

## **Abstract**

### **Impacts of Climate Change on Information and Decision Support Needs for Transportation Officials: Exploring New Sectors**

Principal Investigators: Jan Mueller (EESI), Josh Foster (CCAP), Steve Winkelman (CCAP)

The potential physical impacts of climate change on transportation have been generally defined. However, the research and data needs to enable transportation decisions to effectively respond to climate change impacts, as well as the specific operational implications for transportation agencies and the broader transportation community, are not well understood. How transportation professionals will integrate climate information into decisions regarding policy, planning, budgeting, siting, design, maintenance, and operations of a multimodal transportation system-- and how they need to equip themselves to do so remain critically important but unanswered questions.

Transportation agencies need timely and appropriately targeted information to respond to climate change impacts. Most climate researchers and data providers, however, are unaware of how transportation agencies operate, how decisions are made, or what their present analysis capabilities are. Conversely, the transportation community has begun to recognize the need to address climate change, but have not established what specific climate information or analysis tools they need, or how to integrate climate information into existing decision making processes. A collaborative exchange of information between the climate science and transportation communities is essential to identify and meet research, data gathering, and decision support priorities. To provide a constructive opportunity for such a strategic exchange, the project will conduct a focused dialogue process that will identify and define the priority issues and develop recommendations for concrete actions to be taken by the climate science community, NOAA in particular, to address them.

The project will identify and engage a diverse group of stakeholders from the climate and transportation communities. A subset of these stakeholders will serve as an advisory working group to help guide the project. A larger subset will participate in an in-person stakeholder meeting as well as additional follow-up communications by phone and email. Other stakeholders will participate by providing input on important issues to address and by reviewing and commenting on findings and recommendations developed through the dialogue process. Following a review of existing literature, climate information resources, and transportation decision-making mechanisms, the principal investigators will engage the core advisory group and others to more initially frame the critical issues to be addressed. The agenda for the in person meeting will be designed to facilitate a focused discussion and information discovery process among participants, in order to develop and refine the definition of critical priority issues, specific research data and information needs, and concrete actions to address them. Follow-up analysis and communications with meeting participants and other key stakeholders will further augment, develop, and refine the preliminary results of the in-person dialogues. All information, findings, and action recommendations will be synthesized into a final report to be provided to NOAA.