

ADOT'S ENVIRONMENTAL STEWARSHIP IN RELATION TO WINTER STORM MANAGEMENT OF ARIZONA STATE HIGHWAYS

Ed Latimer, PhD, PE (602.733.6000, ed.latimer@amec.com), Senior Project Manager and Technical Director of Water Resources, AMEC Environmental and Infrastructure, Inc., 4600 Washington Street, Suite 600, Phoenix, AZ 85034-1917 USA

Tom Kombe, PhD, PE (602.712.3135, EKombe@azdot.gov), Project Manager, Arizona Department of Transportation Research Center, 206 S. 17th Avenue, Mail Drop 075R, Phoenix, AZ 85007 USA

Justin White (602.399.3233, jwhite@azdot.gov), Roadside Resources Group Manager, Arizona Department of Transportation, Office of Environmental Services, 1611 West Jackson Street, Mail Drop EM02, Phoenix, AZ 85007 USA

ABSTRACT

ADOT is responsible for keeping transportation corridors safe and operational during winter months when snow and ice accumulate on roadways. In doing this, ADOT is also responsible for complying with various air and surface water environmental laws and regulations. Moreover, many of ADOT roadways transect Indian Territory and lands managed by other state and federal agencies that require close coordination and adherence to intergovernmental agreements.

In the spring of 2007, ADOT set out to complete an Environmental Assessment (EA) of ADOT's winter storm management operations. The objective of this EA was to consider and analyze environmental and economic impacts related to current, new, and potential future winter storm management practices. The project effort also included preparation of a Winter Storm Management Operations Manual based on the findings of the EA. These two important documents, completed in the fall of 2008, provided the foundation of ADOT's winter storm management program, ensuring the level of service remains high, resource impacts are reduced, and compliance with various environmental laws, regulations, and policies is achieved.

In the fall of 2011, ADOT contracted a 2-year research project to recommend initial application rate guidelines of anti-icing and de-icing chemicals used by ADOT to minimize potential environmental impacts through soils, biotic and water analytical information from samples collected in the field over a two-year period (collected before and after WSM activities). The focus will be to identify trends indicating the accumulation of winter maintenance chemicals along transportation corridors and observed or potential impacts to natural resources associated with these accumulations. The anticipated benefit of this research project is to minimize impacts to water quality and roadside vegetation, including trees, while maintaining desired roadway safety.

RESEARCH REPORT

A research report summarizing the result of the project is anticipated to be available online, posted by the ADOT Research Center, no sooner than the end of 2013. Published ADOT Research Center reports are currently located here: www.azdot.gov/TPD/atrc/Publications/project_reports/index.asp