

Maintenance

APRIL 2022

**Project Title:**  
Clear Roads Phase II TPF-5(353)

**Task Number:** 3157

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## Clear Roads Phase II TPF-5(353)

The Clear Roads pooled fund focused on advancing winter highway operations nationally through practical, practice-ready research related to materials, equipment, and methods.

### WHAT WAS THE NEED?

Effective snow and ice removal operations are essential for keeping Caltrans roadways open and safe for the traveling public. These operations are also resource intensive for the department. Caltrans had a need to investigate new technologies, practices, and tools that could improve the safety and efficiency of snow and ice removal operations. This Clear Roads pooled fund addressed 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 WAS OUR GOAL?

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

### WHAT DID WE DO?

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 sixteen years of funding and overseeing research projects, the pooled fund has grown to include thirty-three-member states funding three to ten research projects annually.

This phase of Clear Roads Pooled Fund addressed both operational and management research needs, investigated the most effective tools and practices for clearing snow and ice and for managing program resources, budgets, and performance measures. The pooled fund also expanded support for implementation and technology transfer through the



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development of user manuals, training modules, peer exchanges, and quick turnaround syntheses of the most effective state practices from around the country. Below is a list of just some of the research projects that were completed under this pooled fund.

- Integrating Advanced Technologies into Winter Operations Decisions
- Emergency Operations Methodology for Extreme Winter Storm Events
- Utilization of AVL/GPS Technology: Case Studies
- Standards and Guidance for Using Mobile Sensor Technology to Assess Winter Road Conditions
- Synthesis of Material Application Methodologies for Winter Operations
- Synthesis on GPS/AVL Equipment Used for Winter Maintenance

Caltrans sent a representative from the Division of Maintenance to attend the bi-annual Clear Road task force meetings. During these meetings, the task force reviewed and made decisions on new research projects. All of the task force meetings minutes as well as final reports for each project are posted on the Clear Roads Website: [Clear Roads](#).

## WHAT WAS THE OUTCOME?

This pooled fund investigated over 30 different research projects during this phase of the Clear Roads pooled fund project. Over 25 of these research projects have been completed. The projects that have not been completed will be transferred to the new Clear Roads Pooled Fund TPF-5(479)

## WHAT IS THE BENEFIT?

This research benefited Caltrans by having direct access to all the investigations done by the Clear Roads pooled fund. These investigations included research into new equipment and materials that help with the snow clearing operations. Caltrans was also able to submit research projects proposals

that directly benefited the department, as well as benefited from other research projects that were submitted by the other member states.

## LEARN MORE

All final reports are posted to the Clear Roads website

To view the final reports please visit the link below. [All Research and Synthesis Projects | Clear Roads](#)

## IMAGES



Image 1: Rotary blower removing snow from roadway



Image 2: Brine tank truck spreading salt brine on roadway