

**Request for Implementation Pilots:  
Conceptual Model for Conducting Climate Change Vulnerability and Risk  
Assessments of Transportation Infrastructure**

FHWA is soliciting proposals from State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to partner with us in piloting approaches to conduct climate change vulnerability and risk assessments of transportation infrastructure. This pilot program is jointly sponsored by the FHWA Office of Environment, Planning and Realty, and the Office of Infrastructure.

Background

In 2009, FHWA initiated a project to create a conceptual model for DOTs and MPOs to use in conducting vulnerability and risk assessments of infrastructure to the projected impacts of global climate change (GCC). Products from this project include:

- A synthesis of national and international approaches for conducting such assessments
- A review and synthesis of current and ongoing climate science and what can reasonably be assumed by transportation practitioners with regard to GCC effects, and
- The conceptual model itself

The first two products are complete and can be provided by request.

The draft conceptual model is appended to this solicitation. Please review the model in detail prior to drafting your proposal. The model is effectively a set of considerations for inventorying and classifying vulnerable assets, and for assessing importance, redundancy and risk. This model is intended to be applied to both existing and planned transportation assets. It is recognized that the model will need to evolve as new science and techniques become available. The pilots are intended to be a first step towards creating a more robust and consistent way of addressing vulnerability and risk from climate change in the decision making of transportation agencies.<sup>1</sup>

Purpose of the Pilot Program

This project will fund pilots for DOTs and MPOs to implement the conceptual model. The purpose of the pilots is twofold; 1) to assist State DOTs and MPOs more quickly advance existing adaptation assessment activities and 2) to assist FHWA in “test-driving” the model. Based on the feedback received through the pilots, FHWA will revise and finalize the model for national application. Keep in mind that FHWA’s priority will be to invest in areas that are actively considering or addressing climate change adaptation, so that the pilot funding would be supplementing or more quickly advancing on-going efforts.

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<sup>1</sup> Other research efforts are also underway to address this issue, but are longer term in nature, such as NCHRP 20-83(05): “Climate Change and Highway Infrastructure: Impacts and Adaptation Approaches,” and the U.S. DOT-led “Gulf Coast Study: Phase II.”

### Application/Review Process

The following process will be followed in the application, review, and award process for the pilot program:

1. Solicitation Released  
(June 24, 2010)
2. Completed proposals from applicants submitted to FHWA Division Office  
(Due: July 30, 2010)
3. Division Office reviews, sends with endorsement/comments to FHWA HQ  
(Due: August 13, 2010)
4. Review panel evaluates proposals  
(August 27, 2010)
5. Awards announced  
(September 3, 2010)
6. Funding transferred to Division Office for distribution  
(September 10, 2010)

Total application process time: approximately 2 to 3 months

### Number of Awards/Funding

It is anticipated that 3-4 awards will be made at approximately \$200,000 to \$300,000 each. By Federal statute, a 50% non-Federal match is required for these funds to be awarded to the pilot areas. In-kind contributions such as staffing can be counted towards the match requirement.

### Proposal Contents

#### *I. Description of the Proposed Effort*

This section should include the purpose/goal and a detailed description of the effort to be funded. This section should also include the existing adaptation efforts and the geographic focus of the project (e.g. statewide, metropolitan area, district office or maintenance shop area, portion of coastal areas, floodplain, etc), the types of climate change effects and impacts to be addressed, and the agencies that will be involved. This section should clearly identify the lead agency for the pilot. Note that an MPO or a DOT must be the lead for the project.

#### *II. Description of Dedicated Staffing/Resources*

Proposing agencies should ensure that adequate funding, staffing and technical resources to successfully complete the inventories and assessment pilot are identified and available. This should include the areas of transportation planning, asset management, environmental, and data and GIS, as appropriate. This section should fully describe the funding and assets that will be dedicated to the pilot, and demonstrate how the non-Federal match requirement will be met. This section should describe how the proposed effort fits within other climate change adaptation, vulnerability assessment, asset inventory or other related, on-going efforts, if applicable.

### *III. Draft Work Plan*

Areas should provide a draft work plan to inform the selection process, which should explain how the applicant plans to apply the draft conceptual model. This would include the phases of work, budget, their sequencing, work products, and timing.

### *IV. Letters of support from partners, stakeholders*

While State DOTs and MPOs must be the lead agency for the effort, we encourage partnerships and collaboration with the environmental resource groups, universities, and cities/counties local governments among others. This section should include any letters of support from other agencies, partners or stakeholders critical to the success of the pilot project. Such letters strengthen the proposal by demonstrating collaboration and coordination with other agencies or entities in the pilot.

### Finalizing the Work Plan

After selection, the recipient will participate in a conference call with FHWA to discuss the pilot project. FHWA will provide feedback on the draft work plan, the goals of the project and any additional assistance/resources that FHWA may have available. A revised work plan should be submitted and approved by FHWA before commencing work.

### Final Product

Each pilot should result in a final report that would detail the work performed, parties involved, roles and responsibilities, issues encountered, lessons learned, recommendations for future applications and, most importantly, revisions/changes/additions to the draft conceptual model. The final report should be in a form that is sharable with other agencies, and may be posted to the FHWA website.

### Role of FHWA in Pilots

FHWA will monitor progress of the pilots through periodic project conference calls and will provide guidance as needed. In the event that technical assistance is needed, FHWA will attempt to provide it to the extent practicable. FHWA will establish a single point of contact to ensure consistency in direction and communication. FHWA's anticipated role in each pilot project will be discussed during the conference call to finalize the work plan.

### Period of Performance

The pilots will be required to complete their assessments in 9-12 months from approval of the work plan. All pilots should be completed by September 30, 2011.

### Criteria for selection

The pilot areas will be selected to provide a mix of coastal and riverine environments, relevant GCC effects, geographic dispersal, and urban/rural issues. In addition, the following criteria will be used (not in priority order):

1. Project is application-oriented, not for theoretical research
2. Project will build upon ongoing adaptation efforts

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3. Well thought out project plan and technical approach
4. Willingness to help improve conceptual model
5. Demonstrated funding/staff/resources
6. 50% non-Federal match demonstrated
7. Collaborative approaches and partnerships demonstrated

Contacts

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