

Methodology

The survey contact database was updated from the database previously created for this project which included consideration of the following: 1) state and federal roads, 2) county roads, and 3) municipal roads. For state and federal roads the contacts used were New York State Department of Transportation Regions 3, 4, and 6. For county roads the contacts used were County Highway Departments. For municipal roads the contacts used were municipal highway superintendents, administrators, and public works supervisors (see Survey Contacts, Appendix C). For the Genesee/Finger Lakes Region this amounted to 205 contacts.

Each contact was sent a Road Deicing/Salt Storage Survey (see Survey, Appendix C) with a map of the county(s) of their jurisdiction. The survey instrument was a two-page questionnaire consisting of 20 questions; all but three being closed format type.

A modified Dillman's total design method for conducting a mail survey was followed (Dillman, 1978). Five mailings were carried out:

- The first consisted of the survey, accompanying map(s) and a cover letter sent to the 205 contacts described above.
- The second mailing, carried out one month later to the non-respondents, was a reminder postcard.
- The third mailing, carried out a month after the second mailing to the non-respondents, was a second copy of the survey, map(s) and a cover letter.
- The fourth mailing, sent out one month later to the non-respondents, was a second reminder postcard.
 - o One month later all non-respondents received a telephone call either requesting that the survey be returned or suggesting that the survey be completed over the telephone.
- A fifth and final mailing was sent out one month later to the non-respondents, and was a third copy of the survey, map(s), and cover letter.

A 93.7% response rate was achieved, totaling 192 questionnaires.

The data collected from the surveys for the 192 respondents were tabulated in a Microsoft Access database, with individual fields for each survey question (see Data Dictionary, Appendix A). The returned maps were used to Geocode (assigning x, y coordinate values to addresses so that they can be displayed on a map) the storage locations using ESRI's ArcView, and then joined to the Microsoft Access Database by a unique identifier. Analysis of the Microsoft Access database was then performed for the following data: 1) tons of material applied over two one year periods; 2) regional miles of roads deiced; 3) deicing material storage classification (open vs. closed); 3) deicing material base for storage; 4) average age of storage facilities; 5) type of storage facility; and 6) dust control (see "Summary"). A spatial analysis of the database was performed and thematically mapped for the following data: 1) location of storage facilities; 2) location of storage facilities by major type of deicing material; 3) location of storage facilities by method of storage; and 4) location of storage facilities by base of storage (see "Maps").