# Resilient Ways Forward

Transportation planning for our changing climate



## What can we do?

# **Step 3: Recommendations**

The Dutchess County Transportation Council (DCTC) prepared a Climate Vulnerability Assessment, titled Resilient Ways Forward, that identifies where our transportation system is most vulnerable to the impacts of climate change.

To further our long-range vision of creating a safer, more reliable, resilient, and equitable transportation system, we developed a suite of resilience recommendations based on our priority climate vulnerabilities. These recommendations are designed for decision-makers and partner agencies to evaluate and implement, with the goal of making our transportation infrastructure and services more resilient to our changing climate.

## **Key Questions and Objectives**



### How is the climate changing?

Improve our understanding of climate risks to the transportation system.









**Drought** 



**Winter Conditions** 





#### Where are we vulnerable?

Identify and prioritize vulnerable transportation assets and services for targeted resilience investments.



**Roads** 



**Bridges** 





**Rail Trails** 



#### What can we do?

Provide recommendations to help facilitate and promote transportation resilience across communities.

**Adaptation** Toolbox

**Priority Resilience Projects** 

**Policy-Based** Measures

**Nature-Based** Solutions

**Monitoring and Update Plan** 

### **Resilience Recommendations**

#### ADAPTATION TOOLBOX

A suite of adaptation measures for infrastructure owners and service providers (e.g., highway departments and public transit agencies) to consider applying at vulnerable asset locations.

#### RESILIENCE PROJECTS

Resilience projects that partner agencies may pursue to improve vulnerable assets. These include New York State Department of Transportation projects to reduce flood risk, and Dutchess County Department of Public Works projects to replace scour-critical bridges.

#### POLICY-BASED MEASURES

A set of measures for local jurisdictions and partner agencies to consider and implement to improve system-wide resilience.

# Resilient Ways Forward

# Transportation planning for our changing climate

### **Resilience Recommendations**

The **Adaptation Toolbox** includes more than 40 measures to increase the resilience of our transportation system to climate hazards (flooding, landslide, extreme heat, wind, and winter conditions). Local- and county-level **policies and initiatives** are essential to facilitate and encourage the broader implementation of these resilience measures, so we also developed a series of **policy-based measures** to improve system-wide resilience.

See Our Online Adaptation
Toolbox for details about each resilience
measure. Launch the Toolbox

Climate	D 111
Hazard	Resilience Measures
Flooding	<ul> <li>Infrastructure enhancements</li> <li>Nature-based solutions</li> <li>Stream and waterway management</li> <li>Technological solutions and strategic planning</li> </ul>
Extreme Heat	<ul><li>Public awareness and education</li><li>Cooling infrastructure</li></ul>
Winter Conditions	<ul><li>Roadway maintenance</li><li>Public transportation and services</li></ul>
Landslide	<ul><li>Infrastructure protection</li><li>Slope management</li><li>Technological and monitoring solutions</li></ul>
Wind	<ul><li>Vegetation management</li><li>Monitoring and reporting</li></ul>

Policy-based Measures	Resilience Measures
~	<ul><li>Emergency planning</li><li>Community outreach</li><li>Local planning</li><li>Capacity-building and collaboration</li></ul>
Transportation Asset	Resilience Project Ideas
Roads  Bridges  Culverts	<ul> <li>New York State Department of Transportation road, bridge, and culvert projects</li> <li>Dutchess County Department of Public Works bridge projects</li> </ul>

**Future Project Ideas:** To support agencies applying for federal **PROTECT** (Promoting Resilience Operations for Transformative, Efficient, and Cost-Saving Transportation) grants, we will update our priority project list as we continue to identify ways to address resilience. We encourage our partners to submit project ideas using our **online form**.

# Resilient Ways Forward

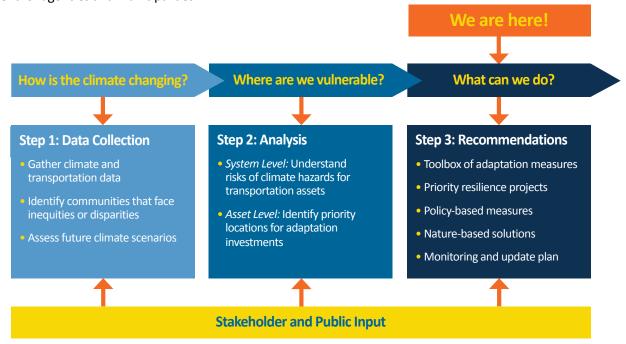
Transportation planning for our changing climate

# Transportation Resilience Improvement Plan

The *Resilient Ways Forward* Transportation Resilience Improvement Plan (TRIP) summarizes our study findings and outlines a path forward with strategies, project concepts, and recommendations for making today's transportation system more resilient to our changing climate.

### **Next Steps**

We look forward to working with partner agencies and the community to build a more resilient transportation system. We will play a key role in facilitating collaboration between partners and stakeholders; integrating resilience and future climate data into current and future planning; programming federal funds for eligible projects; and encouraging training, education, and professional development for agencies and municipalities.



### Resources

- Climate Change Summary: Read the report
- Climate Change Fact Sheet: Read the fact sheet
- Climate Vulnerability Assessment Phase 1: Read the report
- Climate Vulnerability Assessment Phase 2: Read the report
- Climate Vulnerability Assessment Fact Sheet: Read the fact sheet
- Transportation Resilience Improvement Plan: Read the plan

## **Stay Informed**

Visit **ResilientWaysForward.com** for more information.





www.ResilientWaysForward.com dctc@dutchessny.gov



Dutchess County Transportation Council 85 Civic Center Plaza, Suite 107 Poughkeepsie, NY 12601



(845) 486-3600