

Interagency Transportation, Land Use, and Climate Change Pilot Project



Pilot Project Overview

The goal of the Interagency Transportation, Land Use, and Climate Change Pilot Project was to establish a successful and replicable process for integrating climate change mitigation and adaptation measures into a transportation and land use planning strategy. The project employed an interactive, GIS-based software tool called CommunityViz to develop and evaluate a series of transportation and land use scenarios. Scenario indicators included vehicle miles traveled, greenhouse gas emissions, and percent of new population in areas identified as vulnerable to climate change impacts, such as sea level rise, erosion, and storm related events.

The pilot project held a two-day workshop of local, regional, and federal stakeholders. The workshop required attendees to evaluate complex tradeoffs among land use, conservation, and climate change mitigation and adaptation through placement of new housing and employment units and designation of transit improvements. Following the workshop, stakeholders developed a refined transportation and land use scenario for Cape Cod. While not prescriptive in nature, the refined scenario serves as a basis for further evaluating tradeoffs and provides a baseline for future planning efforts on Cape Cod.

The Volpe Center then worked with the National Park Service (NPS), the Cape Cod Commission, and the Commonwealth of Massachusetts to determine how to incorporate elements of the refined scenario into their planning efforts and long-range plans. The pilot project also developed a guidebook for how other regions can use this process to achieve similar results.

What is Scenario Planning?

Scenario planning is an analytical tool that evaluates the performance of a shared vision for the future against a range of internal and external forces. Scenarios are not forecasts or predictions, but agreed-upon possibilities for future conditions. By testing several scenarios against performance indicators, decision-makers can select a preferred scenario and identify an appropriate set of actions that will lead towards this desired vision of future conditions.

Scope and Participation

The study area for the pilot project was defined as Cape Cod, MA, and includes 15 towns and the Cape Cod National Seashore. Local planning, transportation, and environmental stakeholders were responsible for developing and now implementing a refined development scenario for the region. A Planning Group consisting of federal and regional stakeholders provided oversight and guidance for the project. Planning Group members included representatives from the project sponsors – the Federal Highway Administration (FHWA), NPS, and the U.S. Fish and Wildlife Service – as well as from the Environmental Protection Agency, National Oceanic and Atmospheric Administration, Federal Transit Administration, Federal Emergency Management Agency, Department of Defense, Cape Cod Commission, Cape Cod National Seashore, and Cape Cod Regional Transit Authority. A Technical Committee of state and local coastal, climate change, and transportation experts provided technical assistance in areas such as climate change impacts and transportation mitigation strategies.

Cape Cod, Barnstable County, MA



The project grew out of the Federal Interagency Working Group on Transportation, Land Use, and Climate Change, which met regularly in 2008 and 2009. Established by FHWA and comprised of more than a dozen federal agencies, the working group identified opportunities, such as the Pilot Project, to align federal programs and resources to support stakeholders in achieving GHG reduction through transportation and land use planning decisions.

Last updated: 9/28/2011