Unit 1: Welcome and Course Overview

Hazard Mitigation Cost Effectiveness Analysis Course

January 2014
Course Purpose

The purpose of the course is to provide participants with an understanding of the Hazard Mitigation Cost Effectiveness (HMCE) methodology and tools necessary to assess the cost effectiveness of transit resilience projects for Competitive Resilience awards submitted under the FTA Public Transportation Emergency Relief Program.
Course Objectives

1) Estimate resilience project costs.
2) Compute resilience project benefits.
3) Understand how to use FTA’s HMCE Tool.
4) Identify, gather, and analyze documentation required in the FTA Competitive Resilience grant application process.
5) Determine the benefit-cost ratio for a hypothetical resilience project using the FTA HMCE Tool.
# Course Agenda

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro</td>
<td>Review of the NOFA</td>
<td>15 minutes</td>
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<tr>
<td>Unit 1</td>
<td>Welcome and Course Overview</td>
<td>15 minutes</td>
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<tr>
<td>Unit 2</td>
<td>Benefits and Costs of Resilience Projects</td>
<td>45 minutes</td>
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<tr>
<td>Unit 3</td>
<td>Overview of the HMCE Tool</td>
<td>60 minutes</td>
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<tr>
<td>Unit 4</td>
<td>Data Documentation and Case Study</td>
<td>75 minutes</td>
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<tr>
<td>Wrap Up</td>
<td>Question and Answer</td>
<td>30 minutes</td>
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</tbody>
</table>
Administrative Announcements and Ground Rules

- **FTA Announcements**
- **Ground Rules**
  - Be considerate and respectful of other course participants
    - room participants
    - online participants
  - Be considerate of schedule: Hold questions until the end of the unit
  - Be considerate of course instructors
Reminder of Key Terms

- **Resilience Projects**: Projects designed and built to address current and future vulnerabilities of a public transportation facility or system due to future occurrence or recurrence of emergencies or major disasters that are likely to occur in the geographic area in which the public transportation system is located; or projected changes in development, demographics, or climate/weather patterns. Also known as Hazard Mitigation Projects.
Reminder of Key Terms (continued)

- **Hazard Mitigation Cost Effectiveness Analysis**: Analysis of project benefits and project costs intended to demonstrate that the benefits of constructing the resilience project outweigh the costs, or the benefit-cost ratio (BCR) is greater than 1.0

  \[
  \frac{\text{Project Benefits}}{\text{Project Costs}} = \text{Benefit-Cost Ratio (BCR)}
  \]

Hazard Mitigation Cost Effectiveness Analysis approach is consistent with FEMA’s Hazard Mitigation Benefit Cost Analysis (BCA) approach.
Course Materials

The following materials are available for download:

- Student Manual
- HMCE Tool
- HMCE Tool User Guide
- Class activity worksheets
Other HMCE Resources

- FTA Website
- FEMA Flood Map Site

E-mail [FTASandyResilience@dot.gov](mailto:FTASandyResilience@dot.gov) for program-specific questions about applying for the funds as outlined in the NOFA, or contact

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Questions and Answers