SECTION 1:
EXECUTIVE SUMMARY

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1.1 Introduction

"All politics is local." The research for *Benefits of Transportation: Telling America's Transportation and Environment Story* began by using this simple, yet powerful, quote from former Speaker of the U.S. House of Representatives Tip O'Neill as a guidepost. What was discovered through examining tens of thousands of tweets from state and national transportation officials is that transportation messaging is very localized and for good reason: local information is what customers want and need.

Transportation agencies across the country work hard to communicate with their customers and respond to their state's unique needs. With tight budgets, agencies are trying to do more with less. Turning to social media to communicate is smart, effective and reflective of customers' expectations. This relatively new platform also provides an opportunity to see which messages move the public to action and what state departments of transportation (DOTs) and other transportation agencies can do to effectively target their communications.

We live in a time of instant information. If an accident occurs ahead on a major thoroughfare, drivers now expect their state DOT to advise them of the delay. DOTs are working diligently to provide a high level of customer service. There is much they can learn from one another. This white paper looks to share lessons and best practices for communicating and connecting transportation and environmental topics across various communication platforms, with a particular focus on social media; because data can be gathered cost effectively.

1.2 Research Purpose

In many cases, the state DOT is on the front line of much of the environmental work that is happening within a state. Environmental and planning staff regularly engage the public in National Environmental Policy Act (NEPA) and other pre-project processes to monitor and help mitigate the environmental impacts of projects during construction, and put plans in place to improve and protect the natural environment for the future. These actions do more than limit the impact a transportation project has on the environment; they add value to the project and community.

Sometimes the connection between transportation and the environment is framed narrowly as regulatory compliance; however, that frame can be and often is expanded to underscore the positive results transportation projects have on the environment and citizens' quality of life. The Center for Environmental Excellence by AASHTO (CEE) set forth a goal for this research to examine existing messaging and help state DOTs tell the story of the contributions transportation makes to communities and the environment.

Based on that goal, two primary objectives for this research were established:

1. **Examine the national transportation conversation** from multiple vantage points and **assess what is being said about environmental issues and how messages resonate with the general public**.

2. **Develop recommendations to expand and improve message delivery**.

Transportation agencies broadly engage with the public through myriad platforms and tools that include public meetings and open houses, stakeholder meetings, webinars, websites, blogs, email, text messages, press releases, traditional media interaction, published reports, signage for drivers and social media. The research associated with this project focused primarily on social media (specifically, Twitter) because it provides a relatively inexpensive, data-rich window into the landscape of the national conversation.

1.3 Methodology and Results

To evaluate environmental messages in the context of transportation-related conversations, the research team utilized social media analytics and expert interviews. Messages were examined from three perspectives: from the states, from Capitol Hill, and through social media.

- **The view from the states' communications and environmental experts:** The view from the states was analyzed through discussions with the panel of DOT communicators and environmental professionals convened to guide the research. The project panel shared their experiences and thoughts on effective environmental messaging, advice on best practices, how to address negative or inaccurate information, and the use of various communication channels.

  Panel members noted that there are opportunities to expand message content and delivery regarding the environmental benefits of transportation projects. States can learn from each other, and internal information exchanges between environmental staff and communications staff can be strengthened regarding environmental stories to be communicated, and ways to communicate those stories. A summary of project panel input gathered via conference calls is presented in Appendix A.

- **The view from Capitol Hill:** A face-to-face conversation was held with 12 former congressional communications directors. They were asked for their broad assessment of current transportation messaging, advice for improvements, and what topics resonated with congressional members and their constituents. A survey was administered to quantify the conversation, and results of that survey are presented in Appendix B.

  While the communications directors' perspective was that the focus of the national transportation conversation is on funding rather than environmental benefits, they were open to and appreciated messages regarding the environmental benefits of transportation. The discussion highlights a potential opportunity to expand environmental messaging. Information about the environmental benefits associated with a specific project or across investments could be shared with congressional staff – and by extension, congressional staff could then share that information with constituents at home.

- **A view through social media:** The research team gathered and reviewed Twitter data using a three step process.

First, the team examined the national conversation where transportation and the environment were linked in Twitter messages. That research was conducted by searching for tweets that contained at least one environment-related term (Figure 1.3.2) and one transportation-related term (Figure 1.3.3) from December 2013 through December 2014. A total of 12,470 tweets were identified that contained both terms (Figure 1.3.1).
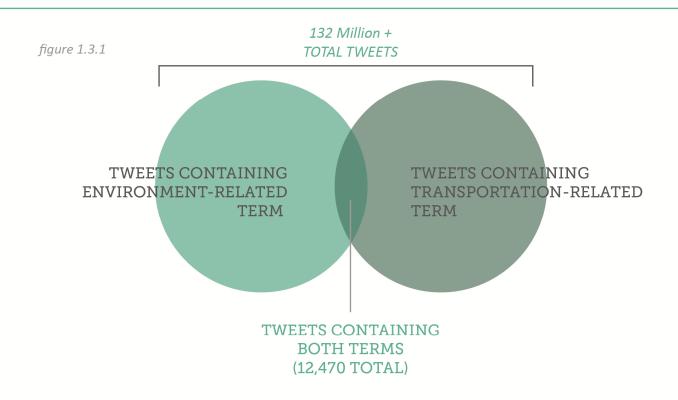
Next, the research team examined the DOT conversation around environmental topics. The team used a Twitter analytics tool to capture every tweet generated by a DOT that mentioned one of the environment-related terms during the course of the year. A total of 755 tweets were identified as being generated by DOTs and containing at least one environmental term.

Twitter accounts were analyzed for three message types:

1) All tweets in the last year that mentioned both an environment-related term and a transportation-related term

2) Every tweet from every DOT that referenced any of the environment-related terms

3) The top 10 tweets from each DOT, regardless of subject

Lastly, the research team examined the DOT conversation occurring across Twitter by examining the top 10 tweets of each state DOT, regardless of content. This analysis was based on the number of "retweets" and "favorites" the tweet received from followers of the DOT. The intent was to capture a snapshot of what DOTs talk about and what creates a response from the public. The list of the top 10 tweets from each agency can be found in Appendix C.

DOTs across the country are demonstrating interesting and effective uses of Twitter to convey often complex messages. Using Twitter to communicate the benefits transportation projects can have on the environment represents a relatively small portion of the conversation. There are opportunities to advance the good work being done at DOTs by broadening the reach and frequency of environment-related messages.

figure 1.3.1

132 Million +
TOTAL TWEETS

TWEETS CONTAINING
ENVIRONMENT-RELATED
TERM

TWEETS CONTAINING
TRANSPORTATION-RELATED
TERM

TWEETS CONTAINING
BOTH TERMS
(12,470 TOTAL)

figure 1.3.2

figure 1.3.3

ENVIRONMENT-RELATED TERMS *and* TRANSPORTATION-RELATED TERMS

ENVIRONMENT-RELATED TERMS		TRANSPORTATION-RELATED TERMS
environment	NREL	infrastructure
activism	offsets	construction
biodiesel	peakoil	road work
bioenergy	publictransit	work zone
biofuels	PV	transportation
biomass	renewable	travel
biopower	renewableenergy	traveler
carbon	renewables	AASHTO
carbonprice	responsibletravel	road
cleanenergy	smartgrowth	street
cleantech	sustainable	lane
climate	sustainability	freeway
climateaction	urbanism	highway
climatechange	urbanplanning	Hwy
conservation	waste	interstate
CSR	TMDL	bridge
ecofriendly	erosion	overpass
eco-friendly	sediment	underpass
ecomarkets	congestion	transit
emissions	airquality	tunnel
energy	constructionerosion	ramp
environment	mitigation	exit
ethanol	cleanwater	interchange
EV	waterquality	automobile
fuelcell	stormwater	car
gas	cleanwateract	vehicle
globalwarming	raingarden	bus
gogreen	bioswale	plow
greencity	treatmentbmps	snowplow
greenisgood		plowing
greentravel		truck
hydrogen		tractor trailer
innovation		rail
methane		railroad
natgas		trolley
		streetcar

1.4 Caveats

Although the research generated a large amount of data, a few caveats should be noted:

- The information gathered as the view from the states and Capitol Hill are based on a narrow sample size.

- While the use of social media by DOTs as a communication tool is increasing, transportation agencies broadly engage with the public through myriad platforms and tools. Thus, this research provides a deep examination of one communication tool (Twitter) but not a broad or inclusive view across all platforms.

- Interviews with state officials and Capitol Hill staff, as well as a review of social media data, provide a snapshot in time rather than a comprehensive study. This report cannot document all the time, energy, innovation and effort state DOT communications practitioners, environmental and planning staff, and others throughout transportation agencies make to inform the public. DOT staff work long, odd hours and have to communicate sometimes difficult information. This research underscores the dedication of DOT staff across the nation, and it highlights an opportunity to support and supplement that work.

With those caveats in mind, the research yielded solid information that creates a snapshot of what is being communicated about the nexus of transportation and environmental issues. The snapshot has been augmented with the communication experience of the research team. Throughout this report, generalizations have been made and recommendations developed through the lens of that experience.

1.5 Recommendations

To enhance America's transportation story with a focus on environmental benefits, the recommendations contained in this report fall broadly into three categories: expand environmental benefits messaging and connect those messages more closely with improved quality of life; establish a national community of practice; and use social media best practices. Additional recommendations are provided, representing cross-cutting, high-level action items.

1. **Expand environmental benefits messaging and connect those messages more closely with improved quality of life.**
   The research suggested that Twitter messages from the state DOTs generally fit into the following categories:
   - Traffic-related updates
   - Safety or weather-related messages
   - Current events/community interaction

   Messaging regarding environmental benefits of transportation work in social media can be expanded. Of the thousands of tweets generated by DOTs over the year of study, only 755 contained one of the environment-related search terms.

   Several DOTs and national organizations are effectively conveying positive messages that connect transportation projects to improving the environment. Across the country, communications and

environmental professionals are sharing stories on Twitter about the work they are doing to clean up streams, preserve wildlife, reduce environmental impacts, and invest in clean energy. One relatively easy and inexpensive way to help generate ideas for positive environmental messaging is for communicators or environmental/planning staff at DOTs to follow each other on Twitter. In essence, this is an instant peer exchange of ideas. The Twitter handles for all 50 states can be found in Appendix C.

2. **Establish a national community of practice.**
   While all politics—and most transportation messaging—is local, not all idea generation has to be. Issues that are common between DOTs could be evaluated on a broader scale by the CCE, American Association of State Highway and Transportation Officials (AASHTO) and Federal Highway Administration (FHWA), and good examples of successful environmental messages could be shared. That assistance would make it easier for DOTs to:
   - Increase the number and reach of environmental messages about the positive impacts DOTs have on the environment.
   - Improve connections to national stories, especially if ways to localize national messages are suggested.
   - Share and adopt messaging best practices.

3. **Use social media best practices.**
   Increasing the effectiveness of social media generally will allow better environmental communication for these reasons:
   - *Social media is most effective when it represents a two-way conversation.* Despite its digital nature, interactions that incorporate a direct, conversational tone are most effective. Likewise, the public responds better to messages when they are part of a constant dialog rather than isolated message points.
   - *Interactions can be expanded by combining topics.* For example, during a snow weather event, a message about the use of environmentally friendly beetroot road treatment can combine and extend the message.
   - *A message is noticed more readily if it connects with what customers are already talking about.* Monitoring social media channels is a good first step, and the reach of a DOT can be expanded by engaging environmental and planning staff to serve as additional eyes and ears for the communications department. While communications departments often serve as a hub of cross-department connections, insights into environmental topics often come from across the agency and can help DOTs better connect with customers.

1.6 Roadmap

Roadmaps show a driver where they have been, where they are, and a course for moving forward. This section describes how the research team looked across multiple national agencies that shape transportation policy and contribute to the national conversation. This brief review helps to understand current national messages regarding the connection between transportation and the environment. The research team placed these current messages in the context of what messages have been used in the past and proposes more aspirational messages for state DOTs with linkages to the environment in the future.

1.7 Next Steps

There are opportunities to build an understanding of the contributions transportation makes to communities and the environment.

The results of this research suggest that transportation agencies have an opportunity to expand environmental messaging and increase stakeholder and public understanding of how transportation projects can contribute positively to communities and the environment. In addition to the recommendations outlined in previous sections, transportation agencies at the state or national level could consider:

- **Analyzing traditional media coverage** to round out the social media research conducted under this project. By combining the traditional and social media views, the national and/or state conversations regarding transportation and the environment can be better understood.

- **Testing messages via focus groups or surveys**. Using information from social media and traditional media analyses, it would be helpful to test various environmental messages to determine which messages, delivery mechanisms and spokespeople are most effective with which audiences and why. This research could help focus limited outreach or education funds on efforts that are most likely to succeed.