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New material upgrades bridge de-icing

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In the Marilla hamlet of Porterville, motorists on Two Rod Road are brought over Buffalo Creek by a bridge unlike any other in Erie County.

That's because the bridge has been covered with a new paving material that its marketers say absorbs anti-icing liquid, then releases it as conditions develop for the formation of ice and snow and keeps releasing it over multiple events.

"It keeps the chemical on the surface, so when the snow or ice event comes, the chemical's already there," said Bob Persichetti, general manager of SafeLane, which is being marketed by Cargill Co.

Practically speaking, it means that road crews could put down de-icer at any time before an ice or snow event, then not have to reapply it for a longer period of time than usual.

"The whole theory is, rather than going out tonight [and applying de-icer] because you're getting a storm tomorrow, it's anti-icing the road on your own time, your own schedule," Persichetti said. "You get a longer residual with that chemical."

The Two Rod Road bridge is one of two in Western New York being used by the state Department of Transportation to test the product. The other is in Jamestown.

SafeLane is also being tested in a number of other states, according to Persichetti. The longest test to date involves a bridge in Crandon, Wis., where Tom Martinelli, winter operations engineer for the Wisconsin Department of Transportation, said the results have been positive.

From 1994 to 2003, the bridge averaged four accidents per winter season. Martinelli said that almost all were single-vehicle accidents where the operator lost control on the icy surface and banged into guardrails.

There have been no accidents reported since the installation, Martinelli said, citing reports from the engineer who monitors the bridge.

"Every spring, he had to go out there and replace a section of the guardrail, and the last two winters, he hasn't had to replace any," Martinelli said.

In addition, he said, workers now apply anti-icing compounds only once a month. Before the surface was put down, "over the course of a month, we might put down eight treatments," Martinelli said.

Just as important, Martinelli said, the epoxy that is used to adhere the crushed stone to the road surface has helped prolong the life of the bridge.

Transportation officials believe that such epoxy coatings reduce chemical wear by blocking chloride and water intrusion and can add decades to a bridge's life span. That's what the state DOT would like to see out of this test, according to regional spokeswoman Susan Surdej, who said the DOT is interested in observing the properties of the epoxy.

"We are testing it primarily from a deck-preservation perspective," she said. "We're looking to see if this extends the service life of our decks."

Any enhanced anti-icing properties of the surface will be a secondary benefit, Surdej said, adding that the DOT will not be changing its regular de-icing schedule for the bridge.