ice-melting products, because they contain nitrogen. Nitrogen that runs into creeks, rivers and the Chesapeake Bay spurs the growth of algae blooms that suck life-sustaining oxygen from the water.

"Everybody can play their part in terms of minimizing and not contributing more than necessary," Apperson said.

Dumping snow

Meanwhile, Annapolis officials have been getting a few questions from residents concerned about truckloads of snow being dumped into the water off City Dock.

City officials said it's a rare but necessary practice when there are large amounts of snow and little place to put it. MDE officials said it's OK to dump snow in tidal waters, so long as it doesn't pose a navigation hazard and isn't riddled with high levels of salt, sand, trash or other contaminants.

Bob Agee, the city's director of public works, noted that even if snow is piled on land, it eventually will melt and end up in the water anyway.

"It's exactly the same snow," he said. "It melts and goes into the same body of water."