FTA

FEDERAL TRANSIT ADMINISTRATION

REPORT SUMMARY

U.S. Department of Transportation
Federal Transit Administration

Metropolitan Atlanta Regional Transit Authority Pilot Project

Transit Climate Change Adaptation Assessment/ Asset Management Pilot for the Metropolitan Atlanta Rapid Transit Authority (MARTA)

Agency Overview

The Metropolitan Atlanta Regional Transit Authority (MARTA) is the ninth largest transit system in the U.S., with an annual ridership of over 1.7 million and 48 miles of rail located in Atlanta and Fulton and Dekalb counties. Public transit agencies such as MARTA play a critical role in providing safe, reliable, and cost-effective transportation to the communities they serve. In the face of increased frequency and intensity of extreme weather events, MARTA is taking the initiative to adapt its system to make it more resilient to changing climate conditions. MARTA has identified its vulnerable assets and is prioritizing improvements to develop a more robust and resilient system. As a result, it will be in a better position to withstand climate hazards and continue to provide adequate service to its customers in a way that saves costs over the life of the agency's assets.

Goals and Objectives

This report makes a case for transit asset management as an appropriate platform for climate change adaptation. Climate change adaptation involves understanding the potential impacts of the changing climate on an agency's services and assets and taking the necessary actions to avoid, reduce, or manage anticipated impacts. This process can be thought of as building resilience to climate change.

Key Pilot Project Findings

MARTA's asset management system offers the possibility of determining a climate vulnerability index for different assets in the system based on their relative vulnerability to the climate hazards.

Climate-related forecasts for the MARTA- service area in the Atlanta metro region indicate the increased likelihood of higher temperatures with heat waves, below-freezing temperatures, a wider variation in temperatures, and droughts. This study applies the Federal Transit Administration's "Asset Management Guide" to demonstrate how a public transit agency can adapt to extreme weather events or climate changes using MARTA as a case study. In addition, the pilot project final report outlines processes for identifying the most critical climate hazards for a transit agency's service area; presents the elements of transit asset management at the enterprise and asset lifecycle management levels, while identifying opportunities to integrate climate adaptation and explaining climate vulnerability and risk

assessments; and discusses how asset vulnerability and risk data can be incorporated in a transit asset management system and how the information can be linked to appropriate business units to ensure continual improvement and updates to the lifecycle management of assets.

Next Steps

The system integration in this pilot project allows for improved cross-asset planning and benefit-cost-risk analysis that addresses climate hazards simultaneously with other system performance considerations, such as safety and state of good repair.

About FTA's Climate Change Adaptation Pilot Program

FTA provided just over $1 million in research funding for seven pilot projects (nine agencies) to conduct climate change adaptation assessments from 2011–2013. The main objective of the pilot projects is to advance the state of practice for adapting transit systems to the impacts of climate change. The selected projects assessed the vulnerability of transit agency assets and services to climate change hazards and developed initial adaptation strategies. The findings from the pilot projects can be applied to various size transit agencies nationwide in order to make systems more resilient and adaptable to future climatic hazards.

Project Information

FTA Report No. 0076

This research project was conducted by the Georgia Institute of Technology, MARTA, and Parsons Brinckerhoff, Inc. For more information, contact Kimberly Gayle, Director, FTA Office of Policy Review and Development, at (202) 366-1429, kimberly.gayle@dot.gov. All research reports can be found at **www.fta.dot.gov/research**.