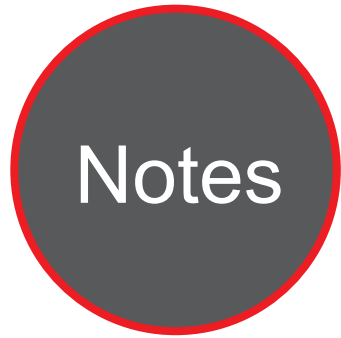




Caltrans Division of Research,
Innovation and System Information

Research



Notes



Maintenance

MARCH 2020

Project Title:
Snow and Ice Removal Strategies

Task Number: 2473

Start Date: May 18, 2012

Completion Date: December 31,
2016

Task Manager:
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Clear Roads Winter Highway Operations, TPF-5(218)

A study focuses on advancing winter highway operations nationally through practical, practice-ready research related to materials, equipment, and methods.

WHAT IS THE NEED?

Effective snow and ice removal operations are essential for keeping California Department of Transportation (Caltrans) roadways open and safe for the traveling public. These operations are also resource intensive for the department.

Caltrans has a need to investigate new technologies, practices, and tools that can improve the safety and efficiency of snow and ice removal operations. This Clear Roads pooled fund will address that need by investigating practical, practice-ready research related to materials, equipment, and methods of snow and ice removal. Improving the efficiency and safety of snow and ice removal operations also helps Caltrans maintain fiscal responsibility.

WHAT ARE WE DOING?

The Clear Roads Pooled Fund project began in 2004 with four members and a focus on real world testing of winter maintenance materials, methods, and equipment. During its twelve years of funding and overseeing research projects, the pooled fund has grown to include 33-member states funding three to ten research projects annually. The group's latest projects and partnership initiatives have included a strong emphasis on implementing research results and sharing successful practices among agencies.

The Clear Roads Pooled Fund provides the critical funding and structure needed to evaluate these new tools and practices in both lab and field settings, to develop industry standards and performance measures, to conduct cost-benefit analyses,



DRISI provides solutions and knowledge that improves California's transportation system

and to develop and evaluate new designs and practices that further improve winter highway safety and minimize environmental impacts. This project responds to research and technology transfer needs not currently met by other pooled fund projects. Existing partners make every effort to coordinate with other agencies to avoid duplication of efforts and encourage implementation of results.

This research will address both operational and management research needs, investigating the most effective tools and practices for clearing snow and ice and for managing program resources, budgets, and performance measures. The project will provide support for implementation and technology transfer through the development of user manuals, training modules, peer exchanges, and quick turnaround syntheses of the most effective state practices from around the country.

WHAT IS OUR GOAL?

The goal is to implement practical, practice-ready research related to materials, equipment, and methods that have been deployed by other agencies across the country.

WHAT IS THE BENEFIT?

This research will help benefit Caltrans by having direct access to all the investigations done by the Clear Roads pooled fund. These investigations include research into new equipment and materials that help with the snow clearing operations. Caltrans is also able to submit research projects that would directly benefit the department, as well as benefit from other research projects that are submitted by the other member states.

WHAT IS THE PROGRESS TO DATE?

This pooled fund expired, and it is in the close out. The Clear Road pooled fund has been continued under pooled fund TPF-5(353).

IMAGES



Figure 1: Rotary blower removing snow from roadway



Figure 2: Brine tank truck spreading salt brine on roadway