



# EXPANDING LANDOWNER ADOPTION OF SNOW CONTROL MEASURES

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Knowledge, Attitudes and Practices (KAP)  
Survey



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# Snow Control Measures – Landowner Adoption KAP Survey

## Instrument Plan

### Introduction

Snow control measures, as defined by the Minnesota Department of Transportation (MnDOT), are trees, shrubs, native grasses, wildflowers, cornstalks, temporary and permanent fencing, and other structures located along roads or around communities that trap snow as it blows across fields.<sup>1</sup> Previous research indicates that Minnesota taxpayers will profit from the implementation of snow control measures in the following ways: reduced cost of snow drift removal and blow ice treatment, decreased travel costs related to blowing and drifting snow, moderated costs and damages attributed to snow-related car accidents, and increased greenhouse gas (GHG) emission avoidance. More recent studies have identified a need for a better understanding of landowner knowledge, attitudes, and practices with respect to snow control measures.

### Purpose

We are administering a survey concerning snow control measures to determine how best to meet the needs and interests of Minnesota landowners. The survey results will be used by MnDOT to inform and shape the development of snow control promotional activities.

### Intended Audience

MnDOT has identified four highways (*corridors* hereafter) that reflect the state's diverse geography, agroecology, land tenure, and blowing and drifting snow problems. The following four corridors were selected: TH 210/169 (Aitkin County), TH 2 (Polk County), TH 250 (Fillmore County), and TH 4 (Brown and Watonwan Counties). The population of interest will be landowners along either side of each of the identified corridors. Note: *landowner* has been defined as any individual, group, or entity that makes ultimate land-use decisions on property parcels along the selected corridors. Thus, some "landowners" may be renters, farm corporations, managers of land trusts, etc.

### Type of Questionnaire

The survey instrument will be available in paper form and online. The survey will likely not exceed 40 questions. The paper survey will include a cover letter explaining the purpose, scope, and confidential nature of the study along with a packet of the questions. The online survey will contain a welcome page, with content similar to the paper survey's cover letter, and one scrollable page containing all survey questions. The online survey will be hosted on Qualtrics, the University of Minnesota's preferred survey tool.

### Topics

- Types of landowners (e.g. owners, renters, corporate farms, land trusts) in the population of interest
- Perceptions of snow problems on Minnesota highways
- Preferred source of information (internet, friends/neighbors, extension services, soil and water conservation districts) about technologies like snow control measures

<sup>1</sup> <https://www.dot.state.mn.us/environment/livingsnowfence/>

- Level of knowledge about snow control measures
- Perceptions of and interest in snow control measures
- Barriers to adoption of snow control measures
- Incentives for adoption of snow control measures
- General perceptions of MnDOT
- Opinions about MnDOT's previous outreach efforts

## Schedule

The following timeline is subject to change due to unforeseen obstacles and developments in the research process. Note that since this is administered through MnDOT to inform policy and programming, and not used for research purposes, IRB will not be involved in the review and approval of the survey.

|  |                    |
|--|--------------------|
| Instrument Plan Draft Review.....                | September 19, 2018 |
| Instrument Plan Completion.....                  | September 28, 2018 |
| Draft Instrument Review – Research Team.....     | October 16, 2018   |
| Draft Instrument Review – Classmate.....         | October 17, 2018   |
| Draft Instrument Review – Expert/Instructor..... | October 24, 2018   |
| Sampling Plan Review – Research Team.....        | November 1, 2018   |
| Sampling Plan Completion.....                    | November 14, 2018  |
| Pilot Summary Review – Research Team.....        | November 21, 2018  |
| Pilot Summary Completion.....                    | November 28, 2018  |
| Data Analysis Plan Review – Research Team....    | December 6, 2018   |
| Data Analysis Plan Completion.....               | December 12, 2018  |
| Prenotice.....                                   | January 2, 2019    |
| Survey Launch/Administration.....                | January 7, 2019    |
| Reminder 1.....                                  | January 21, 2019   |
| Reminder 2.....                                  | January 28, 2019   |
| Close Survey.....                                | February 8, 2019   |
| Draft Report Review – Research Team.....         | March 29, 2019     |
| Final Presentation/Final Report Completion.....  | May 2019           |