



NEWS RELEASE

CONNECTICUT ACADEMY OF SCIENCE AND
ENGINEERING

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CASE Releases Winter Highway Maintenance Study

Rocky Hill, CT — The Connecticut Academy of Science and Engineering (CASE) conducted a study entitled *Winter Highway Maintenance Operations: Connecticut*, on behalf of the Connecticut Department of Transportation (CTDOT). The study was conducted in response to Section 6 of Public Act 14-199 that directed the Commissioner of Transportation to *conduct an analysis of the corrosive effects of chemical road treatments on 1) state snow and ice equipment vehicles, 2) state bridges, highways and other infrastructure, and 3) the environment; The analysis shall determine the cost of corrosion created by road treatments, and shall include an evaluation of alternative techniques and products, such as, but not limited to, rust inhibitors, with a comparison of cost and effectiveness.*

The study found that chloride-based deicing chemicals should be expected to be the standard for the foreseeable future and CTDOT should continue to use sodium chloride as the primary deicing chemical. Furthermore, although corrosion inhibitors are available for use with deicers, literature reviewed did not find evidence of their effectiveness in the field. It is important to note that vehicle washing is the best defense to reduce/prevent corrosion and the public should be educated on the need to wash vehicles, including the undercarriage.

The study concluded that ensuring the safety and mobility of the traveling public requires the most effective winter highway maintenance practices possible. Accomplishing this is a shared responsibility among stakeholders. To achieve comprehensive and sustainable success competing factors must be considered including: safety, cost, corrosion, operating practices, materials and equipment, environmental and economic impacts, and communication with the general public, stakeholders, and government leaders. Balancing these factors presents a challenge that can be met through ongoing monitoring and continuous improvement based on evolving best practices. Also, it was noted that CTDOT engages in an ongoing process of monitoring current practices, identifying areas for improvement, and instituting improvements based on best practices.

Further, analysis of winter season injury crash data showed that CTDOT's anti-icing strategy the reduced number of injury crashes during winter weather events.

The report includes recommendations for consideration by CTDOT and Connecticut's municipalities related to deicing chemicals and application techniques, infrastructure, vehicles, the environment, and outreach and education.

The Full Report, Executive Summary, and Briefing PowerPoint are available on the CASE website (www.ctcase.org). Scroll down to **Reports and Studies**.

The Connecticut Academy of Science and Engineering was chartered by the Connecticut General Assembly in 1976 to provide expert guidance on science and technology to the people and to the state of Connecticut, and to promote the application of science and technology to human welfare and economic well-being. For more information about the Academy, please see www.ctcase.org.

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