

## Searsburg installs high-tech de-icer

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By PATRICK McARDLE Herald Staff

SEARSBURG — During the past few days, the last concern on the minds of anyone in southern Vermont has been icy roads, but the state Agency of Transportation has been using that time to develop a project that may prevent anyone from worrying about icy roads again.

On Wednesday, road crews were on a stretch of Route 9 in Searsburg installing a new road overlay on about 325 feet of road. When complete, it's expected to be only about three-eighths of an inch thick, but a large difference to drivers.

The overlay is a research opportunity for the state and the vendor of the material that will allow the Agency of Transportation to look at the possibility of developing other surfaces that could make icy roads a thing of the past.

The process, provided by Cargill SafeLane Surface Overlay, is actually pretty simple. A strong epoxy, or glue, is poured over the surface of the road and then it is covered by small stones, called aggregate.

The stones are porous limestone and act as small, hard sponges. When a salt solution is poured over the surface, the stones will actually absorb and hold it. When it gets wet because of a snow or ice storm, the stones will, like wet sponges, release the salt solution they had absorbed, creating roads which, in effect, de-ice themselves.

Vermont Agency of Transportation Engineer Jennifer Fitch pointed out that the surface also provided more friction, making it safer in rainy conditions as well.

Because the road surface "holds" the solution, less salt is needed during the course of the winter and the solution is less likely to run off the road, said Kevin Jost, a strategic account manager with Cargill, who was on site in Searsburg on



Photo: Patrick Mcardle / Rutland Herald

**Road crew workers apply a coating of epoxy to hold a new kind of de-icer in a process provided by Cargill SafeLane Surface Overlay to a stretch of Route 9 in Searsburg on Wednesday.**

Wednesday.

The process is expensive, however. In 2006, when the Agency of Transportation agreed to the experiment, the cost was about \$7 a square foot, so it's likely to only be used at "hot spots" where there are high numbers of accidents in bad weather.

The SafeLane overlay doesn't prevent the need for plowing snow either, although Jost said ice will not be able to bond with the road. The roads will also have to be treated with the salt solution once or twice a month depending on the amount of rain or snow. Precipitation will wash some of the solution away.

Fitch said she was excited by the possibilities the SafeLane system presents and the opportunity to do research on how it works under Vermont conditions.

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## Searsburg installs high-tech de-icer (continued)

SafeLane overlays, which were developed at Michigan Tech University, are already in use in about 30 places across 18 states including New York, Connecticut and Maine. But it's primarily used as a road surface on bridges.

The Searsburg installation is unusual not just because it's the first in the state, but also because it's the first time the overlay is being installed on a road with such a steep grade.

The 13 percent grade was part of the reason the site was chosen. According to the Agency of Transportation, police responded to seven crashes and 20 weather-related complaints along the stretch of road during the winter of 2005.

Tractor trailers in particular start up the hill and then get stuck when they can't get traction, blocking traffic on the highway, according to Fitch.

Having chosen an appropriate site, the Agency of Transportation only had to wait for warm weather — because the overlay will only properly set in temperatures above 55 degrees — then apply two coats, known as lifts, and wait. Jost said SafeLane sets quickly and he expected the closed lane of Route 9 to be open to traffic again by Wednesday evening.

Fitch said she plans to spend a minimum of five years monitoring the installation through visits she or other researchers will make and communication with the Vermont State Police in the Shaftsbury barracks who patrol the area and the state road

crews who maintain the highway.

The Searsburg installation was a joint venture between the state and Cargill to allow the research, according to Fitch, with Cargill donating about 60 percent of the material needed.

Agency of Transportation spokesman John Zicconi said in an e-mail the future of SafeLane overlays in the state is dependent on the research results.

"We will hold off from future installations until after we have a chance to see how this works. We are very encouraged from the company's research, but we want to make sure we know firsthand what to expect before we make plans to invest in the product for other locations," Zicconi said.

Jost said Cargill's results from other installations had been very positive.

For more information on Cargill on the Web, visit [www.cargillsafelane.com](http://www.cargillsafelane.com).

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