

Project Title: Risk framing of U.S. intermodal transportation toxic spills in news and social media

Principal Investigator:

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Project Summary:

The risk of transportation-related toxic spills increases the challenges and potential costs of operating the intermodal network of highways, rails, waterways, airports, and shipping terminals in the U.S. These risks are exacerbated by traffic congestion and aging infrastructure, ultimately jeopardizing American competitiveness in the global economy. In the 10-year period between 2003 and 2012, there were 161,079 hazardous waste transport incidents in the U.S., totaling more than \$701 billion in cleanup/mitigation costs (Pipeline and Hazardous Materials Safety Administration, 2013).

The proposed research project will examine a decade of risk framing in news coverage and social media messages about U.S. intermodal transportation incidents involving hazardous materials. It will involve in-depth analysis of more than 1,000 tweets, in addition to 600 newspaper articles. Toxic spills in transportation is important because social amplification of risk has been shown to strongly influence public responses to crises, including these types of accidents. The results of this unique study will be used to expand and refine the principal investigator's outrage-mitigation risk framing model, in order to identify ways to reduce outrage and misinformation in public risk messages following intermodal transportation hazmat incidents.

The stakeholders of this project include intermodal transportation organizations, emergency/risk management officials, media organizations, government agencies, and public audiences. The broader impacts include wide sharing of the study's practical implications for future risk message design, not only for those who talk to the media in the aftermath of a hazmat incident, but also for journalists who cover these events. Identifying the specific ways transportation hazmat risks are presented to the public, via news media and social media, is important to corporate and governmental policymakers in deciding the levels of risk that are acceptable, affordable, and comparable with other risks in society. Examining public risk messages about hazmat incidents could inform preparedness efforts, mitigate potential public outrage, and help transportation leaders identify priorities for hazmat response and preparedness. It also will identify common news routines and journalistic reporting strategies used in coverage of transportation hazmat incidents, as well as implications for improved news coverage of these incidents.