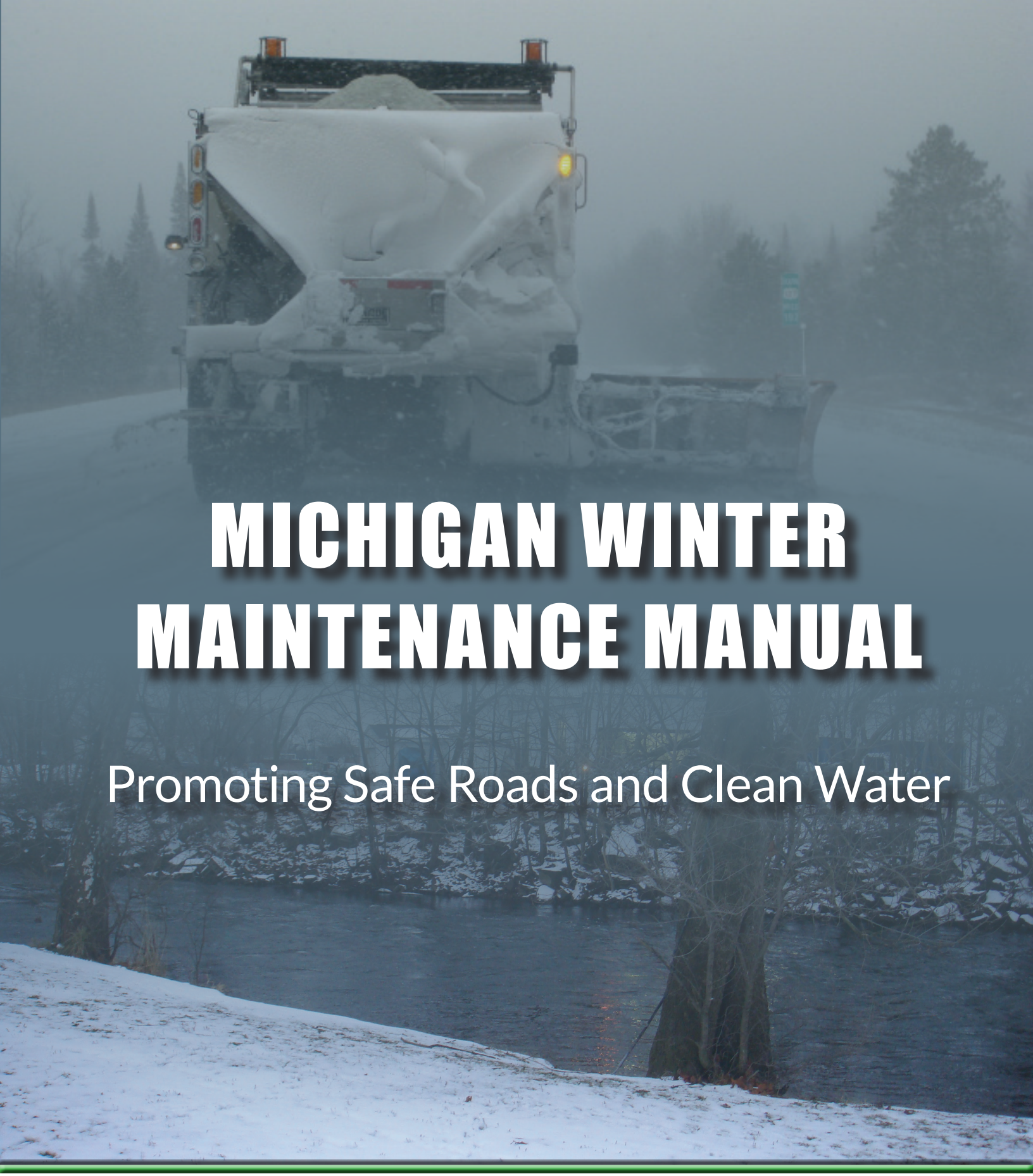

MICHIGAN WINTER MAINTENANCE MANUAL

Promoting Safe Roads and Clean Water

Applying knowledge to improve water quality
Great Lakes Regional Water Program
A Partnership of USDA NIFA & Land Grant Colleges and Universities

MICHIGAN STATE UNIVERSITY | Extension

Acknowledgments

This manual is dedicated to the protection of Michigan's natural resources and the winter maintenance professionals who have the opportunity to protect them. *Michigan Winter Maintenance Manual – Promoting Safe Roads and Clean Water* is based on the *Minnesota Snow and Ice Control Field Handbook for Snowplow Operators, Second Revision* published by the Minnesota Local Road Research Board in 2012.

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Purpose of this Manual

The purpose of this manual is to help winter maintenance professionals achieve their goals of providing safe roads through sustainable winter maintenance practices and policies. As a maintenance professional involved in your organization's winter maintenance program, your daily actions are critical components of its success.

Not only are you tasked with providing continued public safety on roads, parking lots and sidewalks during winter storm events, but the choices you make can greatly affect the ability of your organization to provide these services in a cost-effective manner. The actions you take can also make the difference between adding to or reducing the amount of salt, sand and other pollutants presently entering drains, creeks, streams and lakes throughout Michigan.

The over-application of deicing materials can have a detrimental effect on surface water, groundwater and drinking water quality. Studies have also shown that the over-application of deicing materials can contribute to habitat degradation in our local creeks, streams, and lakes and in vegetated areas near roadways. This has a negative effect on fish and other wildlife living in these areas. The use of deicing materials is being increasingly regulated, and discharge limits are being applied under federal and state storm water regulations.

This manual is designed to provide you with Best Management Practices (BMPs) and other information that can assist you and your organization in making sound decisions around your winter maintenance duties. The goal of this manual is help you establish procedures that will maintain the desired level of service while reducing the amount of deicing materials that are being applied. It will also help your organization comply with strict federal and state storm water regulations.

We hope that reading this manual will increase your knowledge of the equipment, materials and application processes that are used in winter maintenance operations. Reviewing this manual in your organization can provide an opportunity for further discussion between you, your coworkers, supervisors and managers on how to improve efficiency, while reducing the use of de-icing materials and increasing protection of the environment.

Throughout the manual you will find environmental tips shown with a fish symbol. These tips will help you reduce environmental impacts.

$ *Throughout the manual you will find cost-saving tips shown with a dollar symbol. These tips will allow you to maximize your efficiency and save money.*