

# APPENDIX A

## State Highway Agency Questionnaire

Name of Respondent \_\_\_\_\_ State \_\_\_\_\_  
Title \_\_\_\_\_ Phone \_\_\_\_\_

### SURVEY OF DEICING CHEMICAL USAGE AND MITIGATION MEASURES

1. Does your agency use chloride deicing salts (sodium chloride or calcium chloride)?

No. If no, please answer question 9 and return survey.

Yes. If yes, please specify:

Total annual tonnage \_\_\_\_\_ tons

Pct sodium chloride \_\_\_\_\_ %

Pct calcium chloride \_\_\_\_\_ %

2. What is the extent of salt usage in your state?

Widespread

Limited to parts of the state. If limited, please specify:  
Locations where used (generally). \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Percent of state mileage treated \_\_\_\_\_ %

- 3. Please specify the approximate minimum, maximum, and average salt usage on state-maintained highways in terms of annual tons per lane-mile (by highway type if possible).

Highway Type	Annual Tons/Lane-Mi			# of Treated Miles
	Min	Max	Avg	
Urban interstate				
Urban primary				
Other urban				
Rural interstate				
Rural primary				
Rural secondary				
Other rural	_____	_____	_____	_____
Total	_____			_____

- 4. Are salt application decisions and rates based on a prescribed agency policy?

No

Yes. If yes, briefly explain the policy. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- 5. Does your agency use other deicing chemicals in addition to common sodium chloride or calcium chloride (e.g., CMA, corrosion-inhibiting salt additives)?

No

Yes. If yes, please identify the type of alternative, the amount used per year (in tons), and the circumstances when used. \_\_\_\_\_

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6. Does your agency have a policy for reducing salt usage on highways in environmentally sensitive areas (such as forests or parklands) or near water supplies?

No

Yes. If yes, how many miles are affected? \_\_\_\_\_ miles

7. In recent years, has your agency received any complaints or been involved in litigation related to road salt impacts on water supplies or the natural environment?

No

Yes. If yes, please specify which areas have attracted the most complaints (e.g., water supplies, damage to roadside vegetation, etc.).

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Is the annual number of complaints increasing?

Yes  No

How many complaints did you receive last year? \_\_\_\_\_

8. Is your agency (or another state agency) taking measures to monitor or mitigate (e.g., special drainage systems, relocation of private wells) the effect of highway salt runoff on the natural environment or drinking water?

No

Yes. If yes, please explain. \_\_\_\_\_

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If the annual dollar cost of these measures is known, please specify. \$ \_\_\_\_\_

9. Which bridge deck protective systems are used most frequently by your agency on new bridges or completely replaced bridge decks?

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10. What has been the trend in salt use in your state in recent years?

Upward       No change       Downward

If upward, by how much since 1980? \_\_\_\_\_ %

If downward, by how much since 1980? \_\_\_\_\_ %

11. What is your agency's total annual budget for snow and ice removal?

Total \$ \_\_\_\_\_ (include expenditures on contract work)

If possible, please specify expense by:

Equipment \_\_\_\_\_ %

Manpower \_\_\_\_\_ %

Deicing Chemicals \_\_\_\_\_ %

Abrasives \_\_\_\_\_ %

Other \_\_\_\_\_ % (please specify \_\_\_\_\_ )

12. Do local highway agencies (county, municipal, toll) in your state use road salt?

No

Yes. If yes, estimate the total amount they use as a percentage of state salt use. \_\_\_\_\_ %

13. Does your state regulate local agency salt use or offer any guidance on salt use practices?

No

Yes. If yes, please explain. \_\_\_\_\_

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