

SEMCOG Flooding and Resilience Plan: Resilience Project Solicitation Guidance

SEMCOG, the Southeast Michigan Council of Governments, is soliciting resilience projects for inclusion in the Flooding and Resilience Plan for Southeast Michigan, anticipated for completion in March 2027. The plan will inform transportation, stormwater, and broader resilience planning related primarily to flooding. Projects submitted through this process will help guide future flood mitigation priorities and investment needs across Southeast Michigan.

While implementation funding is currently not available, projects identified within the Flooding and Resilience Plan are eligible for reduced match through Federal Highway Administration's (FHWA) Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Competitive Grant Program, which supports transportation resilience investments. Inclusion in the plan also strengthens project competitiveness for other federal and state funding opportunities.

This document provides information to help your jurisdiction identify and submit resilience projects for consideration in the plan. Specifically, this document:

- Defines a resilience project and provides categories of project types that should be submitted.
- Provides an overview of projects already identified through SEMCOG's Regional Transportation Plan, SEMCOG's Transportation Improvement Plan, and additional regional plans.
- Previews the project submission form and spreadsheet used to submit resilience projects for consideration and potential inclusion in the plan.

Project submissions are due Friday, August 7, 2026 at 5 p.m.

If you have questions regarding project eligibility or project submission, please reach out to [Katie Grantham](#), Planner III, SEMCOG Environment and Infrastructure.

Flooding and Resilience Plan Development

Why is SEMCOG compiling this list?

The purpose of the project list is to compile known resilience investment opportunities in the region, either transportation-related or otherwise flooding-related. Projects on the list will be elevated to SEMCOG and other funders when seeking grant funding. This

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is your opportunity to ensure your community’s needs are part of a larger, united effort to fix flooding across Southeast Michigan.

What are the benefits of having a project listed in the Flooding and Resilience Plan?

There are additional benefits for projects eligible for the PROTECT competitive grant program. Projects listed in the Flooding and Resilience Plan would receive the following benefits under the PROTECT competitive grant program:

- Preference during the PROTECT awards process
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Identifying a Resilience Project

A resilience project enhances a system’s ability to anticipate, prepare for, or adapt to conditions or withstand, respond to, or recover rapidly from disruptions, including the ability to:

- Resist hazards or withstand impacts from weather events and natural disasters.
- Reduce the magnitude or duration of impacts of a disruptive weather event or natural disaster.
- Have absorptive capacity, adaptive capacity, and recoverability to decrease project vulnerability to weather events or other natural disasters.
- Consider incorporation of natural infrastructure.

Table 1 includes both transportation resilience project types that could be eligible for PROTECT and non-transportation resilience project types, which are indicated in italics. SEMCOG encourages agencies in the region to submit any project ideas that fall within these categories for inclusion in the Flooding and Resilience Plan project list.

Table 1. Eligible project types, PROTECT and non-PROTECT (in italics)

CATEGORY	ELIGIBLE PROJECT TYPES
Resilience planning and data-driven decision making	<ul style="list-style-type: none"> • Vulnerability assessments of transportation infrastructure • Climate adaptation planning focused on transportation • Resilience-focused asset management plans • GIS-based risk mapping and scenario modeling

	<ul style="list-style-type: none"> • <i>General vulnerability assessments or adaptation planning</i>
Highway and roadway resilience	<ul style="list-style-type: none"> • Reconstruction / rehabilitation (e.g., roadway elevation and relocation) • Stormwater management (e.g., permeable pavement, bioswales) • Pavement materials for extreme weather resistance, including cooling • Erosion control and vegetative buffers • Drainage improvements/maintenance (e.g., culverts, storm sewers, pump stations) • Other preventative maintenance
Bridge and tunnel resilience	<ul style="list-style-type: none"> • Reconstruction / rehabilitation (e.g., bridge elevation or reinforcement) • Scour protection and erosion control for bridges • Tunnel waterproofing and drainage improvements/maintenance • Other preventative maintenance
Transit system resilience	<ul style="list-style-type: none"> • Floodproofing bus and rail stations • Elevating or reinforcing rail tracks and guideways • Upgrading power systems for extreme weather • Climate-adaptive electric bus and rail infrastructure • Storm-resistant transit facilities (e.g., bus depots) • Shade structures/other cooling amenities at transit stops
Port, freight, and intermodal resilience	<ul style="list-style-type: none"> • Flood and storm surge barriers for freight corridors • Elevating or reinforcing port infrastructure • Hardening intermodal facilities (e.g., rail yards, distribution centers) • Strengthening supply chain resilience to extreme weather
Intelligent transportation systems (ITS) and other technology	<ul style="list-style-type: none"> • Weather-responsive traffic management • Automated flood detection and warning systems • Remote sensing and predictive maintenance tools • Smart traffic signals that adapt to extreme weather
Emergency response and disaster recovery infrastructure	<ul style="list-style-type: none"> • Evacuation route improvements • Hardening emergency access routes for first responders • <i>Backup power and microgrid systems</i> • <i>Temporary flood barriers & deployable resilience solutions</i>

	<ul style="list-style-type: none"> • <i>Resiliency Hubs</i>
Large-scale natural infrastructure (non-transportation)	<ul style="list-style-type: none"> • <i>Wetland restoration for flood mitigation</i> • <i>Living shorelines and natural flood barriers</i> • <i>Urban tree planting for heat island mitigation</i>
Stormwater management - physical	<ul style="list-style-type: none"> • <i>Gray infrastructure (e.g., traditional pipe, storage, and treatment systems, real-time CSO control systems, sediment controls)</i> • <i>Green infrastructure (e.g., green roofs, green walls, rainwater harvesting systems, replacement of gray infrastructure with GI)</i>
Stormwater management - non-physical	<ul style="list-style-type: none"> • <i>Stormwater project planning and comprehensive planning</i> • <i>Stormwater operations and maintenance</i> • <i>Stormwater system optimization</i>

Project Eligibility Criteria

At minimum, any project included in the Flooding and Resilience Plan must reduce the risk of impacts from one or more natural hazards. Natural hazards include, but are not limited to:

- Precipitation and flooding (urban, riverine, coastal)
- Extreme heat
- Severe storms (rain, snow, ice, wind)
- Coastal erosion

Projects that increase resilience of the transportation system specifically may be eligible for the PROTECT competitive grant program. To view PROTECT project eligibility, please refer to Appendix *Appendix A: Project Eligibility for FHWA’s PROTECT Program*.

Referring to Relevant Existing Projects

SEMCOG has compiled a list of known projects previously submitted to it or identified by stakeholders from around the region that could be relevant for the Flooding and Resilience Plan, including:

- Transportation Improvement Program (TIP) projects located in areas identified as highly vulnerable to natural hazards
- Projects in county hazard mitigation plans relevant to natural hazards

These projects are provided for reference in Appendix E. **If any of these existing projects address or could be adjusted to address climate risks, please consider submitting them.**

Submitting Projects for Plan Consideration

Please submit projects for consideration by **August 7, 2026**. Projects will be accepted on a rolling basis until the submission deadline. SEMCOG will review each submitted project and will follow up to gather additional information if needed.

Jurisdictions may submit resilience projects by using the project submission form and/or the project submission spreadsheet, both of which are detailed below.

Project Submission Form

The [project submission form](#) allows you to enter one project at a time. This format could be convenient for jurisdictions to submit a limited number of projects. When using this option, please submit one project per form. Appendix *Appendix B: Project Submission Form and Spreadsheet* includes a preview of the form.

Project Submission Spreadsheet

The [project submission spreadsheet](#) allows you to compile information on several projects in one document. It includes the same questions from the project submission form. When using this option, please submit one spreadsheet per agency/jurisdiction.

Optional Form Questions

The priority is submitting the required project information and a detailed description of how the project advances resilience. If you want to make sure the project is on the list but do not have the time or capacity to answer all the optional entries, please submit the project without that information.

Frequently Asked Questions on Project Submissions

What types of projects are you looking for?

- SEMCOG welcomes projects of all sizes and stages—from early planning efforts to major infrastructure investments—that contribute to flood mitigation and resilience.
- SEMCOG will review the projects for eligibility based on the criteria on page 5. Any transportation projects that meet the PROTECT eligibility requirements will be included in the final Flooding and Resilience Plan.

What is the timeframe for project implementation?

- SEMCOG encourages jurisdictions to submit any transportation resilience projects that are a priority for them regardless of anticipated timing.

Who should submit a project?

- Anyone can submit a project! We encourage all resilience stakeholders throughout Southeast Michigan to submit projects to the plan. Counties, cities, townships, villages, educational institutions, utilities, and nonprofit organizations are all eligible to submit projects.

Is there a limit on project cost?

- There is no limit on the dollar amount for submitted projects. We want this plan to showcase the investment needed to create a resilient environment in Southeast Michigan.
- Regarding very large (i.e., multi-billion-dollar) PROTECT-eligible projects, only part of the project would likely be eligible for PROTECT, so SEMCOG encourages transportation managers to consider which component of the project would best fit the PROTECT eligibility requirements. See Appendix Appendix A: Project Eligibility for FHWA's PROTECT Program for more details.

How many projects can I submit?

- There is no limit to the number of projects an agency or jurisdiction can submit. However, if you are submitting a large number of projects, please indicate which are your top priority projects (up to about five projects).

Can I submit multiple similar projects that are happening at different locations?

- For now, interested agencies/jurisdictions can submit multiple similar projects in one line item in the Project Submission Spreadsheet. However, please include all the specific locations in the project submission.

Should I submit a project that is partially or fully funded?

- Projects that are fully funded or in the final phase of construction do not need to be submitted. We are looking for projects that we can influence – by either helping secure funding through inclusion in the plan or by encouraging implementers to find ways to incorporate resilience measures into already planned (but not too far along) projects.

Appendix A: Project Eligibility for FHWA's PROTECT Program

Projects eligible for PROTECT funding must fall into one of the four grant types:

1. **Resilience planning:** Development of resilience improvement plans, resilience planning activities, capacity building, and evacuation planning and preparation.
2. **Resilience improvements:** Projects to make existing surface transportation assets more resilient, such as improving drainage, upgrades to meet or exceed design standards, relocating roadways, or elevating bridges.
3. **Community resilience and evacuation routes:** Improvements to make evacuation routes more resilient or add capacity and redundant evacuation routes.
4. **At-risk coastal infrastructure:** Protecting, strengthening, or relocating coastal highway and non-rail. This includes infrastructure impacted by Lake Michigan.

The project must also increase the resilience of one of the following asset types:

- Public roads^{1,2} and roads not designated as Federal-aid highways, which include local roads or rural minor collectors
 - This includes active transportation facilities (bicycle and pedestrian)
- Bridge or culvert
- Public transportation facility or service
- Amtrak facility or service
- Port facility (including a facility that connects a port to other modes of transportation, improves the efficiency of evacuations and disaster relief, or aids transportation)

For resilience improvement and at-risk coastal infrastructure grants, the proposed project must increase the resilience of one of the above surface transportation assets.

For projects with very large dollar amounts that go above and beyond required design standards or include components that would not be typically funded, the resilience-related components or enhancements could be funded by PROTECT (e.g., the addition of a nature-based solution, additional cost from exceeding design standards).

See the [PROTECT Discretionary Grant Program Frequently Asked Questions](#) for more details on eligible project types.

¹ Any road or street under the jurisdiction of and maintained by a public authority and open to public travel

² Highways and roads that are functionally classified as principal arterials, minor arterials, collectors (other than rural minor collectors), and the Interstate and National Highway System (NHS)

Appendix B: Project Submission Form and Spreadsheet

The resilience project submission form and spreadsheet consist of the following sections:

1. **Submitter information:** Basic information about the submitter.
2. **Basic project information:** Key project details, including title, implementation agency, TIP/CFP/RCP project ID, and the project location (if required).
3. **Project details:** Project type and description, climate hazard(s) impacting the asset(s), and project's ability to reduce risk of impacts from those hazards.
4. **Additional project information (optional):** Optional opportunity to provide additional details about the project, such as priority, timeline, cost, and funding.

The project submission form/spreadsheet fields are provided in the sections below for reference only. When submitting a resilience project for consideration, please use the links provided above. **Questions marked with an asterisk (*) are required** and you will not be able to proceed or submit the form until they are answered.

Submitter Information

The first section of the form requests basic information from the submitter. This individual will act as the primary point of contact for the project and may be reached if additional information is required.

1. **Name***
2. **Agency or organization***
3. **Email address***
4. **Phone number*** (format as 123-456-7890)

Basic Project Information

The second section of the form requests basic information about the project being submitted.

1. **Project title***
2. **Identify the project location*** – Draw the project boundaries and generate the spatial location. Refer to Appendix C: Project Location Mapping to learn how to draw the project location.
3. **Asset owner for the proposed project***
4. **Lead implementing agency***, if different from the agency entered in Section 1 – Enter the name of the agency that will oversee project implementation.
5. **Lead implementation agency type***– Select one of the following options.
 - Unit of local government
 - Special purpose district or public authority with a transportation function, including a port authority or a public transit agency

- Multi-state or multi-jurisdictional group of entities
 - Other (specify)
6. **Secondary implementation agency name**, if applicable
 7. **Secondary implementation agency type**, if applicable – Select one of the following options.
 - Unit of local government
 - Special purpose district or public authority with a transportation function, including a port authority or a public transit agency
 - Multi-state or multi-jurisdictional group of entities
 - Other (specify)
 8. **Is your project already included in SEMCOG Transportation Improvement Program (TIP) or Regional Transportation Plan (RTP)** – (yes, no)
 - *If yes:* please provide the project's assigned unique identification number
 9. **Is the project in an existing plan (besides the TIP)?** – For example, hazard mitigation, long-range transportation, etc. (yes, No)
 - *If yes:* Which plan(s)?

Project Details

1. **Project type*** – Select one of the following options below. If a project includes more than one type, specify under “Other”.
 - Transportation-related study or plan (e.g., evacuation plan)
 - Resilience study or plan focused more broadly than transportation
 - Highway and roadway
 - Active transportation (bicycle or pedestrian facility)
 - Bridge, culvert, or tunnel
 - Transit system
 - Port, freight, and intermodal (e.g., rail yards, distribution centers)
 - Transportation-related service or operations, including technology-focused projects
 - Transportation-related emergency response and recovery (e.g., evacuation or emergency access routes)
 - Non-transportation emergency response and recovery
 - Non-transportation natural infrastructure (e.g., wetland restoration)
 - Non-transportation stormwater planning
 - Non-transportation stormwater project
 - Other (specify)
2. **Project description*** – Briefly explain the project, location, and intended resilience outcomes (3-4 sentences). (For example, how the proposed project reduces risk of impacts from flooding and/or other hazards.)

3. **What is the estimated timeline for the project?*** Provide the start and end date, if known.
4. **Provide an order of magnitude estimated cost*** - This amount should cover all project costs, not just the resilience component(s).
5. **Hazard(s) impacting the asset(s)*** - Select all that apply.
 - Flooding
 - Coastal erosion
 - Extreme heat
 - Other
6. **Describe the hazard(s) impacting the asset(s)**
7. **Describe the extent to which the project protects transportation assets from extreme weather events and climate hazards, and identify any climate risks that would remain after project completion** (For example, does the project fully or partially reduce vulnerability and/or eliminate climate risks?)
8. **If this is a construction project, did/will design incorporate future conditions?**

Additional Project Information

1. **Describe any current funding commitments for the project** (both full project and resilience component, if separate)
2. **If this is a transportation project, was it included in an application to the PROTECT program?** (yes, no, N/A)
 - *If no:* Is there interest in submitting this project to the PROTECT program in the future?
3. **Describe the extent to which the project achieves the following, if applicable:**
 - Enhances system-wide resilience (i.e., provides benefits to the transportation system beyond the project site)
 - Prevents long-term service disruptions (week to months) due to climate hazards
 - Will reduce severe infrastructure damage/repair needs after extreme weather events
4. **Describe how the project integrates nature-based solutions and/or gray infrastructure solutions to support long-term resilience.** (For example, does the project combine multiple solutions or just use one major nature-based or gray infrastructure element?)
5. **Describe any additional co-benefits the project will provide beyond resilience, if applicable.** (For example, will the project provide air and water improvements, ecosystem health, or economic benefits?)
6. **Provide any additional relevant information.** (Document submission)

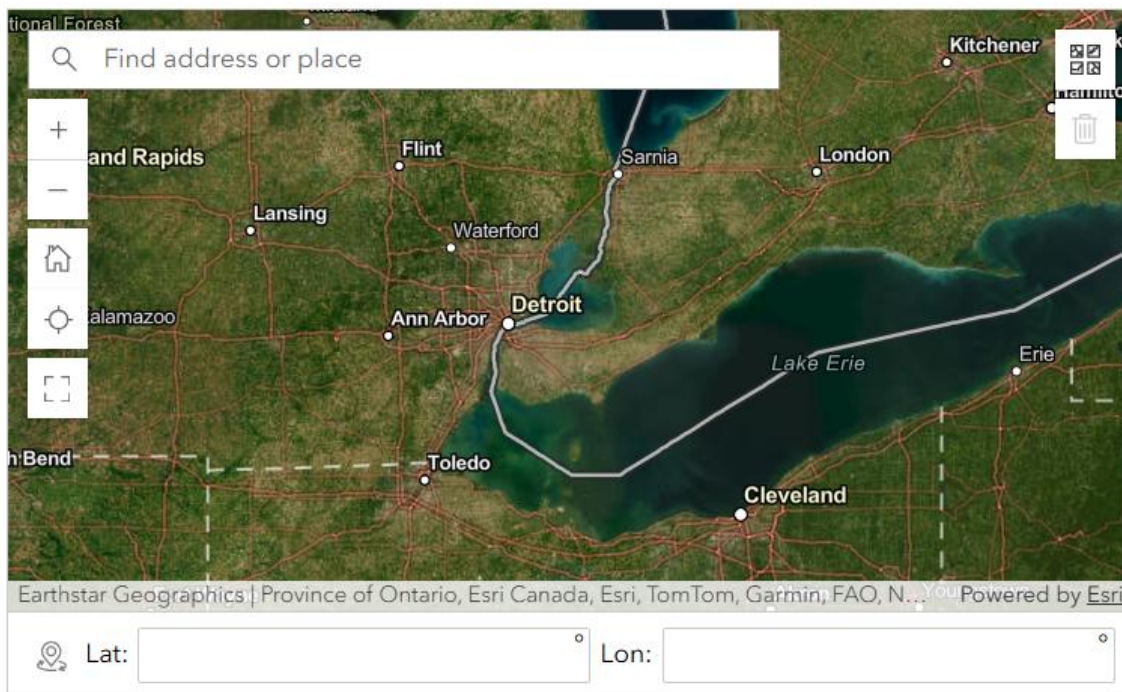
Appendix C: Project Location Mapping

Understanding the Icons

The project location question allows you to draw the project's general boundaries. The question, shown in *Figure 1*, is made up of the following components:

Figure 1. Project location question

Identify the project location*



1. **Search bar:** The search bar allows you to narrow the map view to an area of interest.
2. **Zoom:** The zoom-in (+) and zoom-out (-) buttons allows you to enlarge or narrow the map view to an area of interest.
3. **Default map view:** The default map view button will navigate the map view to a preset extent.
4. **Pinpoint:** The pinpoint button will navigate the map view to your location. Note: the submitter's location is not required to use the map and does not need to be provided.
5. **Large map:** The large map button will expand the application to allow for a larger canvas on which to draw upon.
6. **Map gallery:** The map gallery button will provide you with a variety of basemaps that can be used to better identify an area of interest.

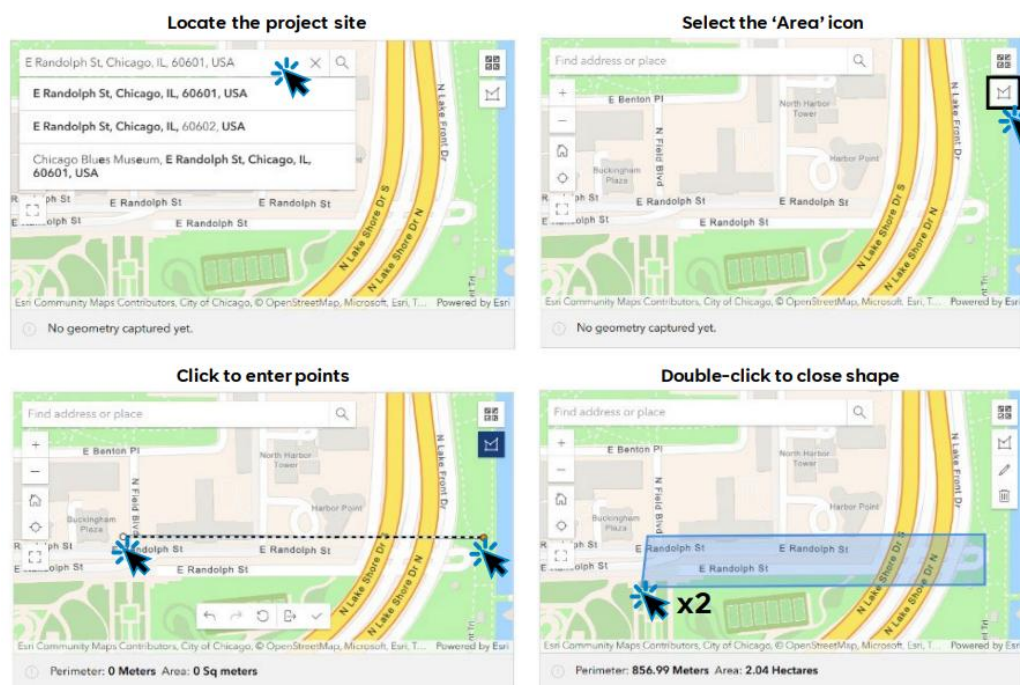
7. **Area:** The area button allows you to draw the project boundaries.

Drawing the Project

Drawing the project location involves connecting multiple points to create a shape that defines the boundary. This guide uses a hypothetical project as an example (Figure 2). Follow these steps to draw the project area:

1. **Expand the map view (optional):** Click the large map icon to enlarge the drawing window for better visibility.
2. **Locate the project site:** To navigate to the project site, you may:
 - a. Use the search bar to enter an address and be directed to the estimated location.
 - b. Use the zoom-in or zoom-out buttons to adjust the map extent.
 - c. Click and drag the map to refine location as needed.
3. **Select the area icon:** Click the area button to begin outlining the project boundary.
4. **Mark the first point:** Click on the map to place the first point of your project boundary.
5. **Draw the project area:** Move the cursor and click to add additional points, shaping the boundary as needed.
6. **Complete the drawing:** Double-click on the final point to close the shape and finalize the project area.

Figure 2. Drawing project location example



Appendix D: Glossary

- **Adaptive capacity:** The ability of an asset or system to adjust, repair, or flexibly respond to damage caused by climate variability, extreme weather, or other natural disasters.
- **Natural hazard:** An event or condition that arises from the Earth's natural processes that may cause physical damage to infrastructure, disrupt operations, or injure people.
- **Climate adaptation:** Measures to reduce the impacts of climate change, including but not limited to hardening of infrastructure and operational changes to improve the ability of a system to recover from damage and disruptions.
- **Co-benefits:** The positive effects of an action intended for one purpose (e.g., resilience) that also have other positive outcomes, such as improved air quality, ecosystem services, etc.
- **Gray infrastructure:** Human-engineered systems, like dams, levees, and stormwater pipes, designed to control and manage water flow.
- **Resilience:** The ability of a system to anticipate, prepare for, respond to, and recover from disruption.
- **Risk:** Potential threats to the system due to climate hazards. In terms of transportation, these can include physical impacts on infrastructure and disruptions to services and operations. Risk is often used interchangeably with vulnerability, although some studies make distinctions between the terms; for example, risk may be a representation of the potential harm caused by vulnerabilities if an event happens.
- **Vulnerability:** The susceptibility of a system to adverse impacts from climate hazards.

Appendix E: Relevant Existing Projects

Fiscal Year	Job Type	Job#	GPA Type	MPO	County	Responsible Agency	Project Name	Primary Work Type
2026	Trunkline	222093	S/TIP Line items	Southeast Michiç	St. Clair	MDOT	I-94	Environmental
2026	Trunkline	226632	S/TIP Line items	Southeast Michiç	Monroe	MDOT	US-24	Bridge Replacement
2026	Trunkline	226632	S/TIP Line items	Southeast Michiç	Monroe	MDOT	US-24	Bridge Replacement
2029	Trunkline	226632	S/TIP Line items	Southeast Michiç	Monroe	MDOT	US-24	Bridge Replacement
2026	Trunkline	210113	Trunkline Bridge	Southeast Michiç	Oakland	MDOT	M-1	Bridge Replacement
2026	Trunkline	221353	Trunkline Bridge	Southeast Michiç	Monroe	MDOT	US-23 N	Bridge Replacement
2026	Trunkline	222837	Trunkline Bridge	Southeast Michiç	Livingston	MDOT	M-36	Bridge Replacement
2026	Trunkline	222837	Trunkline Bridge	Southeast Michiç	Livingston	MDOT	M-36	Bridge Replacement
2026	Trunkline	226614	Trunkline Bridge	Southeast Michiç	Oakland	MDOT	M-59	Bridge Replacement
2026	Trunkline	226614	Trunkline Bridge	Southeast Michiç	Oakland	MDOT	M-59	Bridge Replacement
2028	Trunkline	226614	Trunkline Bridge	Southeast Michiç	Oakland	MDOT	M-59	Bridge Replacement
2028	Trunkline	217121	S/TIP Line items	Southeast Michiç	Wayne	MDOT	I-94 W	Environmental
2028	Trunkline	217121	S/TIP Line items	Southeast Michiç	Wayne	MDOT	I-94 W	Environmental
2026	Trunkline	221386	S/TIP Line items	Southeast Michiç	Monroe	MDOT	River Raisin Lake	Environmental
2026	Multi-Modal	226421	S/TIP Line items	Southeast Michiç	Livingston	MDOT	MDOT Rail	R000-Rail
2026	Trunkline	211155	S/TIP Line items	Southeast Michiç	Washtenaw	MDOT	US-23 N	Reconstruction
2026	Trunkline	211155	S/TIP Line items	Southeast Michiç	Washtenaw	MDOT	US-23 N	Reconstruction
2027	Trunkline	211155	S/TIP Line items	Southeast Michiç	Washtenaw	MDOT	US-23 N	Reconstruction
2026	Trunkline	217456	S/TIP Line items	Southeast Michiç	Monroe	MDOT	I-75	Reconstruction
2028	Trunkline	217456	S/TIP Line items	Southeast Michiç	Monroe	MDOT	I-75	Reconstruction
2027	Local	222251	S/TIP Line items	Southeast Michiç	Livingston	Livingston Coun	Grand River Ave	Reconstruction
2026	Local	222762	S/TIP Line items	Southeast Michiç	Wayne	Wayne County	Willow Rd	Reconstruction
2026	Local	225588	S/TIP Line items	Southeast Michiç	Oakland	Lake Orion	Village wide	Road Capital
2026	Local	225589	S/TIP Line items	Southeast Michiç	Oakland	Bingham Farms	Old Stage Rd	Road Capital
2026	Trunkline	222848	S/TIP Line items	Southeast Michiç	Wayne	MDOT	I-94 W	Road Rehabilitation
2026	Trunkline	226977	S/TIP Line items	Southeast Michiç	Wayne	MDOT	Regionwide	Road Rehabilitation
2027	Local	225419	Local Livability a	Southeast Michiç	Macomb	Macomb County	25 Mile Rd	Roadside Facilities -

Project Description	Phase	Phase Status	Fund Source
Wetland Restoration	CON	Programmed	ST
Culvert replacements	PE	Programmed	ST
Culvert replacements	PES	Programmed	ST
Culvert replacements	CON	Programmed	ST
Culvert Replacement	CON	Programmed	BFP
Culvert Replacement and	CON	Active	BFP
Culvert Replacement	PE	Programmed	ST
Culvert Replacement	PES	Programmed	ST
Culvert Replacement	PE	Active	ST
Culvert Replacement	PES	Active	ST
Culvert Replacement	ROW	Programmed	ST
I-94 Drainage agreement to	PE	Programmed	PROTECT
I-94 Drainage agreement to	ROW	Programmed	PROTECT
Culvert Installation and	CON	Programmed	ST
Replacing 3 culverts on the	NI	Programmed	CTFR
Road reconstruction with	ROW	Programmed	M
Road reconstruction with	UTL	Programmed	M
Road reconstruction with	CON	Programmed	NH,MNMP,NHFP
Pavement reconstruction,	ROW	Programmed	M
Pavement reconstruction,	CON	Programmed	NH,INFR
Culvert Replacement	CON	Programmed	STUL
Willow Rd/Desbrow Drain	CON	Active	STL
Mill & overlay, drainage,	CON	Active	TEDB
Full depth concrete repair,	CON	Active	TEDB
Drainage Tunnel	CON	Active	ST,PROTECT
Sewer Repair and New	CON	Programmed	M
Sidewalk and pedestrian	CON	Programmed	TAU

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Bridge and tunnel resilience	<ul style="list-style-type: none"> • Reconstruction / rehabilitation (e.g., bridge elevation or reinforcement) • Scour protection and erosion control for bridges • Tunnel waterproofing and drainage improvements/maintenance • Other preventative maintenance
Transit system resilience	<ul style="list-style-type: none"> • Floodproofing bus and rail stations • Elevating or reinforcing rail tracks and guideways • Upgrading power systems for extreme weather • Climate-adaptive electric bus and rail infrastructure • Storm-resistant transit facilities (e.g., bus depots) • Shade structures/other cooling amenities at transit stops
Port, freight, and intermodal resilience	<ul style="list-style-type: none"> • Flood and storm surge barriers for freight corridors • Elevating or reinforcing port infrastructure • Hardening intermodal facilities (e.g., rail yards, distribution centers) • Strengthening supply chain resilience to extreme weather
Intelligent transportation systems (ITS) and other technology	<ul style="list-style-type: none"> • Weather-responsive traffic management • Automated flood detection and warning systems • Remote sensing and predictive maintenance tools • Smart traffic signals that adapt to extreme weather
Emergency response and disaster recovery infrastructure	<ul style="list-style-type: none"> • Evacuation route improvements • Hardening emergency access routes for first responders • <i>Backup power and microgrid systems</i> • <i>Temporary flood barriers & deployable resilience solutions</i>

	<ul style="list-style-type: none"> • <i>Resiliency Hubs</i>
Large-scale natural infrastructure (non-transportation)	<ul style="list-style-type: none"> • <i>Wetland restoration for flood mitigation</i> • <i>Living shorelines and natural flood barriers</i> • <i>Urban tree planting for heat island mitigation</i>
Stormwater management - physical	<ul style="list-style-type: none"> • <i>Gray infrastructure (e.g., traditional pipe, storage, and treatment systems, real-time CSO control systems, sediment controls)</i> • <i>Green infrastructure (e.g., green roofs, green walls, rainwater harvesting systems, replacement of gray infrastructure with GI)</i>
Stormwater management - non-physical	<ul style="list-style-type: none"> • <i>Stormwater project planning and comprehensive planning</i> • <i>Stormwater operations and maintenance</i> • <i>Stormwater system optimization</i>

Project Eligibility Criteria

At minimum, any project included in the Flooding and Resilience Plan must reduce the risk of impacts from one or more natural hazards. Natural hazards include, but are not limited to:

- Precipitation and flooding (urban, riverine, coastal)
- Extreme heat
- Severe storms (rain, snow, ice, wind)
- Coastal erosion

Projects that increase resilience of the transportation system specifically may be eligible for the PROTECT competitive grant program. To view PROTECT project eligibility, please refer to Appendix *Appendix A: Project Eligibility for FHWA’s PROTECT Program*.

Referring to Relevant Existing Projects

SEMCOG has compiled a list of known projects previously submitted to it or identified by stakeholders from around the region that could be relevant for the Flooding and Resilience Plan, including:

- Transportation Improvement Program (TIP) projects located in areas identified as highly vulnerable to natural hazards
- Projects in county hazard mitigation plans relevant to natural hazards

These projects are provided for reference in Appendix E. **If any of these existing projects address or could be adjusted to address climate risks, please consider submitting them.**

Submitting Projects for Plan Consideration

Please submit projects for consideration by **August 7, 2026**. Projects will be accepted on a rolling basis until the submission deadline. SEMCOG will review each submitted project and will follow up to gather additional information if needed.

Jurisdictions may submit resilience projects by using the project submission form and/or the project submission spreadsheet, both of which are detailed below.

Project Submission Form

The [project submission form](#) allows you to enter one project at a time. This format could be convenient for jurisdictions to submit a limited number of projects. When using this option, please submit one project per form. Appendix *Appendix B: Project Submission Form and Spreadsheet* includes a preview of the form.

Project Submission Spreadsheet

The [project submission spreadsheet](#) allows you to compile information on several projects in one document. It includes the same questions from the project submission form. When using this option, please submit one spreadsheet per agency/jurisdiction.

Optional Form Questions

The priority is submitting the required project information and a detailed description of how the project advances resilience. If you want to make sure the project is on the list but do not have the time or capacity to answer all the optional entries, please submit the project without that information.

Frequently Asked Questions on Project Submissions

What types of projects are you looking for?

- SEMCOG welcomes projects of all sizes and stages—from early planning efforts to major infrastructure investments—that contribute to flood mitigation and resilience.
- SEMCOG will review the projects for eligibility based on the criteria on page 5. Any transportation projects that meet the PROTECT eligibility requirements will be included in the final Flooding and Resilience Plan.

What is the timeframe for project implementation?

- SEMCOG encourages jurisdictions to submit any transportation resilience projects that are a priority for them regardless of anticipated timing.

Who should submit a project?

- Anyone can submit a project! We encourage all resilience stakeholders throughout Southeast Michigan to submit projects to the plan. Counties, cities, townships, villages, educational institutions, utilities, and nonprofit organizations are all eligible to submit projects.

Is there a limit on project cost?

- There is no limit on the dollar amount for submitted projects. We want this plan to showcase the investment needed to create a resilient environment in Southeast Michigan.
- Regarding very large (i.e., multi-billion-dollar) PROTECT-eligible projects, only part of the project would likely be eligible for PROTECT, so SEMCOG encourages transportation managers to consider which component of the project would best fit the PROTECT eligibility requirements. See Appendix Appendix A: Project Eligibility for FHWA's PROTECT Program for more details.

How many projects can I submit?

- There is no limit to the number of projects an agency or jurisdiction can submit. However, if you are submitting a large number of projects, please indicate which are your top priority projects (up to about five projects).

Can I submit multiple similar projects that are happening at different locations?

- For now, interested agencies/jurisdictions can submit multiple similar projects in one line item in the Project Submission Spreadsheet. However, please include all the specific locations in the project submission.

Should I submit a project that is partially or fully funded?

- Projects that are fully funded or in the final phase of construction do not need to be submitted. We are looking for projects that we can influence – by either helping secure funding through inclusion in the plan or by encouraging implementers to find ways to incorporate resilience measures into already planned (but not too far along) projects.

Appendix A: Project Eligibility for FHWA's PROTECT Program

Projects eligible for PROTECT funding must fall into one of the four grant types:

1. **Resilience planning:** Development of resilience improvement plans, resilience planning activities, capacity building, and evacuation planning and preparation.
2. **Resilience improvements:** Projects to make existing surface transportation assets more resilient, such as improving drainage, upgrades to meet or exceed design standards, relocating roadways, or elevating bridges.
3. **Community resilience and evacuation routes:** Improvements to make evacuation routes more resilient or add capacity and redundant evacuation routes.
4. **At-risk coastal infrastructure:** Protecting, strengthening, or relocating coastal highway and non-rail. This includes infrastructure impacted by Lake Michigan.

The project must also increase the resilience of one of the following asset types:

- Public roads^{1,2} and roads not designated as Federal-aid highways, which include local roads or rural minor collectors
 - This includes active transportation facilities (bicycle and pedestrian)
- Bridge or culvert
- Public transportation facility or service
- Amtrak facility or service
- Port facility (including a facility that connects a port to other modes of transportation, improves the efficiency of evacuations and disaster relief, or aids transportation)

For resilience improvement and at-risk coastal infrastructure grants, the proposed project must increase the resilience of one of the above surface transportation assets.

For projects with very large dollar amounts that go above and beyond required design standards or include components that would not be typically funded, the resilience-related components or enhancements could be funded by PROTECT (e.g., the addition of a nature-based solution, additional cost from exceeding design standards).

See the [PROTECT Discretionary Grant Program Frequently Asked Questions](#) for more details on eligible project types.

¹ Any road or street under the jurisdiction of and maintained by a public authority and open to public travel

² Highways and roads that are functionally classified as principal arterials, minor arterials, collectors (other than rural minor collectors), and the Interstate and National Highway System (NHS)

Appendix B: Project Submission Form and Spreadsheet

The resilience project submission form and spreadsheet consist of the following sections:

1. **Submitter information:** Basic information about the submitter.
2. **Basic project information:** Key project details, including title, implementation agency, TIP/CFP/RCP project ID, and the project location (if required).
3. **Project details:** Project type and description, climate hazard(s) impacting the asset(s), and project's ability to reduce risk of impacts from those hazards.
4. **Additional project information (optional):** Optional opportunity to provide additional details about the project, such as priority, timeline, cost, and funding.

The project submission form/spreadsheet fields are provided in the sections below for reference only. When submitting a resilience project for consideration, please use the links provided above. **Questions marked with an asterisk (*) are required** and you will not be able to proceed or submit the form until they are answered.

Submitter Information

The first section of the form requests basic information from the submitter. This individual will act as the primary point of contact for the project and may be reached if additional information is required.

1. **Name***
2. **Agency or organization***
3. **Email address***
4. **Phone number*** (format as 123-456-7890)

Basic Project Information

The second section of the form requests basic information about the project being submitted.

1. **Project title***
2. **Identify the project location*** – Draw the project boundaries and generate the spatial location. Refer to Appendix C: Project Location Mapping to learn how to draw the project location.
3. **Asset owner for the proposed project***
4. **Lead implementing agency***, if different from the agency entered in Section 1 – Enter the name of the agency that will oversee project implementation.
5. **Lead implementation agency type***– Select one of the following options.
 - Unit of local government
 - Special purpose district or public authority with a transportation function, including a port authority or a public transit agency

- Multi-state or multi-jurisdictional group of entities
 - Other (specify)
6. **Secondary implementation agency name**, if applicable
 7. **Secondary implementation agency type**, if applicable – Select one of the following options.
 - Unit of local government
 - Special purpose district or public authority with a transportation function, including a port authority or a public transit agency
 - Multi-state or multi-jurisdictional group of entities
 - Other (specify)
 8. **Is your project already included in SEMCOG Transportation Improvement Program (TIP) or Regional Transportation Plan (RTP)** – (yes, no)
 - *If yes:* please provide the project's assigned unique identification number
 9. **Is the project in an existing plan (besides the TIP)?** – For example, hazard mitigation, long-range transportation, etc. (yes, No)
 - *If yes:* Which plan(s)?

Project Details

1. **Project type*** – Select one of the following options below. If a project includes more than one type, specify under “Other”.
 - Transportation-related study or plan (e.g., evacuation plan)
 - Resilience study or plan focused more broadly than transportation
 - Highway and roadway
 - Active transportation (bicycle or pedestrian facility)
 - Bridge, culvert, or tunnel
 - Transit system
 - Port, freight, and intermodal (e.g., rail yards, distribution centers)
 - Transportation-related service or operations, including technology-focused projects
 - Transportation-related emergency response and recovery (e.g., evacuation or emergency access routes)
 - Non-transportation emergency response and recovery
 - Non-transportation natural infrastructure (e.g., wetland restoration)
 - Non-transportation stormwater planning
 - Non-transportation stormwater project
 - Other (specify)
2. **Project description*** – Briefly explain the project, location, and intended resilience outcomes (3-4 sentences). (For example, how the proposed project reduces risk of impacts from flooding and/or other hazards.)

3. **What is the estimated timeline for the project?*** Provide the start and end date, if known.
4. **Provide an order of magnitude estimated cost*** - This amount should cover all project costs, not just the resilience component(s).
5. **Hazard(s) impacting the asset(s)*** - Select all that apply.
 - Flooding
 - Coastal erosion
 - Extreme heat
 - Other
6. **Describe the hazard(s) impacting the asset(s)**
7. **Describe the extent to which the project protects transportation assets from extreme weather events and climate hazards, and identify any climate risks that would remain after project completion** (For example, does the project fully or partially reduce vulnerability and/or eliminate climate risks?)
8. **If this is a construction project, did/will design incorporate future conditions?**

Additional Project Information

1. **Describe any current funding commitments for the project** (both full project and resilience component, if separate)
2. **If this is a transportation project, was it included in an application to the PROTECT program?** (yes, no, N/A)
 - *If no:* Is there interest in submitting this project to the PROTECT program in the future?
3. **Describe the extent to which the project achieves the following, if applicable:**
 - Enhances system-wide resilience (i.e., provides benefits to the transportation system beyond the project site)
 - Prevents long-term service disruptions (week to months) due to climate hazards
 - Will reduce severe infrastructure damage/repair needs after extreme weather events
4. **Describe how the project integrates nature-based solutions and/or gray infrastructure solutions to support long-term resilience.** (For example, does the project combine multiple solutions or just use one major nature-based or gray infrastructure element?)
5. **Describe any additional co-benefits the project will provide beyond resilience, if applicable.** (For example, will the project provide air and water improvements, ecosystem health, or economic benefits?)
6. **Provide any additional relevant information.** (Document submission)

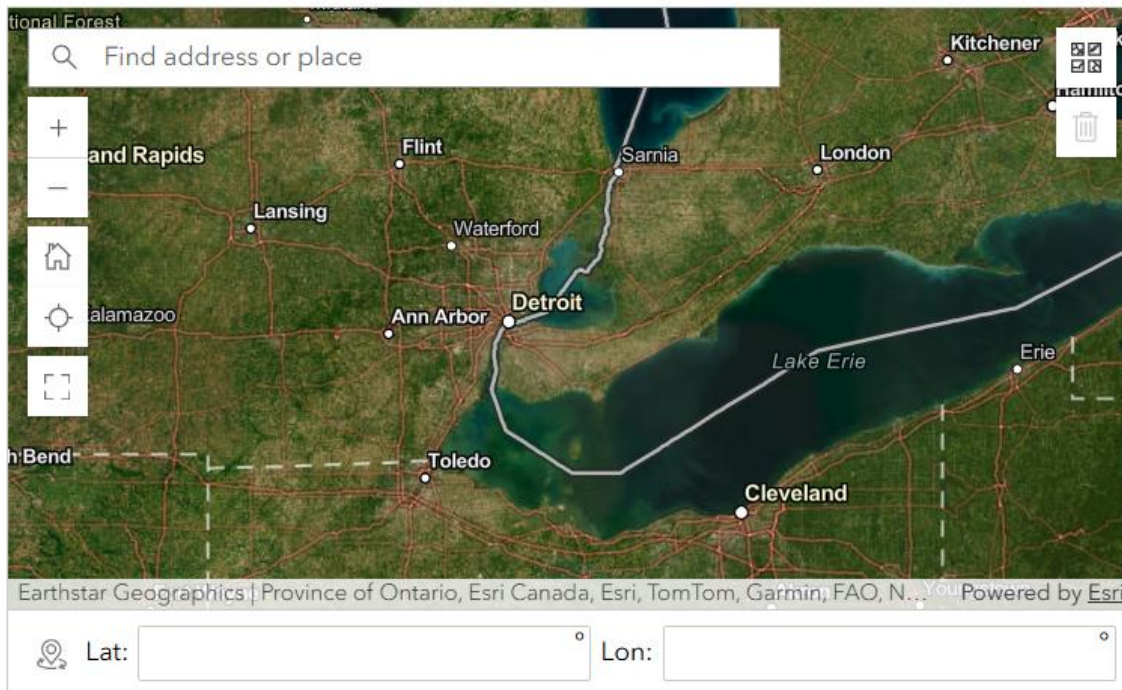
Appendix C: Project Location Mapping

Understanding the Icons

The project location question allows you to draw the project's general boundaries. The question, shown in *Figure 1*, is made up of the following components:

Figure 1. Project location question

Identify the project location*



1. **Search bar:** The search bar allows you to narrow the map view to an area of interest.
2. **Zoom:** The zoom-in (+) and zoom-out (-) buttons allows you to enlarge or narrow the map view to an area of interest.
3. **Default map view:** The default map view button will navigate the map view to a preset extent.
4. **Pinpoint:** The pinpoint button will navigate the map view to your location. Note: the submitter's location is not required to use the map and does not need to be provided.
5. **Large map:** The large map button will expand the application to allow for a larger canvas on which to draw upon.
6. **Map gallery:** The map gallery button will provide you with a variety of basemaps that can be used to better identify an area of interest.

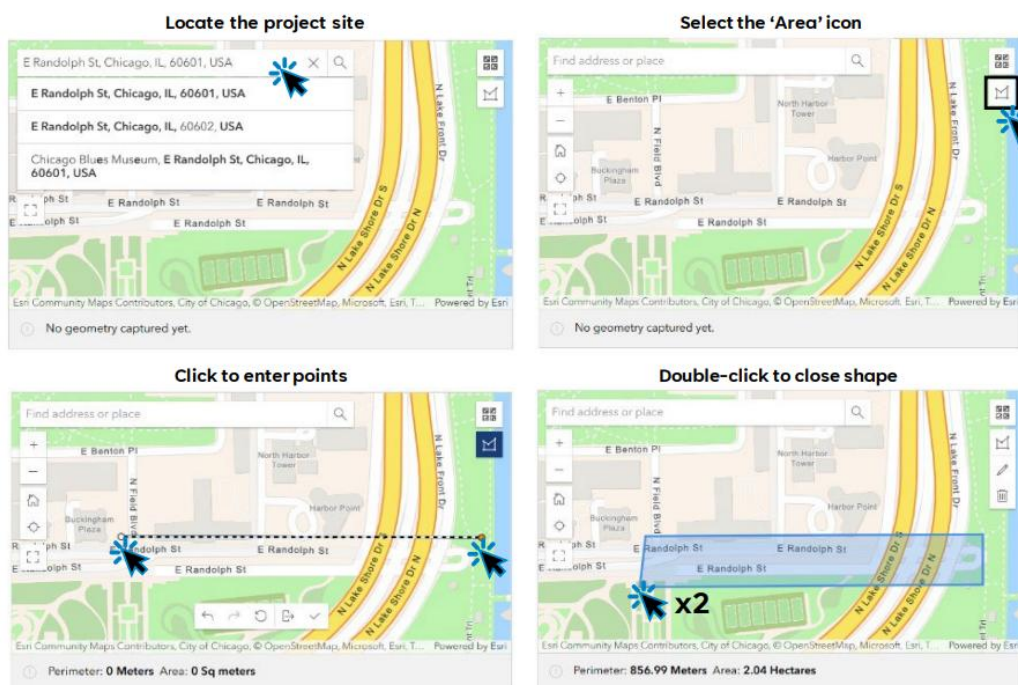
7. **Area:** The area button allows you to draw the project boundaries.

Drawing the Project

Drawing the project location involves connecting multiple points to create a shape that defines the boundary. This guide uses a hypothetical project as an example (Figure 2). Follow these steps to draw the project area:

1. **Expand the map view (optional):** Click the large map icon to enlarge the drawing window for better visibility.
2. **Locate the project site:** To navigate to the project site, you may:
 - a. Use the search bar to enter an address and be directed to the estimated location.
 - b. Use the zoom-in or zoom-out buttons to adjust the map extent.
 - c. Click and drag the map to refine location as needed.
3. **Select the area icon:** Click the area button to begin outlining the project boundary.
4. **Mark the first point:** Click on the map to place the first point of your project boundary.
5. **Draw the project area:** Move the cursor and click to add additional points, shaping the boundary as needed.
6. **Complete the drawing:** Double-click on the final point to close the shape and finalize the project area.

Figure 2. Drawing project location example



Appendix D: Glossary

- **Adaptive capacity:** The ability of an asset or system to adjust, repair, or flexibly respond to damage caused by climate variability, extreme weather, or other natural disasters.
- **Natural hazard:** An event or condition that arises from the Earth's natural processes that may cause physical damage to infrastructure, disrupt operations, or injure people.
- **Climate adaptation:** Measures to reduce the impacts of climate change, including but not limited to hardening of infrastructure and operational changes to improve the ability of a system to recover from damage and disruptions.
- **Co-benefits:** The positive effects of an action intended for one purpose (e.g., resilience) that also have other positive outcomes, such as improved air quality, ecosystem services, etc.
- **Gray infrastructure:** Human-engineered systems, like dams, levees, and stormwater pipes, designed to control and manage water flow.
- **Resilience:** The ability of a system to anticipate, prepare for, respond to, and recover from disruption.
- **Risk:** Potential threats to the system due to climate hazards. In terms of transportation, these can include physical impacts on infrastructure and disruptions to services and operations. Risk is often used interchangeably with vulnerability, although some studies make distinctions between the terms; for example, risk may be a representation of the potential harm caused by vulnerabilities if an event happens.
- **Vulnerability:** The susceptibility of a system to adverse impacts from climate hazards.