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Johnson Creek bridge to get new deicing treatment

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BLOSSBURG - Two relatively new bridges near here with a history of crashes have been selected to receive a newly developed de-icing overlay treatment with the \$700,000 cost partially covered by a Federal Highway Administration grant of \$150,000.

The two bridges, part of the new Route 15/I-99 project, were opened to traffic in November 2003. Since then, there have been 12 bad crashes on the bridges during or immediately following winter storms, Rick Mason, community relations coordinator for the state Department of Transportation, said.

The new treatment, described by PennDOT district bridge engineer Gary Williams as a surface overlay, may also seal minor transverse cracking in the bridge deck from railing to railing.

The pilot treatment, known as Four SafeLane, was developed by Cargill, a Minneapolis, Minn., company that provides PennDOT with most of its winter road salt.

Some of the local PennDOT staff saw a presentation by company officials about Four SafeLane last year.

"They said when you put this overlay down and then spread a salt mixture over it, the overlay retains some of the salt mixture. Then the next time you have a weather event, it will prevent ice from forming," Williams said.

The two bridges over the Arnot Road and Johnson Creek are "very high" and have the tendency to experience winter icing problems, Williams said.

The local bridge was one of four selected nationwide to receive the pilot treatment through an Innovative Bridge Research and Construction grant program,

he said. Others are in North Carolina, Texas and Idaho.

The program helps governments incorporate innovative materials and technologies into their bridge projects.

The SafeLane surface overlay is a patented combination of epoxy and aggregate rock, according to the Cargill.

When liquid anti-icing chemicals are applied to the overlay before ice or snowstorms hit, the material acts like a rigid sponge, storing the chemicals inside and automatically releasing them as conditions develop for the formation of ice or snow.

Another benefit to using the overlay treatment claimed by Cargill is that it is supposed to have the effect of preventing concrete erosion from the sodium chloride used in de-icing road treatments.

"We are looking at it also as a bridge preservation technique. With enough time, the coating on the steel will wear away and that's where you get potholes on the bridge deck," Williams said.

Williams said today's new bridges are built to last up to 100 years.

"That's our goal. And the longer we can keep the decks in good shape, the longer they last," he said.

Bids to apply the treatment will be opened in October, and the work is to be done in next spring after warmer air returns.

If the pilot project is successful, it could become an approved product for use throughout the state.