Thriving Through Change: Opportunities for Local Climate Action

Local Resilience Infrastructure and Governance, with NJDEP's Resilient NJ

January 14, 2025

Webinar Presenters

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Webinar Series

Thriving Through Change: Opportunities for Local Climate Action

1/14: Local Resilience Infrastructure and Governance

Webinar Goals:

- Understand how **environmental commissions**, **green teams**, and other **local institutions** can be leaders in resilience and adaptation efforts in their communities
- Become familiar with potential **infrastructure actions**
- Learn about potential **governance actions**
- Get connected to **resources** to support **action**

1/28: Community Engagement and Risk Communication

We look forward to Part 2 of this webinar series!

Today’s Agenda

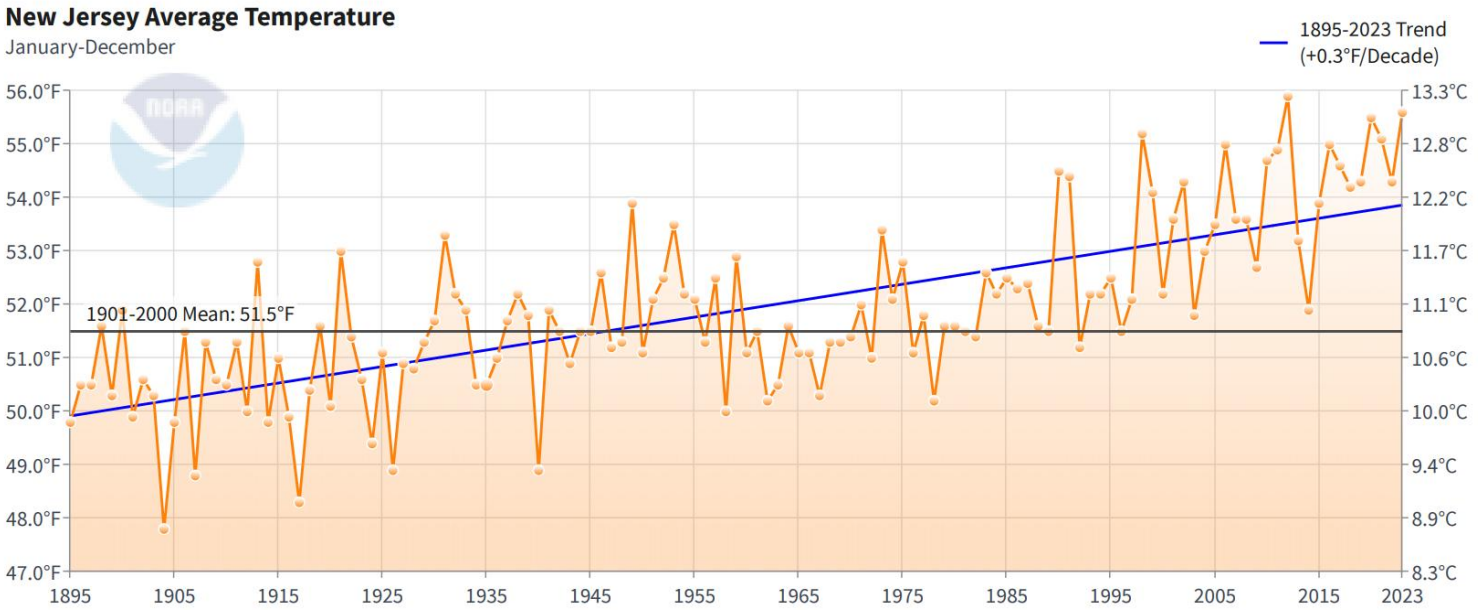
1. Introduction to Climate Resilience in New Jersey
2. Local Institutions’ Role in Resilience Leadership
3. Resilience and Infrastructure
4. Local Institution Spotlight: Maplewood Stormwater Utility
5. Resilience and Governance
6. Local Institution Spotlight: Princeton’s Green Building Checklist
7. Resource spotlight: ANJEC Resource Library
8. Conclusion + Questions

Why Does Resilience Matter?

Climate change is not coming – it's already here.

New Jersey is already experiencing climate change effects, which will only intensify in the coming decades. Future climate effects are expected to include:

- Increased average annual temperatures
- Increased annual precipitation and changes in precipitation patterns that also result in more frequent droughts
- Sunny day flooding and sea level rise affecting coastal regions of NJ



New Jersey Average Temperature, 1895-2024. The orange line represents the annual average temperature, and the blue line represents the temperature trend from 1895-2023, a 0.3F increase per decade (NOAA National Centers for Environmental Information).

***Note**: though resilience can encompass many hazards, this presentation will focus on heat and flood resilience.*

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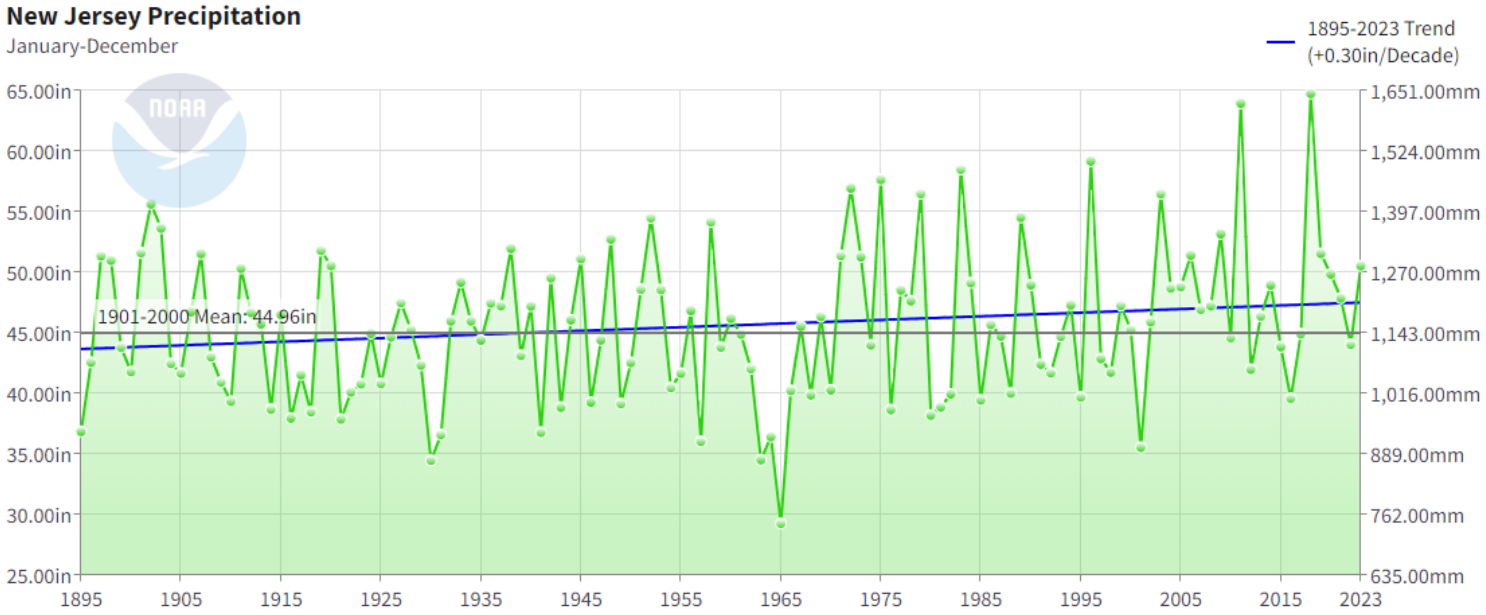

New Jersey Average Precipitation, 1895-2024. The green line represents the annual average precipitation, and the blue line represents the temperature trend from 1895-2023, a 0.30-inch increase per decade (NOAA National Centers for Environmental Information).

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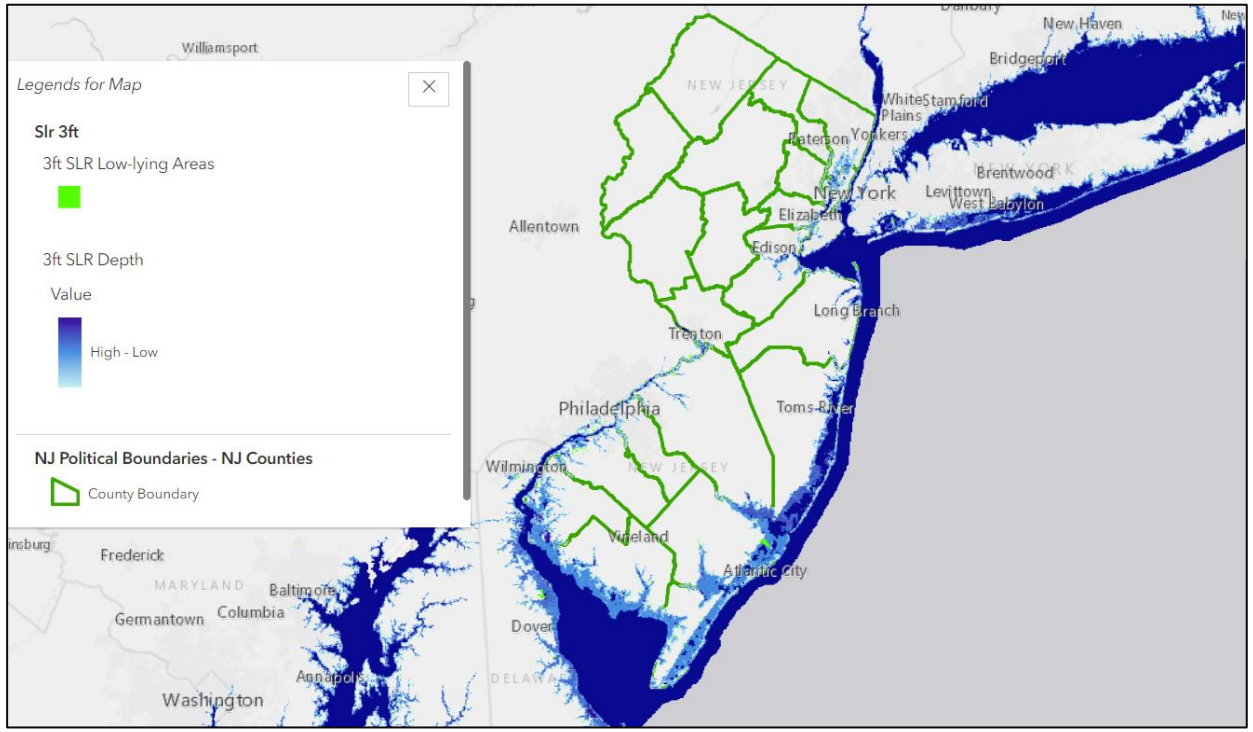


New Jersey Flooding – 3 feet of SLR. The blue areas represent land that would be exposed to flooding under a 3 feet sea level rise scenario. Different shades of blue represent different water depths. There is a ~50 percent chance of 3.3 feet of sea level rise by 2100 under a moderate emissions scenario according to Rutgers sea level rise estimates. (NJFloodMapper from NJ Adapt).

***Note**: though resilience can encompass many hazards, this presentation will focus on heat and flood resilience.*

Climate Resilience in New Jersey

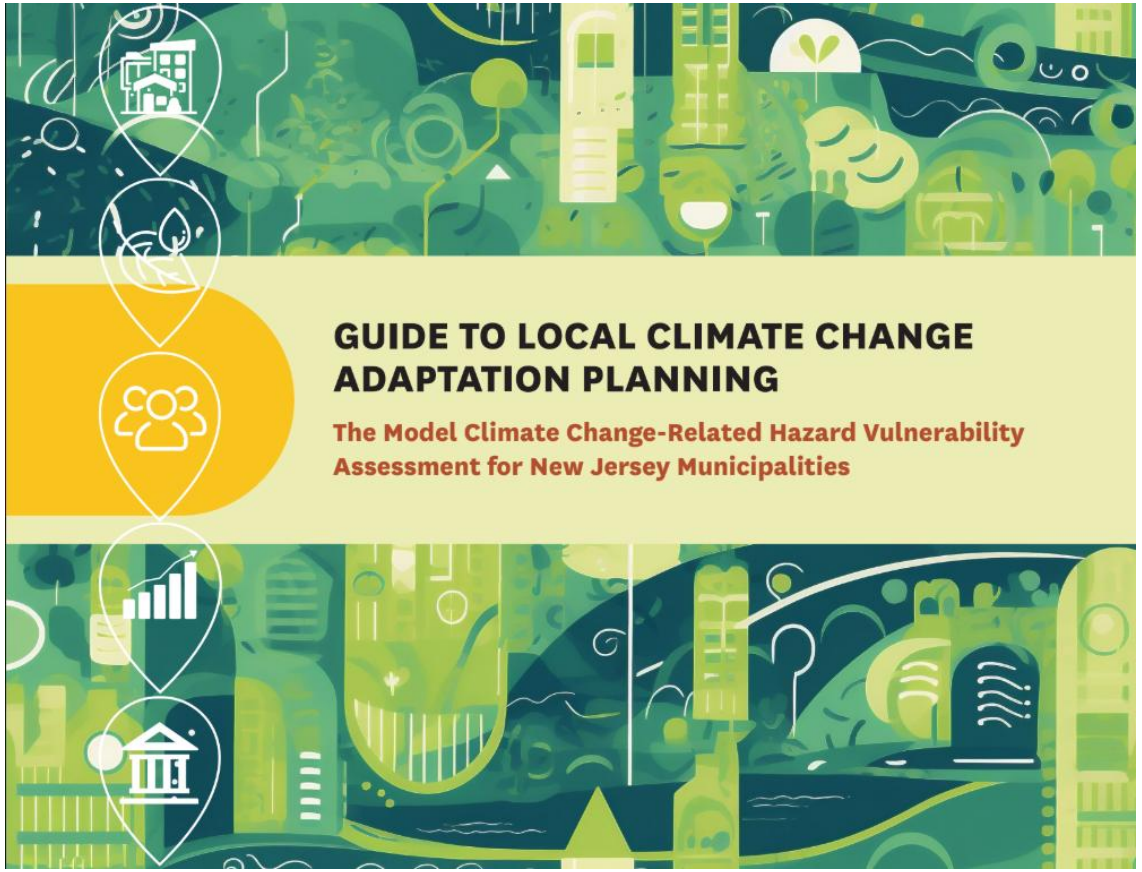
Nick Angarone is New Jersey's Chief Resilience Officer and manager of NJDEP's Office of Climate Resilience.

Nick coordinates statewide resilience policy and supports local governments in their efforts to address the impacts of climate change, among other statewide resilience work. Read more about Nick's work here.

- Resilient NJ (RNJ) is a strategic regional planning effort to strengthen resilience across the state
- The regional strategy helps communities coordinate resilience planning and compiles resources for local use
- Resilient New Jersey Grant Recipients:
  - Municipalities:
    - Burlington County U.S. Route 130 Corridor
    - Town of Harrison
    - City of Lambertville
    - Montclair Township
    - City of Salem
    - City of Trenton
    - Stafford Township
    - Upper Township
    - Township of Ocean
  - Regions:
    - Northeastern New Jersey
    - Atlantic County Coastal Region
    - Raritan River and Bay Communities
    - Long Island Beach Region

Climate Change-Related Hazard Vulnerability Assessment (CCRHVA)

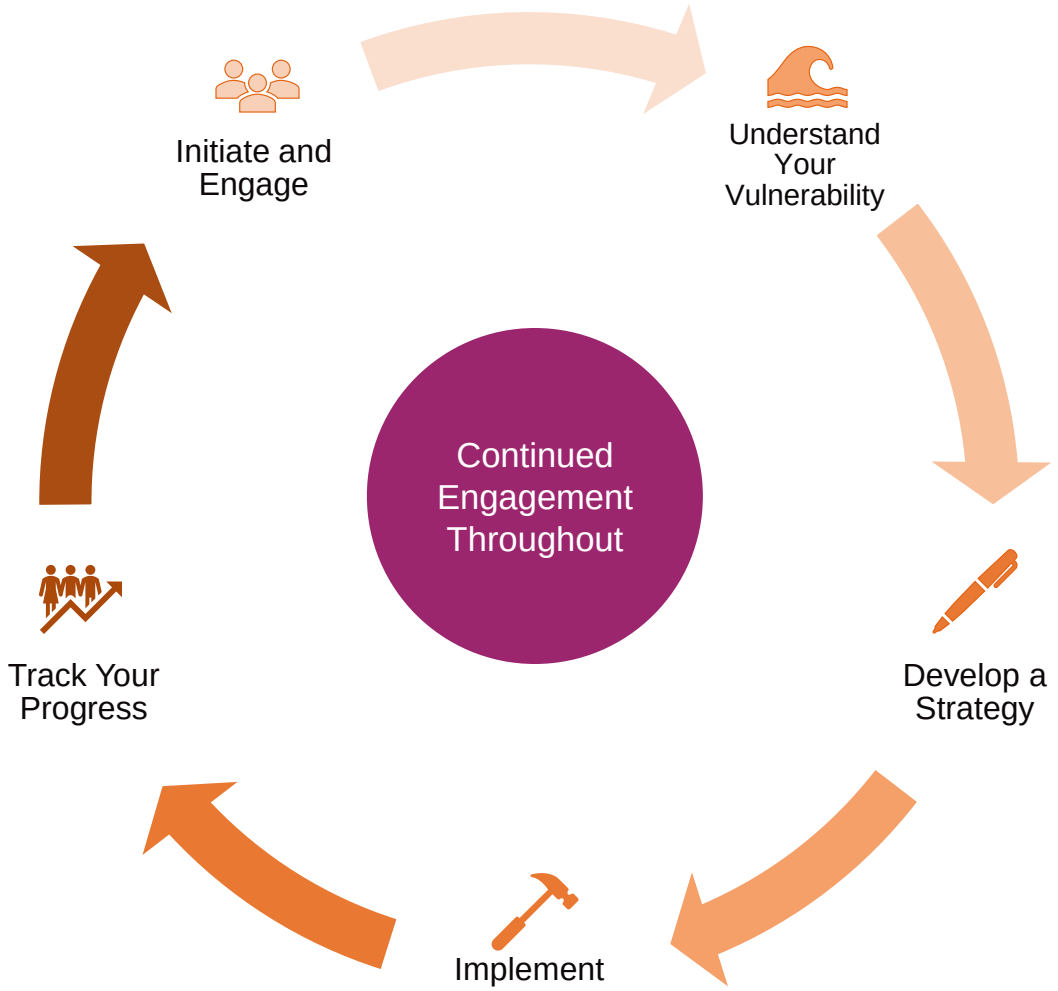
- New Jersey adopted Senate Bill No. 2607 in 2021, which requires municipalities to include a **Climate Change-Related Hazard Vulnerability Assessment** (CCRHVA) in their Master Plan Land Use Elements.
- Communities can meet this requirement through **multiple approaches to assessment.**
- **Example**: The Guide to Local Climate Change Adaptation and Planning was developed by New Jersey Future to assist municipalities in meeting the 2021 MLUL amendment requirements.
  - This document represents one method that communities can use to meet the requirement. It frames vulnerability assessments around five systems (**built**, **natural**, **social**, **economic**, and **governance**).
  - Considering the vulnerability of each system can help communities build **resilience** throughout critical facets of communities.



Source: New Jersey Future

Local Institutions' Role in Resilience

Local leaders play a pivotal role in improving community resilience. Key steps to building local resilience include:

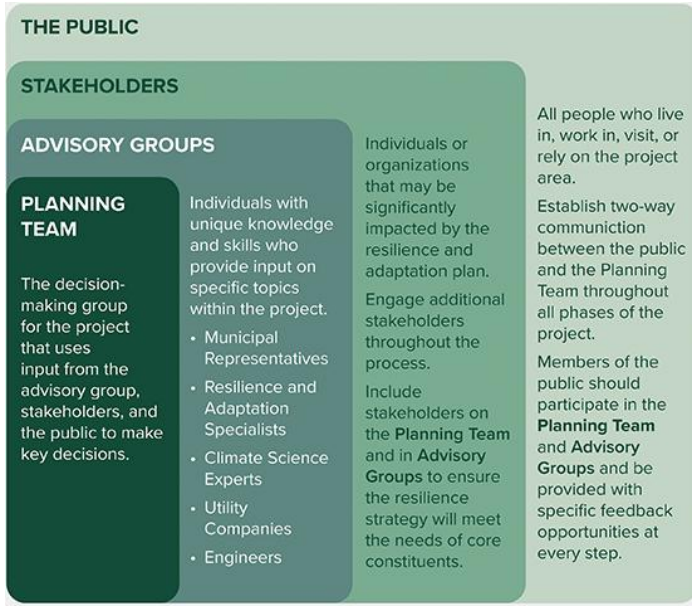


Information Source: [Resilient NJ: Local Planning for Climate Change Toolkit]

Local Institutions' Role in Resilience

Initiate and Engage

Community engagement is a critical first step towards building resilience. To ensure effective and suitable resilience projects, gaining community buy-in and feedback from the community throughout the process is vital. First, local leaders must build a strong team and make a plan to engage equitably and effectively with community members and stakeholders. Leaders should consider how to engage key stakeholders, the timeline for engagement, and ways to achieve collaborative action and decision-making.



1. *Involve **project leaders** who will represent the community's interests.*
2. *Build a steering committee to **guide** the project throughout its lifespan.*
3. *Determine relevant **stakeholder groups** who will be project partners and shape the project, paying special attention to socially **vulnerable** populations and historically **underrepresented** groups.*
4. *Consider building advisory committees who can provide input based on **special expertise**.*

Information Source: Resilient NJ: Local Planning for Climate Change Toolkit

Local Institutions' Role in Resilience

Initiate and Engage

***Share your thoughts in the chat box**: What are barriers that might prevent people from participating in resilience planning efforts in your community? Are there ways to overcome these barriers?*

Community engagement is a critical first step towards building resilience. To ensure effective and suitable resilience projects, gaining community buy-in and feedback from the beginning of the process is critical. Local leaders must build a strong team and make a plan to engage equitably and effectively with community members and stakeholders. Leaders should consider how to engage key stakeholders, the tools for engaging, and ways to overcome challenges to participation and decision-making.

1. *Involve **project leaders** who will represent the community throughout the project.*
2. *Build a steering committee to **guide** the project through each step.*
3. *Determine relevant **stakeholder groups** who will be project partners and shape the project, paying special attention to socially **vulnerable** populations and historically **underrepresented** groups.*
4. *Consider building advisory committees who can provide input based on **special expertise**.*

Information Source: Resilient NJ: Local Planning for Climate Change Toolkit

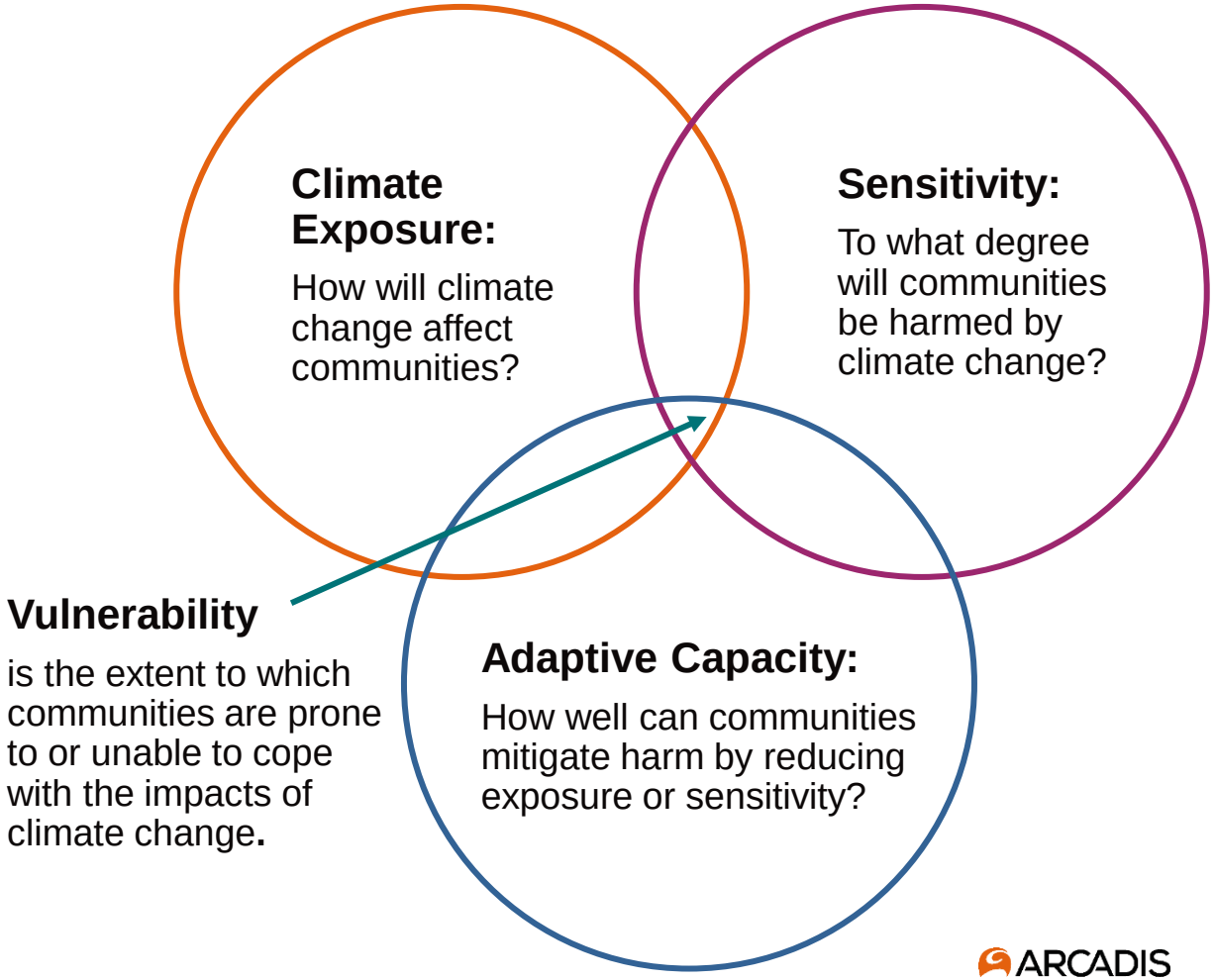
Local Institutions' Role in Resilience

Understand Your Vulnerability

Vulnerability assessments identify the potential impacts of climate change on communities. Consider climate exposure, sensitivity, and adaptive capacity during the vulnerability assessment to build a holistic view of vulnerability.

There are many online tools to identify climate hazards and assess vulnerability.

- NJ Adapt
- NOAA Digital Coast
- CDC Social Vulnerability Index
- New Jersey Environmental Justice Mapping Tool



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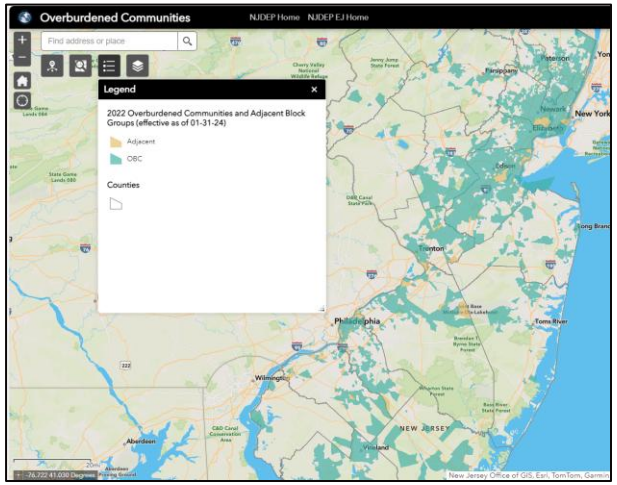
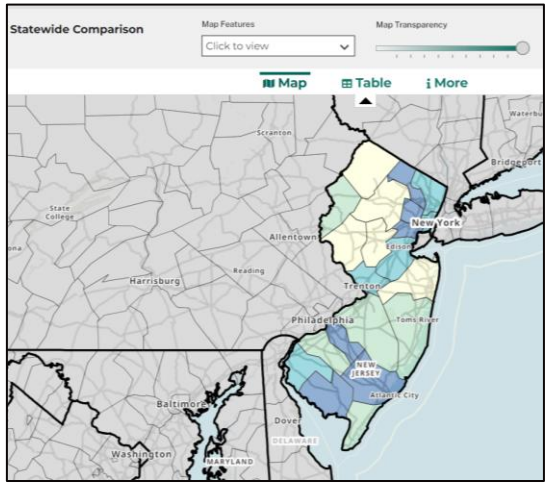
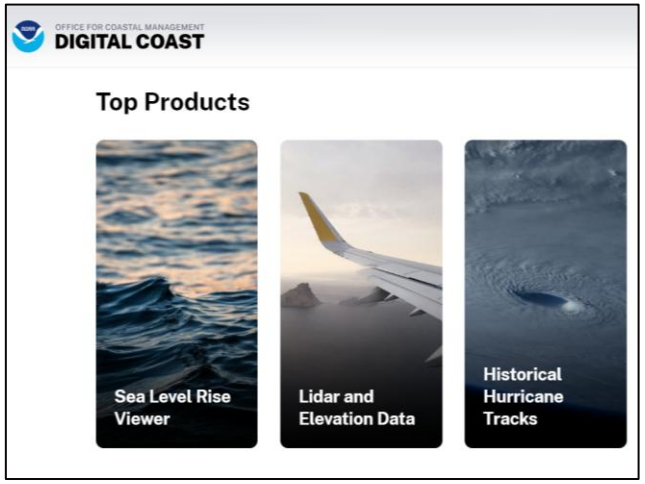
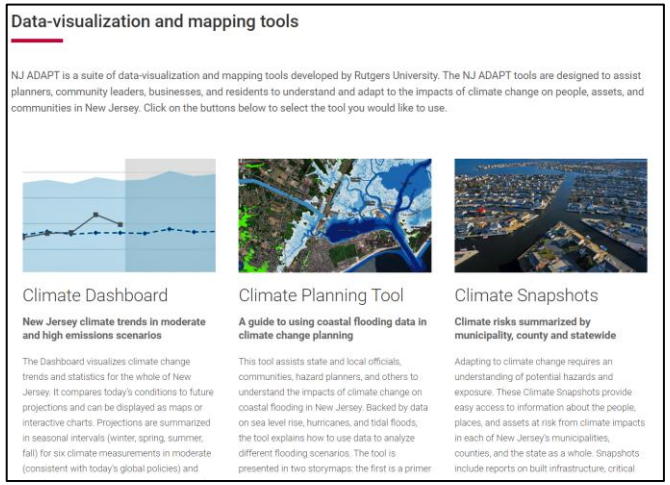
Local Institutions' Role in Resilience

Understand Your Vulnerability









NJ Environmental Justice Mapping Tool

- Visualizes Census Overburdened Communities and Adjacent Block Groups
- Provides data on factors that qualify each Block Group as Overburdened

CDC Social Vulnerability Index

- Visualizes community vulnerability based on socioeconomic status, household characteristics, racial and ethnic minority status, and housing type and transportation.

NOAA Digital Coast

- Offers free trainings, data, and tools focused on flooding and coastal issues.
- NOAA's SLR calculator, included in this site, shows historical and future flooding

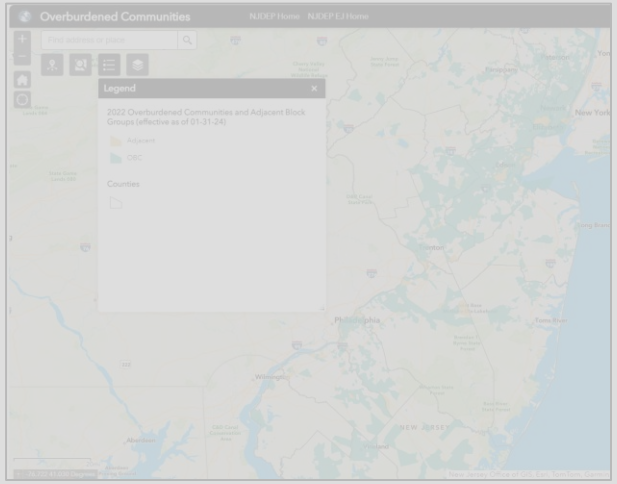
NJ ADAPT

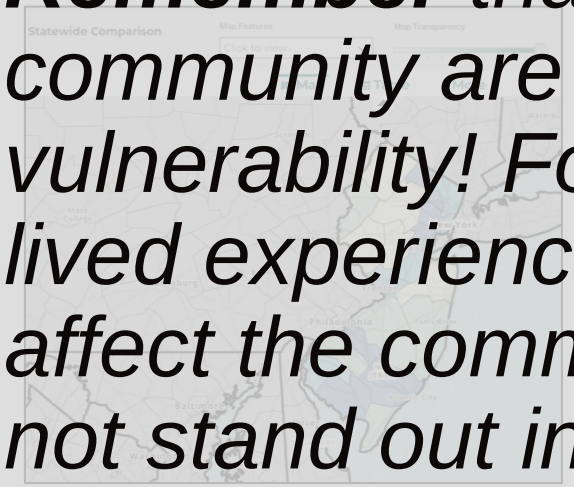
- Provides data visualization and mapping tools to help decision-makers understand climate impacts.
- Tools include NJ Public Health Adapt (climate impacts on health), NJ FloodMapper, and Climate Snapshots (show potential hazards and exposure)

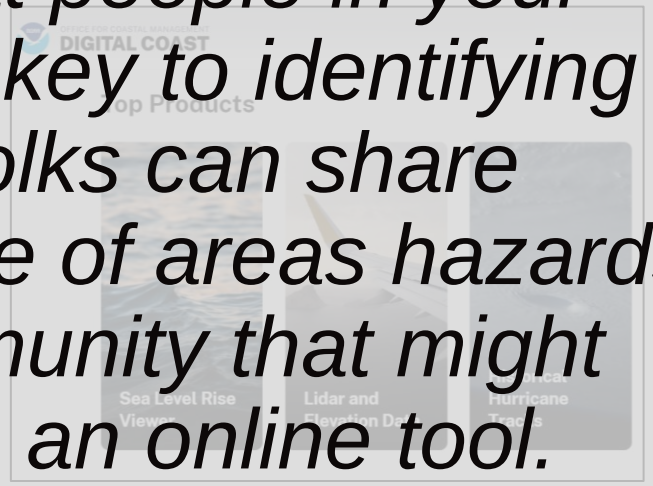
Local Institutions' Role in Resilience

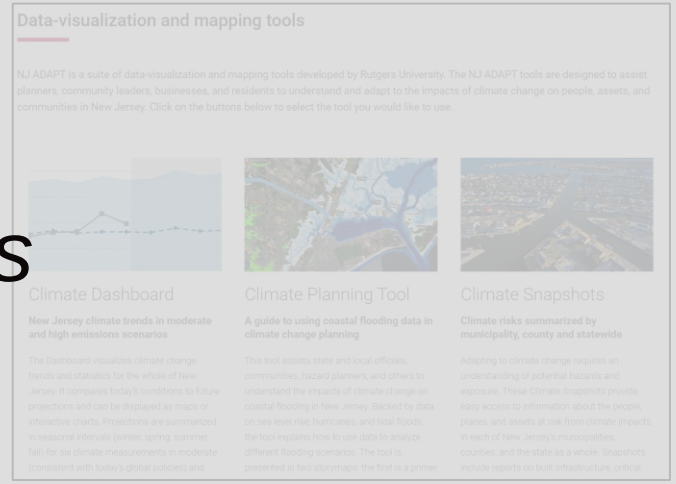
Understand Your Vulnerability

Remember *that people in your community are key to identifying vulnerability! Folks can share lived experience of areas hazards affect the community that might not stand out in an online tool.*









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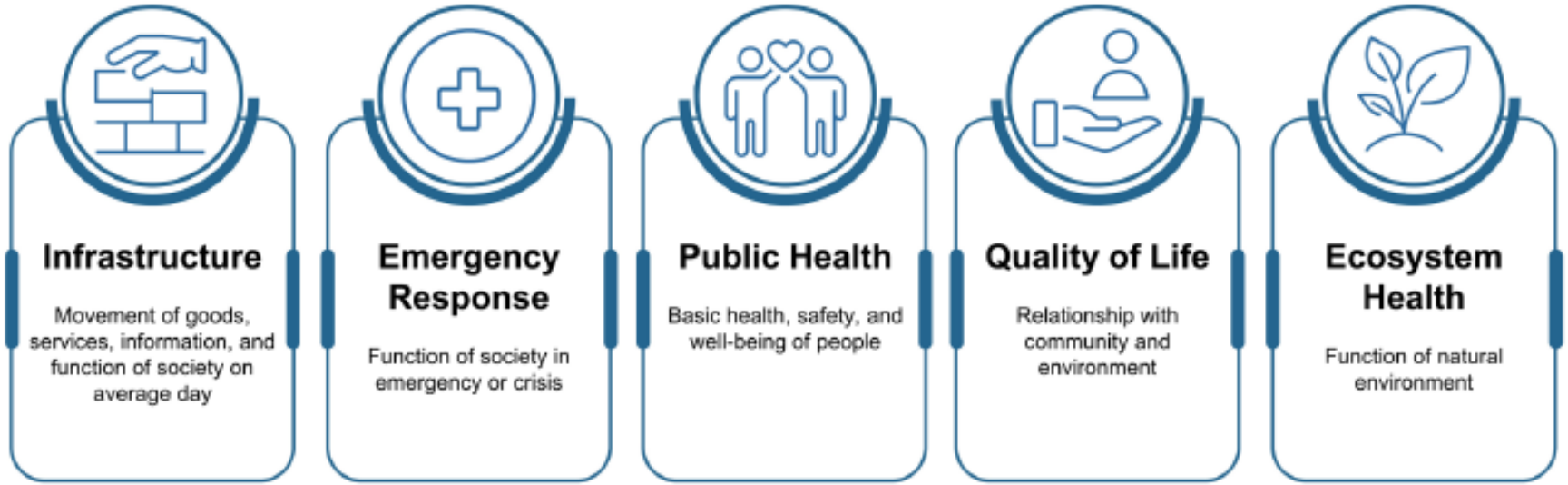
Local Institutions' Role in Resilience

Understand Your Vulnerability

In addition to assets identified by community members, leaders can consider assets that fall into multiple **buckets** that would be important to include in a vulnerability assessment process.



Environmental Commissions *can work with local government officials to highlight assets that may be overlooked.*

Information Source: [Resilient NJ: Local Planning for Climate Change Toolkit]

Local Institutions' Role in Resilience

Understand Your Vulnerability

Consider **local** and **regional collaboration** efforts and existing plans that can inform your work, such as Resilient New Jersey projects.

Building a **Vulnerability Matrix** that accounts for the three pieces of vulnerability can identify **community assets** that are **highly vulnerable**. Communities can prioritize planning for and protecting highly vulnerable assets.

Asset Name	Asset Category	Increased Temp	Sea level rise	Adaptive Capacity (high, medium, low)	Vulnerability (high, medium, low)
Lighthouse	Cultural Asset	1	1		5
Interstate XYZ	Critical Infrastructure	2	2		13
XYZ Wetlands	Natural Resource	3	4		16
XYZ Recreation Center	Cultural Asset	1	5		14
Blueberry production	Economic asset	5	3		17

Check out the RNJ Vulnerability Assessment Matrix Template to build your own matrix.

Information Source: Resilient NJ: Local Planning for Climate Change Toolkit

Local Institutions' Role in Resilience

Understand Your Vulnerability

Consider **local** and **regional collaboration** efforts and existing plans that can inform your work, such as Resilient New Jersey projects.

Building a **Vulnerability Matrix** that accounts for the three pieces of vulnerability can identify **community assets** that are **highly vulnerable**. Communities can use this information to plan for highly vulnerable assets.

Brainstorming prompt: *What assets would be important to represent in the vulnerability matrix for your community?*

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Local Institutions' Role in Resilience

Develop a Strategy

There is no "one size fits all" strategy to build resilience.

First, communities should consider a "**no-action**" scenario. What will happen in your community if resilience planning tools are not implemented?

Next, consider what actions could build resilience and adaptation. **Review existing plans** to determine what actions have been studied and **engage the community** to determine what resilience actions might be most suitable for the community.

Information Source: Resilient NJ: Local Planning for Climate Change Toolkit

Image Sources: RNJ NENJ and RNJ RRBC

Local Institutions' Role in Resilience

Develop a Strategy

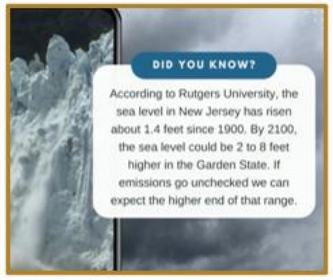
Many types of solutions can improve resilience. Resilience strategies should reflect the community's vision and preferences.

Physical and nature-based solutions

Example: Conversion of vacant and abandoned lots

Recommended changes to policies and governance

Example: Incentives for green infrastructure



Outreach, education, and capacity building

Example: Flood management 101 campaign

Service and program development

Example: Resilience hubs

Emergency response and preparedness

Example: Improved flood warning systems

*As local leaders, Environmental Commissions can work to improve government transparency by **spreading information** about ongoing resilience efforts and ways for the **community to participate** in the planning process. They can **advocate** for the community's preferred solutions.*

Image Source: RNJ NENJ

Local Institutions' Role in Resilience

Implementation

Once local leaders and the community have found preferred resilience solutions, the project can be implemented.

Who might be involved in the implementation process?

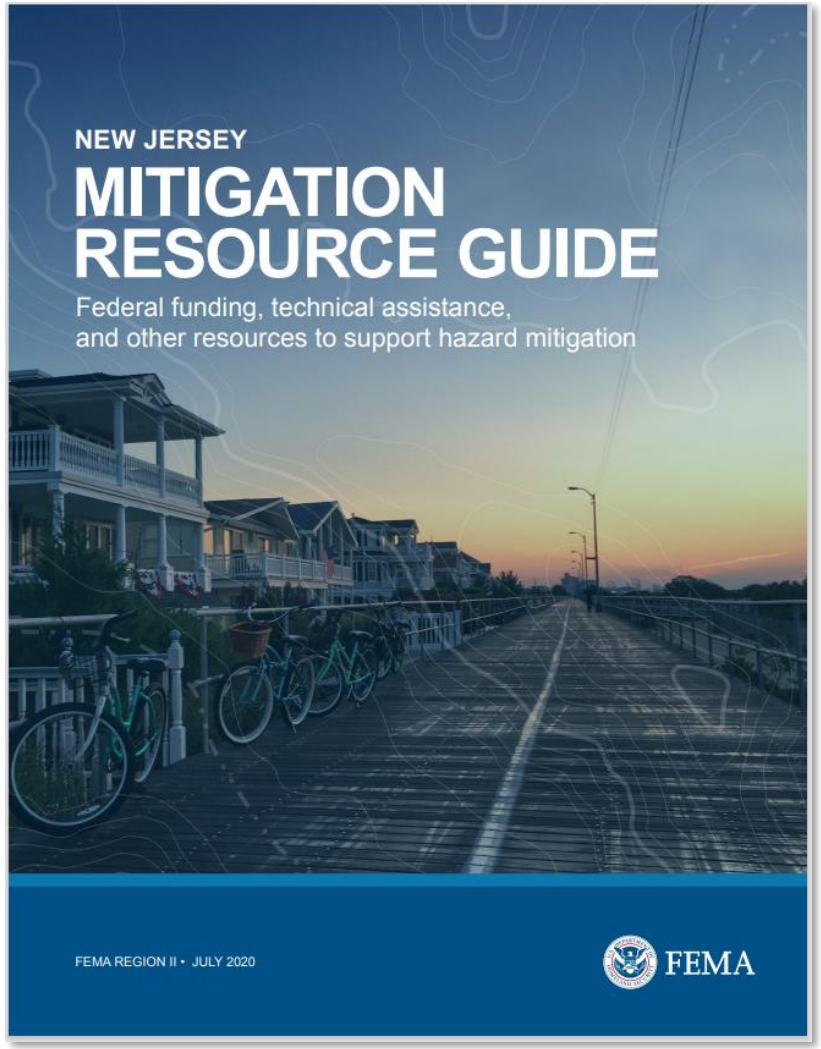
- Local government officials, such as planners and representatives, who **spearhead** the process and gain funding for projects
- Engineers and construction workers, who **design** and **install** infrastructure projects
- Community leaders, who help **communicate** project information with the community
- Community members, who continue to give **feedback** about the project

Environmental Commissions *participate in the implementation process by sharing funding sources with local government leaders, advocating for a preferred solution, and sharing implementation information with the community.*

Local Institutions' Role in Resilience

Implementation

Local leaders can drive resilience by **identifying funding sources** for resilience projects and **implementing priority actions**. Federal, state, and local funding sources can enable project implementation.



Information Source: Resilient NJ: Local Planning for Climate Change Toolkit

Image Source: FEMA NJ Mitigation Resource Guide

Local Institutions' Role in Resilience

Implementation

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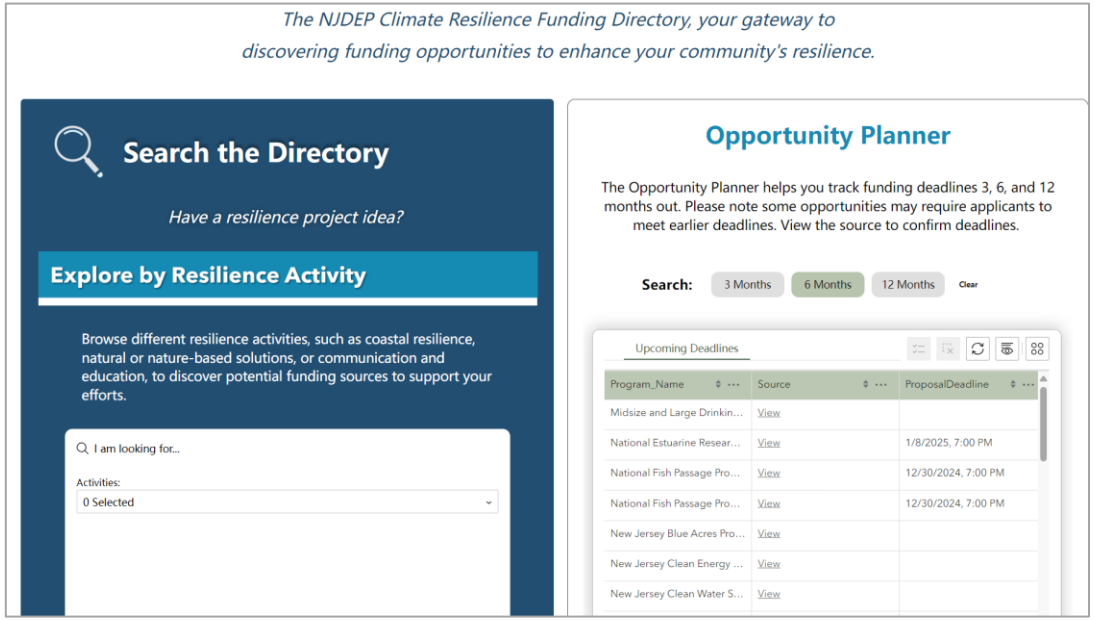
NJDEP's new Climate Resilience Funding Directory connects communities with funding opportunities to facilitate project planning and implementation.



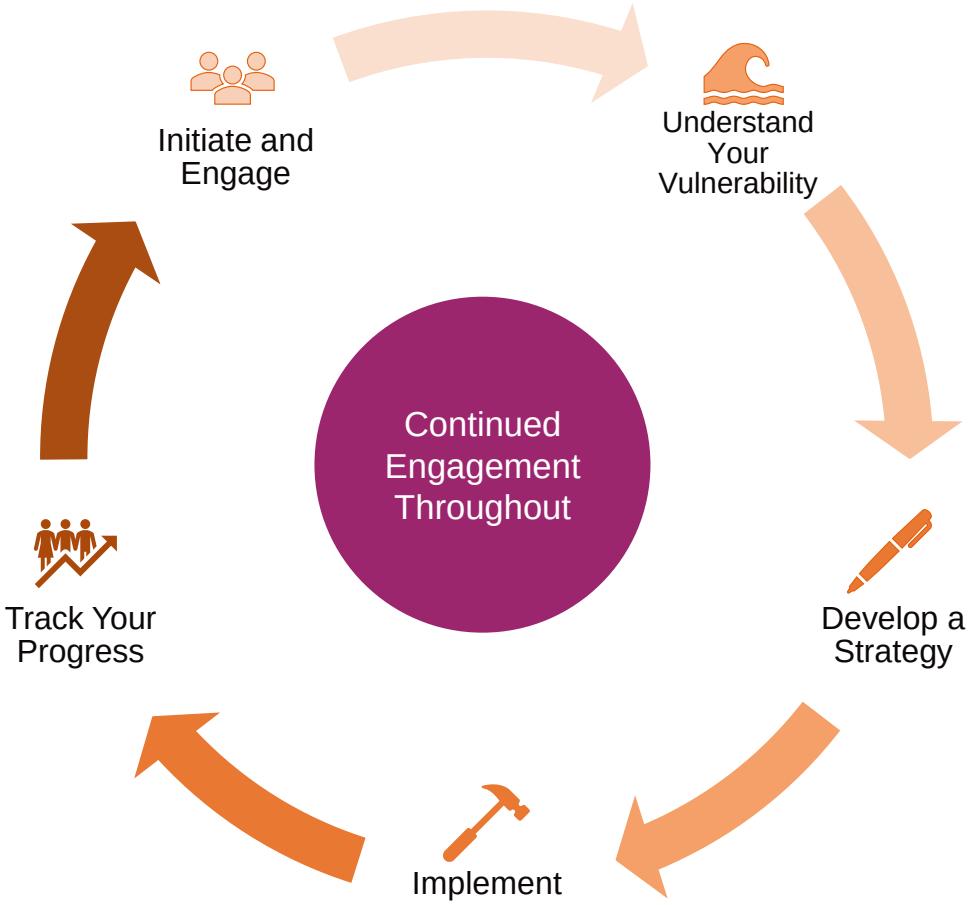
Information Source: Resilient NJ: Local Planning for Climate Change Toolkit

Local Institutions' Role in Resilience

Track Your Progress

Remember to **revisit** your plans and projects over time. These plans are living documents and can be revised based on emerging hazards and community preferences.

Resilience efforts can be revised or restarted as needed.



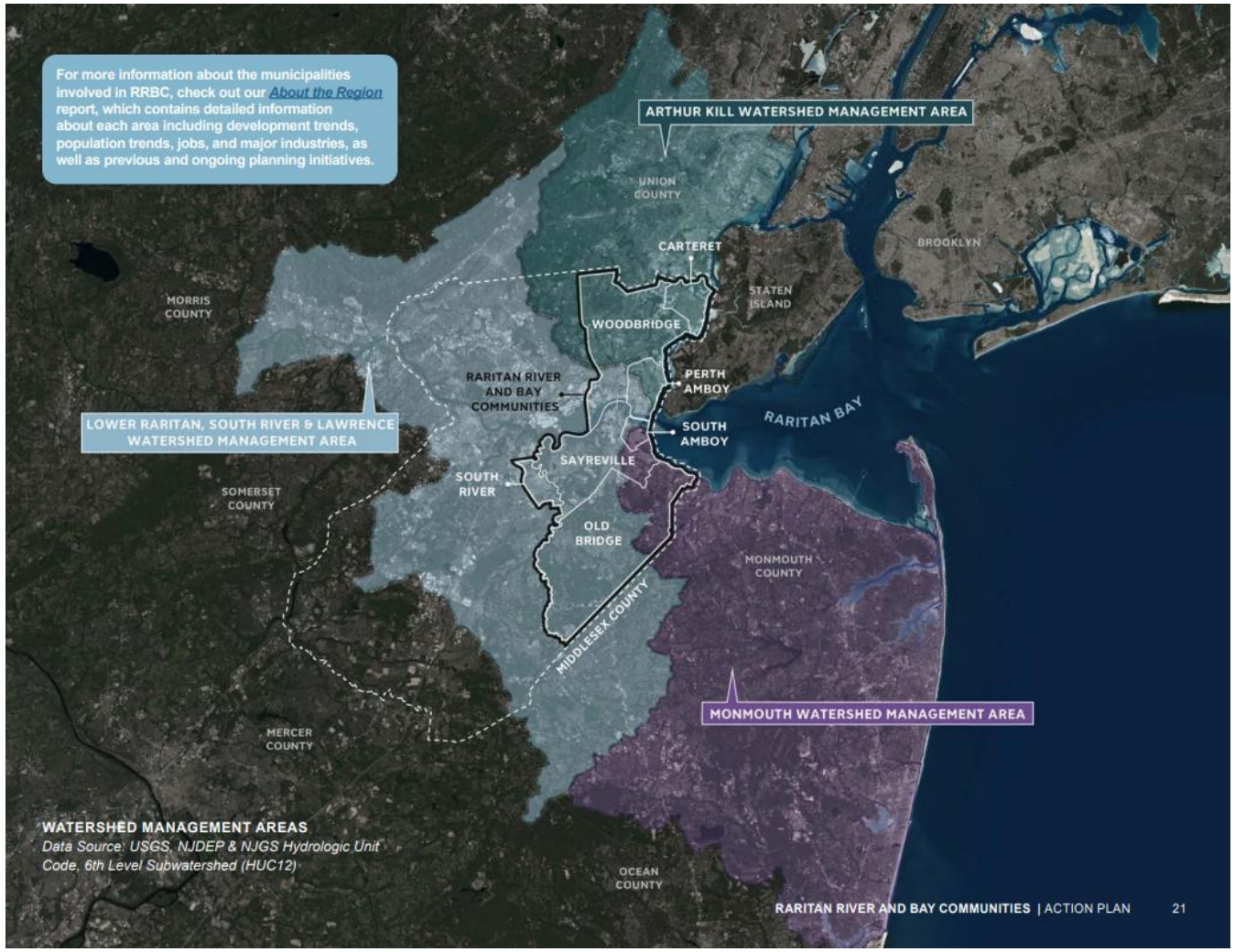
Information Source: [Resilient NJ: Local Planning for Climate Change Toolkit]

Case Study: Resilient NJ RRBC Action Plan

Initiate and Engage:

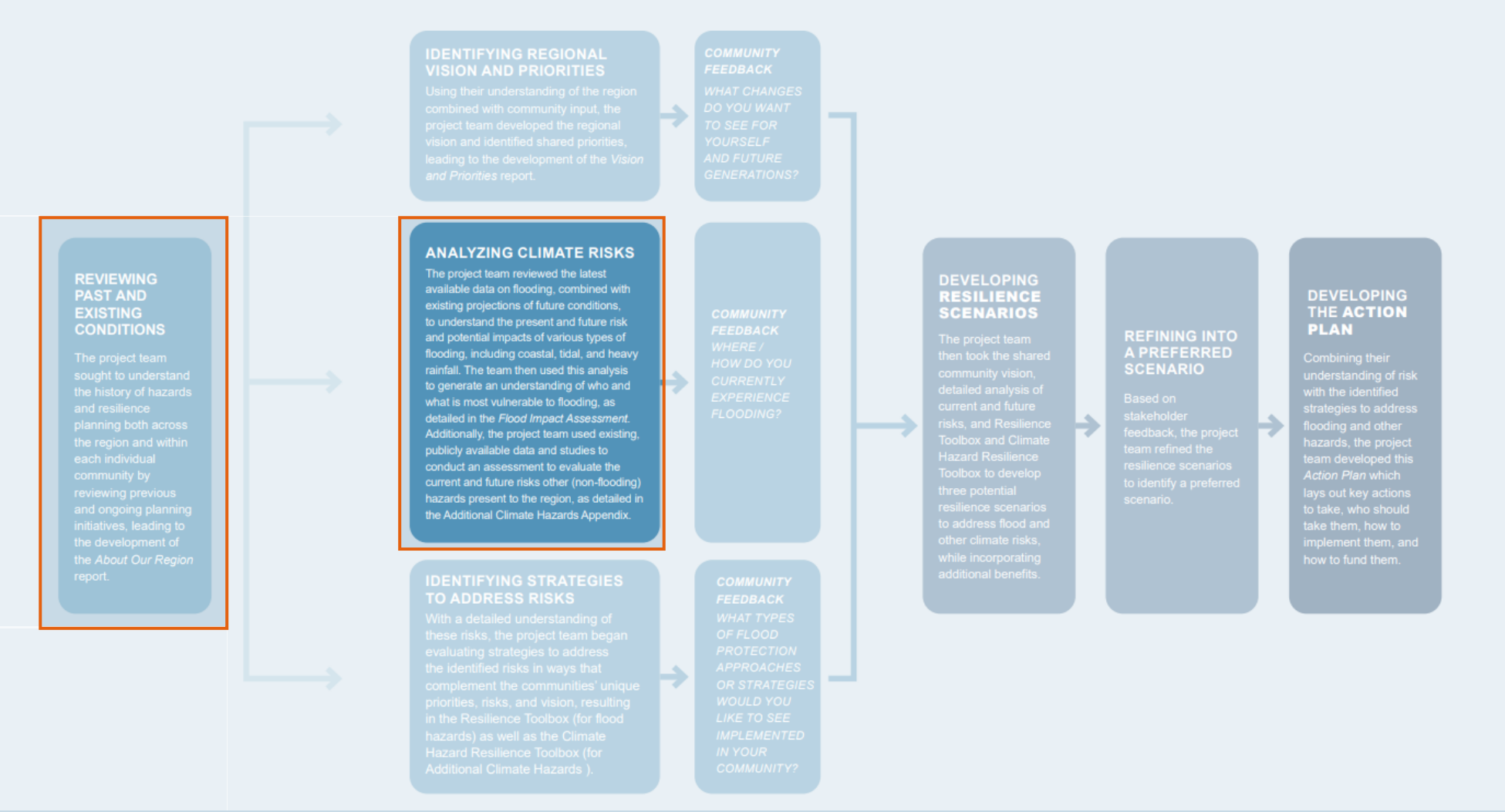
The Resilient New Jersey Raritan River and Bay Communities (RRBC) planning process involved seven Middlesex County municipalities affected by Hurricane Sandy and aimed to plan a **resilient future** for the region.

Before starting the planning process, the project team identified a **Steering Committee** that included representatives from each municipality, the County, and a non-profit partner to give feedback on the project and materials.



Source: Resilient NJ RRBC Action Plan

Case Study: Resilient NJ RRBC Action Plan



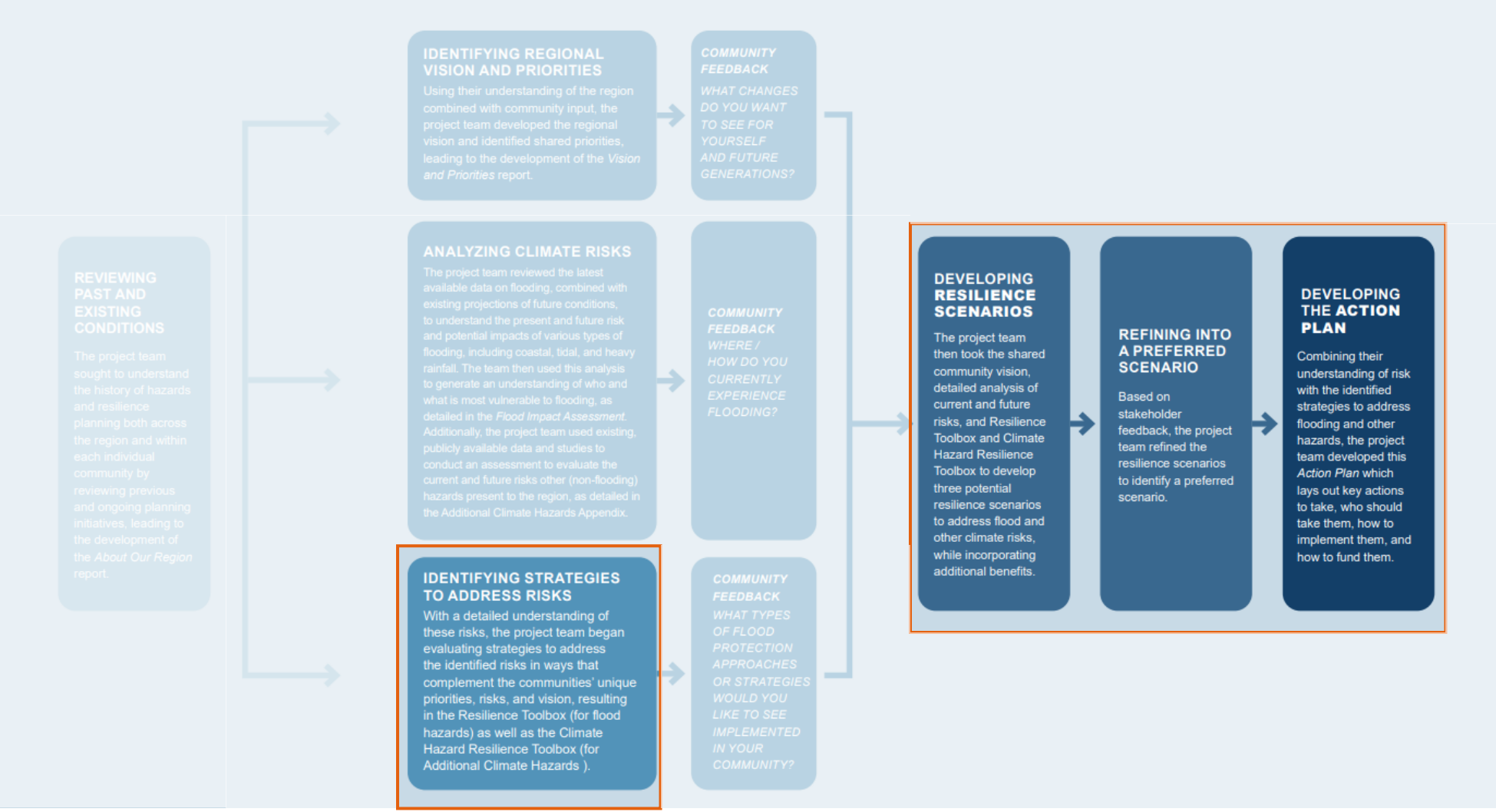
Understand Your Vulnerability:

The RNJ RRBC planning process started by assessing the **history** of **hazards** and **resilience** planning across the region.

- Past and ongoing flood risk
- Tropical Storm Ida & Hurricane Sandy impacts
- Information about the region's experiences with flooding (*stakeholder engagement*)

Source: Resilient NJ RRBC Action Plan

Case Study: Resilient NJ RRBC Action Plan



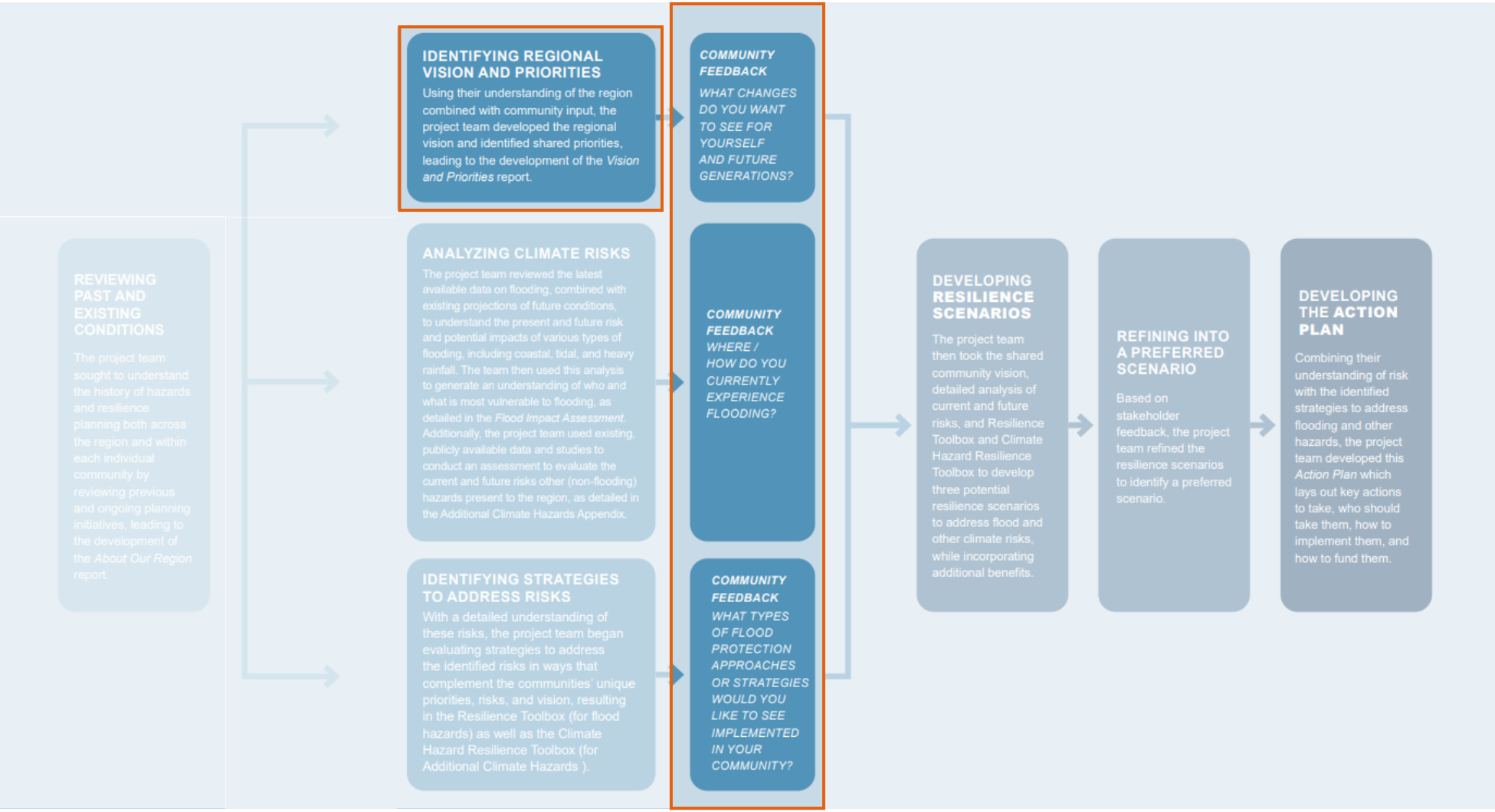
Develop a Strategy:

Next, the planning team built a resilience strategy based on the **community's priorities**, assessed climate risks, and identified ways to address those risks.

- Identify communities and locations that will be especially susceptible to climate hazards
- Develop adaptation strategies that will make the region more resilient

Source: Resilient NJ RRBC Action Plan

Case Study: Resilient NJ RRBC Action Plan



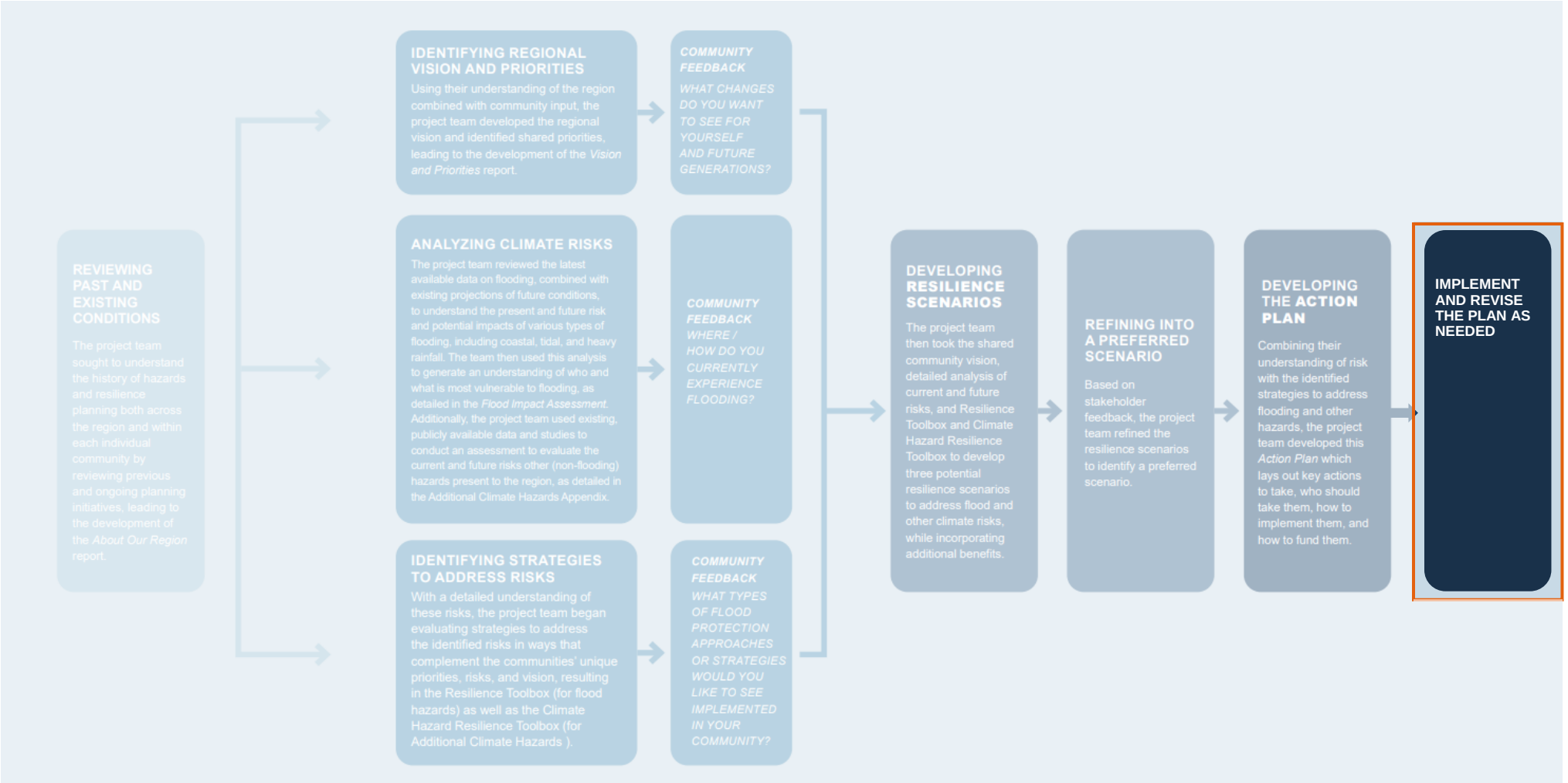
Engagement:

The planning process integrated community engagement and opportunities for feedback throughout.

- The Steering Committee provided feedback as a key group of stakeholders
- Community feedback was integrated into different portions of the project, including identifying regional priorities and providing information on hazards in the community.

Source: Resilient NJ RRBC Action Plan

Case Study: Resilient NJ RRBC Action Plan



Track Your Progress:

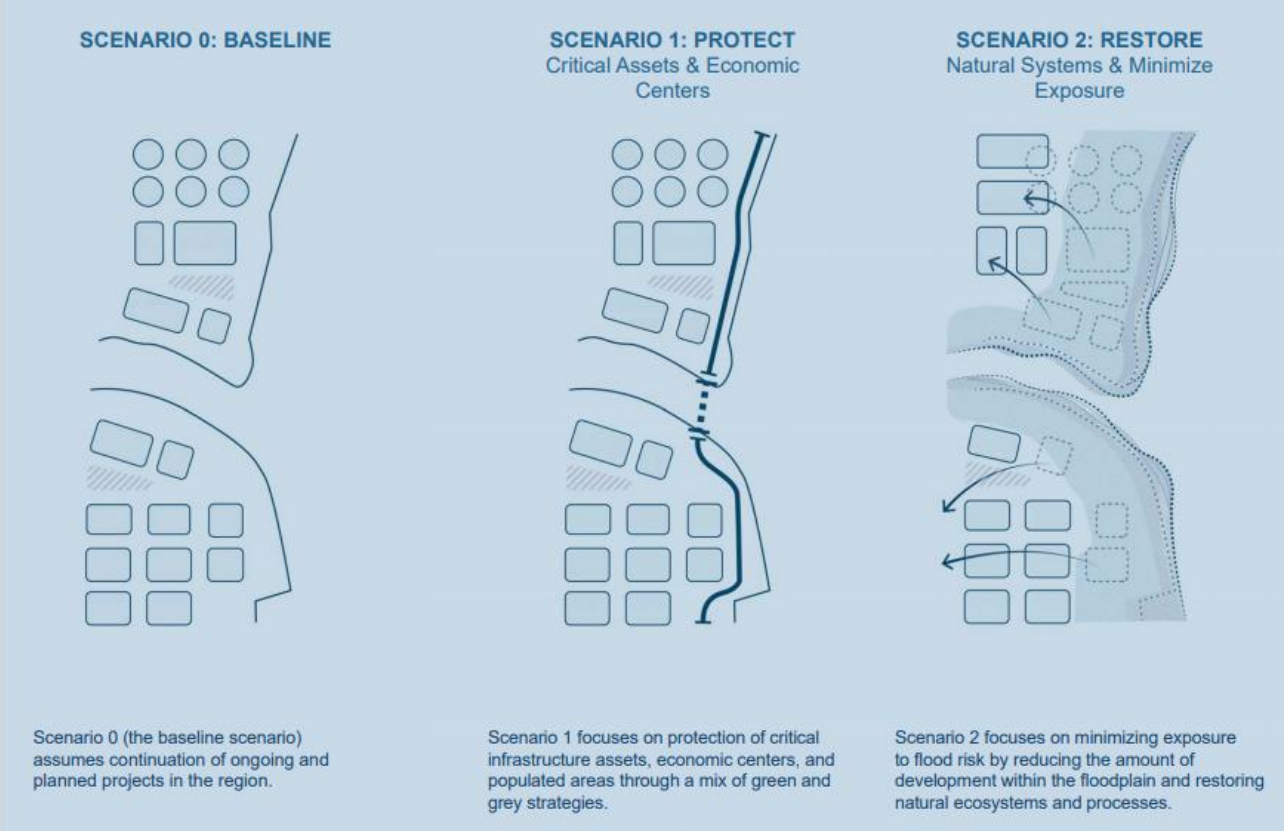
The planning team **assessed resilience scenarios** and worked with the community to find a preferred scenario.

- Community feedback is integral to building a shared vision for a resilient future
- Documenting the planning process helps make this a living plan that can be revisited and changed in the coming years
- Next steps for the project include the implementation of preferred alternatives.

Source: Resilient NJ RRBC Action Plan

Local leaders can improve resilience through infrastructure projects.

- Integrating **resilient infrastructure** into the community can protect and improve **key assets**.
  - Gray and green infrastructure solutions provide **protection** and **amenities** to communities.



Environmental Commissions *can advocate for solutions that align with EC goals by promoting green infrastructure, protecting wetlands and water resources, and preserving wildlife habitat.*

Source: [Resilient NJ RRBC Action Plan]

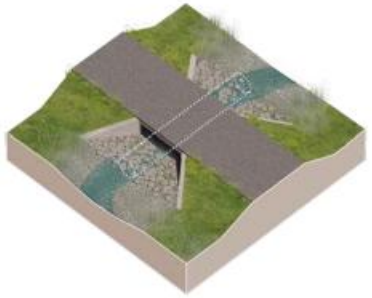
Local leaders can improve resilience through infrastructure projects.

- Gray infrastructure projects might include:
  - Shoreline barriers to protect low-lying areas
  - Increase stormwater systems' capacity
  - Building- and site-scale adaptation of critical infrastructure

Flood Barriers

Shoreline barriers, like berms and levees, protect low-lying areas from coastal and tidal flooding.

Stormwater Management



Increasing capacity of stormwater systems helps manage heavy rainfall.

Floodproof / Harden

Building- and site-scale adaptation of critical infrastructure can include floodproofing, hardening or perimeter protection strategies.

WATERFRONT BULKHEAD REPAIR
Perth Amboy, NJ

WOODBRIDGE CENTER DR INTERSECTION IMPROVEMENTS
Woodbridge, NJ

SAYREVILLE PUMP STATION
Sayreville, NJ

Source: Resilient NJ RRBC Action Plan

Local leaders can improve resilience through infrastructure projects.

- Green infrastructure projects might include:
  - Restoring riparian zones for stormwater management
  - Restoring tidal wetlands
  - Relocate vulnerable uses to minimize exposure

Wetland Restoration

Restoration of tidal wetlands and riparian zones help buffer coastal flooding and provide space for marsh migration and coastal habitats.

Stream Restoration / Riparian Zone Expansion

Restoration and expansion of riparian zones, such as stream daylighting or construction of wet ponds, can help increase flood storage capacity on publicly owned open spaces and parks.

Relocation

Relocation of vulnerable land uses out of flood-prone areas can redirect growth to reduce flood exposure and preserve open space.

CHEVRON WETLAND RESTORATION
Perth Amboy, NJ

NOE'S CREEK PARK RETENTION POND
Carteret, NJ

WATSON CRAMPTON BUYOUT AND RESTORATION PROJECT
Woodbridge, NJ

Source: Resilient NJ RRBC Action Plan

What can environmental commissions do to advance resilient infrastructure projects?

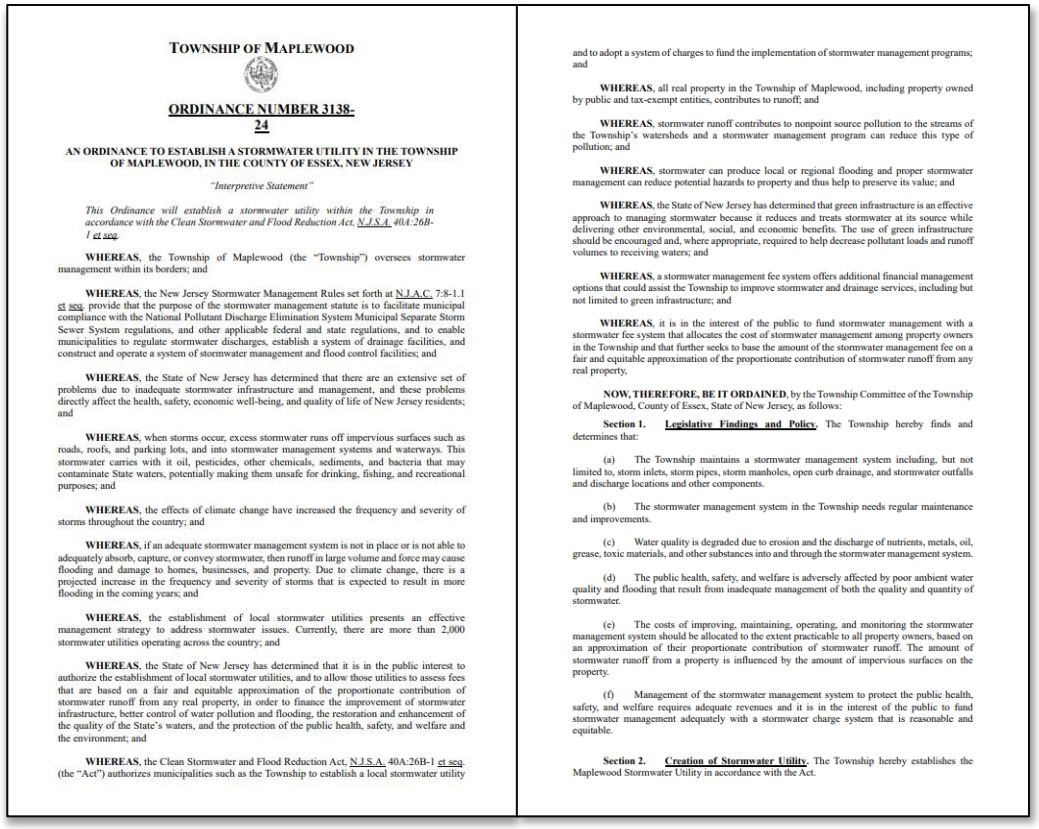
1. Environmental commissions can **encourage** local communities to work on resilience projects by advocating for resilience plan development and project implementation.
2. Environmental commissions can **inform** their communities about vulnerability and hazards that may affect the community in the future.
3. Environmental commissions can **share** details about projects in the community and **describe** ways that community members can get involved.
4. Environmental commissions can **propose** adaptation actions that can improve resilience to local planners and other government officials.

***Share in the chat**: What are other ways that ECs could advance resilient infrastructure projects?*

Local Institution Spotlight: Maplewood Stormwater Utility

Maplewood passed its **Stormwater Utility Ordinance** in December 2024. The Stormwater Utility will collect fees and use the funds for green infrastructure, pollution control, public outreach, and more. Fees collected by the Utility will help Maplewood **implement resilience** projects across the municipality.

A member of the Environmental Advisory Committee played a key role in moving the ordinance forward!



TOWNSHIP OF MAPLEWOOD

ORDINANCE NUMBER 3138-24

AN ORDINANCE TO ESTABLISH A STORMWATER UTILITY IN THE TOWNSHIP OF MAPLEWOOD, IN THE COUNTY OF ESSEX, NEW JERSEY

"Interpretive Statement"

This Ordinance will establish a stormwater utility within the Township in accordance with the Clean Stormwater and Flood Reduction Act, N.J.S.A. 40A:26B-1 et seq.

WHEREAS, the Township of Maplewood (the "Township") oversees stormwater management within its borders; and

WHEREAS, the New Jersey Stormwater Management Rules set forth at N.J.A.C. 7:8-1.1 et seq. provide that the purpose of the stormwater management statute is to facilitate municipal compliance with the National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System regulations, and other applicable federal and state regulations, and to enable municipalities to regulate stormwater discharges, establish a system of drainage facilities, and construct and operate a system of stormwater management and flood control facilities; and

WHEREAS, the State of New Jersey has determined that there are an extensive set of problems due to inadequate stormwater infrastructure and management, and these problems directly affect the health, safety, economic well-being, and quality of life of New Jersey residents; and

WHEREAS, when storms occur, excess stormwater runs off impervious surfaces such as roads, roofs, and parking lots, and into stormwater management systems and waterways. This stormwater carries with it oil, pesticides, other chemicals, sediments, and bacteria that may contaminate State waters, potentially making them unsafe for drinking, fishing, and recreational purposes; and

WHEREAS, the effects of climate change have increased the frequency and severity of storms throughout the country; and

WHEREAS, if an adequate stormwater management system is not in place or is not able to adequately absorb, capture, or convey stormwater, then runoff in large volume and force may cause flooding and damage to homes, businesses, and property. Due to climate change, there is a projected increase in the frequency and severity of storms that is expected to result in more flooding in the coming years; and

WHEREAS, the establishment of local stormwater utilities presents an effective management strategy to address stormwater issues. Currently, there are more than 2,000 stormwater utilities operating across the country; and

WHEREAS, the State of New Jersey has determined that it is in the public interest to authorize the establishment of local stormwater utilities, and to allow those utilities to assess fees that are based on a fair and equitable approximation of the proportionate contribution of stormwater runoff from any real property, in order to finance the improvement of stormwater infrastructure, better control of water pollution and flooding, the restoration and enhancement of the quality of the State's waters, and the protection of the public health, safety, and welfare and the environment; and

WHEREAS, the Clean Stormwater and Flood Reduction Act, N.J.S.A. 40A:26B-1 et seq. (the "Act") authorizes municipalities such as the Township to establish a local stormwater utility and to adopt a system of charges to fund the implementation of stormwater management programs; and

WHEREAS, all real property in the Township of Maplewood, including property owned by public and tax-exempt entities, contributes to runoff; and

WHEREAS, stormwater runoff contributes to nonpoint source pollution to the streams of the Township's watersheds and a stormwater management program can reduce this type of pollution; and

WHEREAS, stormwater can produce local or regional flooding and proper stormwater management can reduce potential hazards to property and thus help to preserve its value; and

WHEREAS, the State of New Jersey has determined that green infrastructure is an effective approach to managing stormwater because it reduces and treats stormwater at its source while delivering other environmental, social, and economic benefits. The use of green infrastructure should be encouraged and, where appropriate, required to help decrease pollutant loads and runoff volumes to receiving waters; and

WHEREAS, a stormwater management fee system offers additional financial management options that could assist the Township to improve stormwater and drainage services, including but not limited to green infrastructure; and

WHEREAS, it is in the interest of the public to fund stormwater management with a stormwater fee system that allocates the cost of stormwater management among property owners in the Township and that further seeks to base the amount of the stormwater management fee on a fair and equitable approximation of the proportionate contribution of stormwater runoff from any real property,

NOW, THEREFORE, BE IT ORDAINED, by the Township Committee of the Township of Maplewood, County of Essex, State of New Jersey, as follows:

Section 1. Legislative Findings and Policy. The Township hereby finds and determines that:

(a) The Township maintains a stormwater management system including, but not limited to, storm inlets, storm pipes, storm manholes, open curb drainage, and stormwater outfalls and discharge locations and other components.

(b) The stormwater management system in the Township needs regular maintenance and improvements.

(c) Water quality is degraded due to erosion and the discharge of nutrients, metals, oil, grease, toxic materials, and other substances into and through the stormwater management system.

(d) The public health, safety, and welfare is adversely affected by poor ambient water quality and flooding that result from inadequate management of both the quality and quantity of stormwater.

(e) The costs of improving, maintaining, operating, and monitoring the stormwater management system should be allocated to the extent practicable to all property owners, based on an approximation of their proportionate contribution of stormwater runoff. The amount of stormwater runoff from a property is influenced by the amount of impervious surfaces on the property.

(f) Management of the stormwater management system to protect the public health, safety, and welfare requires adequate revenues and it is in the interest of the public to fund stormwater management adequately with a stormwater charge system that is reasonable and equitable.

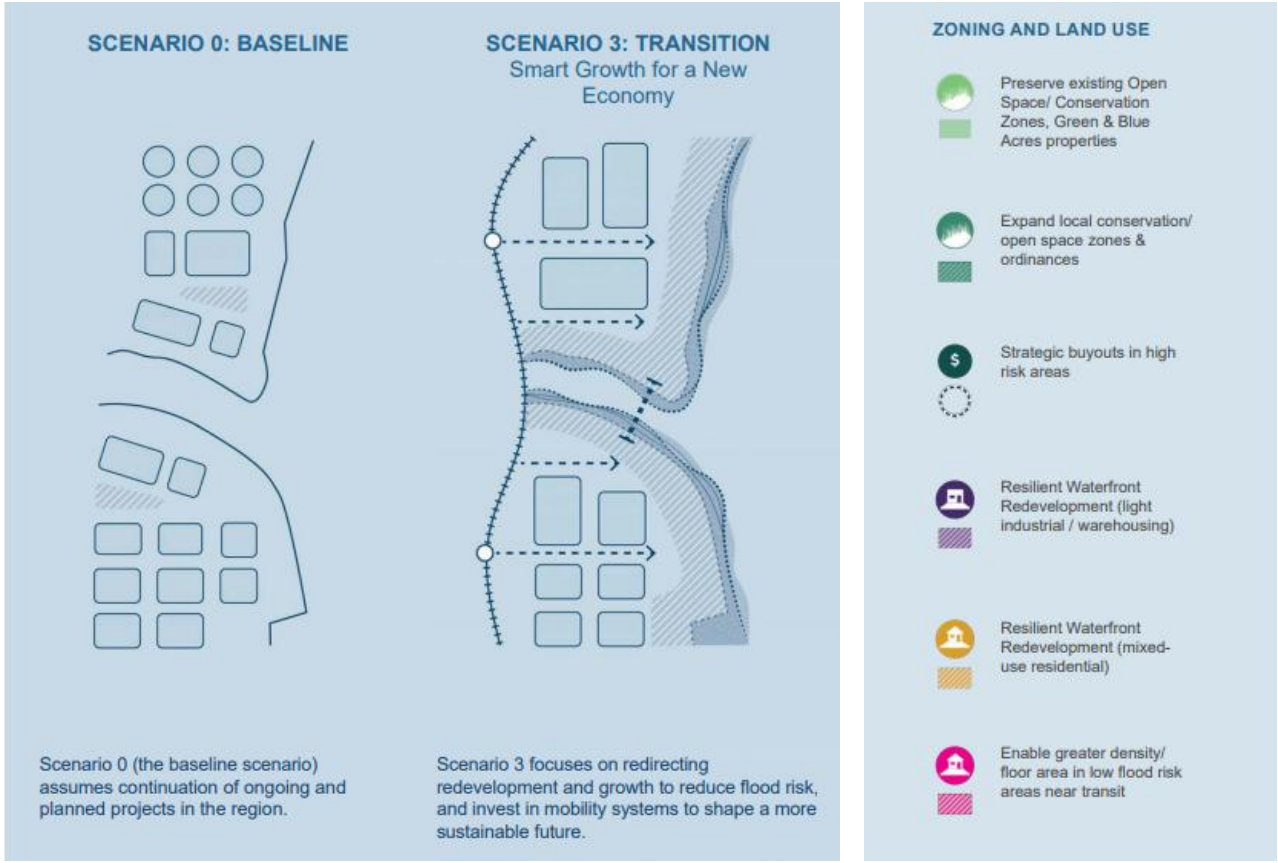
Section 2. Creation of Stormwater Utility. The Township hereby establishes the Maplewood Stormwater Utility in accordance with the Act.

Image source: Maplewood, NJ

***Share in the chat**: What other ways could ECs advance resilient infrastructure projects?*

Local leaders can improve resilience through governance.

- **Policy changes** can also improve resilience.
- **Zoning** changes, local **ordinances**, targeted **economic development**, and **redevelopment** efforts can help communities develop more resilient economies and communities.



Source: [Resilient NJ RRBC Action Plan]

Local leaders can improve resilience through governance.

- **Policy changes** might include:
  - Transitioning industrial uses away from oil and gas and toward new resilient economic drivers
  - Strengthening and enabling growth in areas outside of the floodplain
  - Enhancing resilience of mobility systems
  - Incorporating higher standards into stormwater management and floodplain ordinances

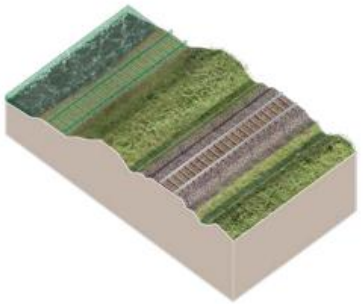
Resilient Redevelopment

Redevelopment of vulnerable waterfront legacy industrial areas into light industry or mixed-use residential should incorporate resilience standards.

Strengthen Low Risk Centers

Enabling growth and additional density in well-connected areas outside of the floodplain can also support transit-oriented development.

Resilient Transportation Infrastructure



Mobility systems should be designed to be resilient to future flooding, taking into account sea level rise and future precipitation.

PROPOSED FERRY TERMINAL
South Amboy, NJ

AVENUE & GREEN TRANSIT-ORIENTED DEVELOPMENT
Woodbridge, NJ

NJ TRANSIT RARITAN BRIDGE REPLACEMENT
Middlesex County, NJ

S

Source: [Resilient NJ RRBC Action Plan]

What can environmental commissions do to advance resilient policy development?

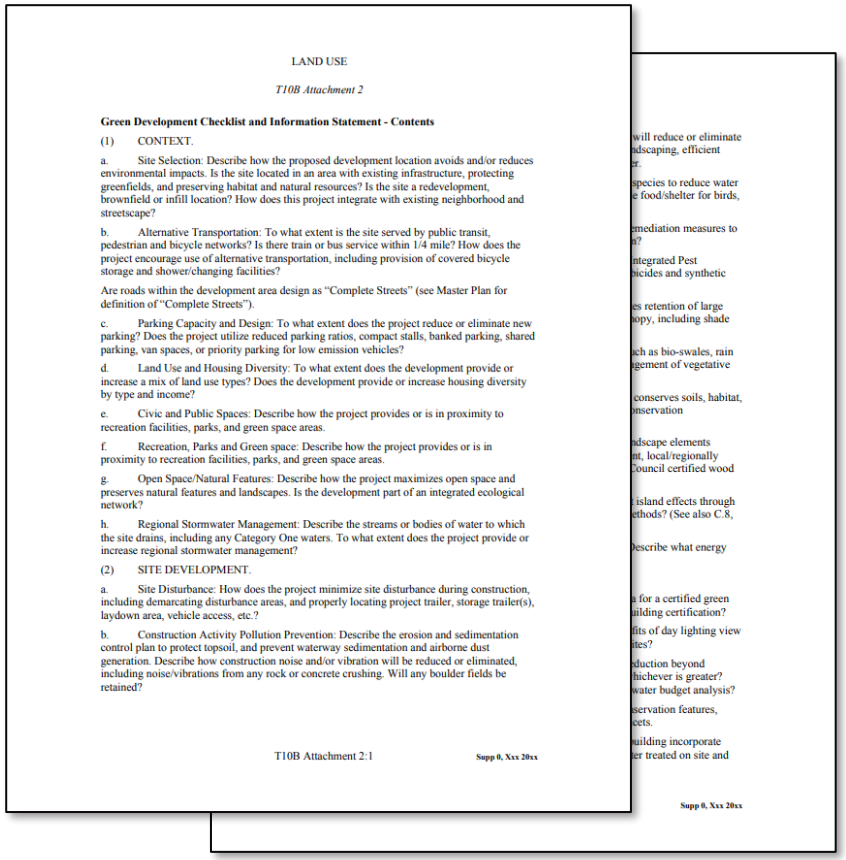
1. Environmental commissions can **advise** local governments on potential policies and policy enhancements that can improve resilience.
2. Environmental commissions can **assess** the existing policy landscape in the community to determine where gaps may exist.
3. Environmental commissions can **research** policies that have been successfully implemented in other communities to better understand the implementation process and outcomes.
4. Environmental commissions **participate** in the site plan review process and ensure alignment with policies focused on resilience.

***Share in the chat**: What are other methods ECs could use to promote resilience policy?*

Local Institution Spotlight: Princeton's Green Building Checklist

Princeton recently passed a resilience-focused ordinance, the **Green Building Checklist**, that every applicant proposing major developments to the Planning Board must complete. The Checklist requires applicants to consider open space and natural features, regional stormwater management, and pollution prevention, among other **resilience requirements**. This Checklist is a great example of a policy that influences **building-scale** resilience features across a community, which combine to make a large impact.

Princeton's Environmental Commission was instrumental in passing the Checklist!



LAND USE

T10B Attachment 2

Green Development Checklist and Information Statement - Contents

(1) CONTEXT.

a. Site Selection: Describe how the proposed development location avoids and/or reduces environmental impacts. Is the site located in an area with existing infrastructure, protecting greenfields, and preserving habitat and natural resources? Is the site a redevelopment, brownfield or infill location? How does this project integrate with existing neighborhood and streetscape?

b. Alternative Transportation: To what extent is the site served by public transit, pedestrian and bicycle networks? Is there train or bus service within 1/4 mile? How does the project encourage use of alternative transportation, including provision of covered bicycle storage and shower/changing facilities?

Are roads within the development area design as "Complete Streets" (see Master Plan for definition of "Complete Streets").

c. Parking Capacity and Design: To what extent does the project reduce or eliminate new parking? Does the project utilize reduced parking ratios, compact stalls, banked parking, shared parking, van spaces, or priority parking for low emission vehicles?

d. Land Use and Housing Diversity: To what extent does the development provide or increase a mix of land use types? Does the development provide or increase housing diversity by type and income?

e. Civic and Public Spaces: Describe how the project provides or is in proximity to recreation facilities, parks, and green space areas.

f. Recreation, Parks and Green space: Describe how the project provides or is in proximity to recreation facilities, parks, and green space areas.

g. Open Space/Natural Features: Describe how the project maximizes open space and preserves natural features and landscapes. Is the development part of an integrated ecological network?

h. Regional Stormwater Management: Describe the streams or bodies of water to which the site drains, including any Category One waters. To what extent does the project provide or increase regional stormwater management?

(2) SITE DEVELOPMENT.

a. Site Disturbance: How does the project minimize site disturbance during construction, including demarcating disturbance areas, and properly locating project trailer, storage trailer(s), laydown area, vehicle access, etc.?

b. Construction Activity Pollution Prevention: Describe the erosion and sedimentation control plan to protect topsoil, and prevent waterway sedimentation and airborne dust generation. Describe how construction noise and/or vibration will be reduced or eliminated, including noise/vibrations from any rock or concrete crushing. Will any boulder fields be retained?

T10B Attachment 2:1 Supp 0, Xxx 20xx

Image source: Princeton Code

***Share in the chat**: What are other methods ECs could use to promote resilience policy?*

Local Institution Spotlight: Princeton's Green Building Checklist

Princeton hopes to eventually have the checklist available as a **fillable form** so that data collection will be easier and more accurate.

Princeton has published two documents to accompany the Checklist. One is a short document, and the other includes greater detail and clickable links that explain why each of the checklist items is important to consider and where a developer might find more information about the checklist item.

Office use	Question	Yes/ No	If yes, how? If no, why not?
	1. Does the development minimize disturbed areas by limiting clearing and grading to a carefully described and compact development envelope?		
	2. Does the development improve the relationship of the site to the surrounding neighborhood, streetscape, and civic/public spaces?		
	3. Does the development promote or accommodate the use of alternative transportation? (i.e., modes of transportation other than single car transportation)?		
	4. Does the development exceed the Princeton's municipal bike parking requirements?		
	5. Does the development exceed the state EV charging requirements?		

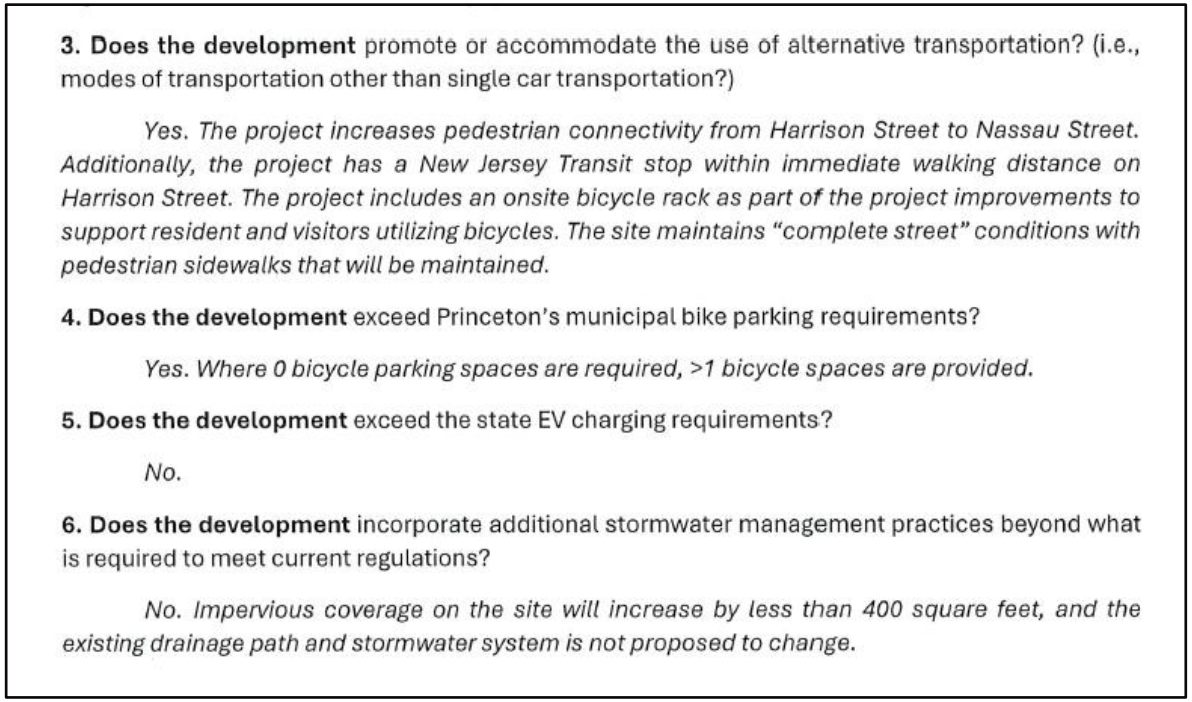
Image source: Princeton Environmental Commission

***Share in the chat**: What are other methods ECs could use to promote resilience policy?*

Local Institution Spotlight: Princeton's Green Building Checklist

Princeton aimed to "force" developers to answer **yes** or **no** on the checklist and to explain their answers, which addressed a major frustration from the previous checklist.

Time will tell if the new form will get developers to **explain** why they are not taking certain actions that would help the environment.



3. Does the development promote or accommodate the use of alternative transportation? (i.e., modes of transportation other than single car transportation?)

Yes. The project increases pedestrian connectivity from Harrison Street to Nassau Street. Additionally, the project has a New Jersey Transit stop within immediate walking distance on Harrison Street. The project includes an onsite bicycle rack as part of the project improvements to support resident and visitors utilizing bicycles. The site maintains "complete street" conditions with pedestrian sidewalks that will be maintained.

4. Does the development exceed Princeton's municipal bike parking requirements?

Yes. Where 0 bicycle parking spaces are required, >1 bicycle spaces are provided.

5. Does the development exceed the state EV charging requirements?

No.

6. Does the development incorporate additional stormwater management practices beyond what is required to meet current regulations?

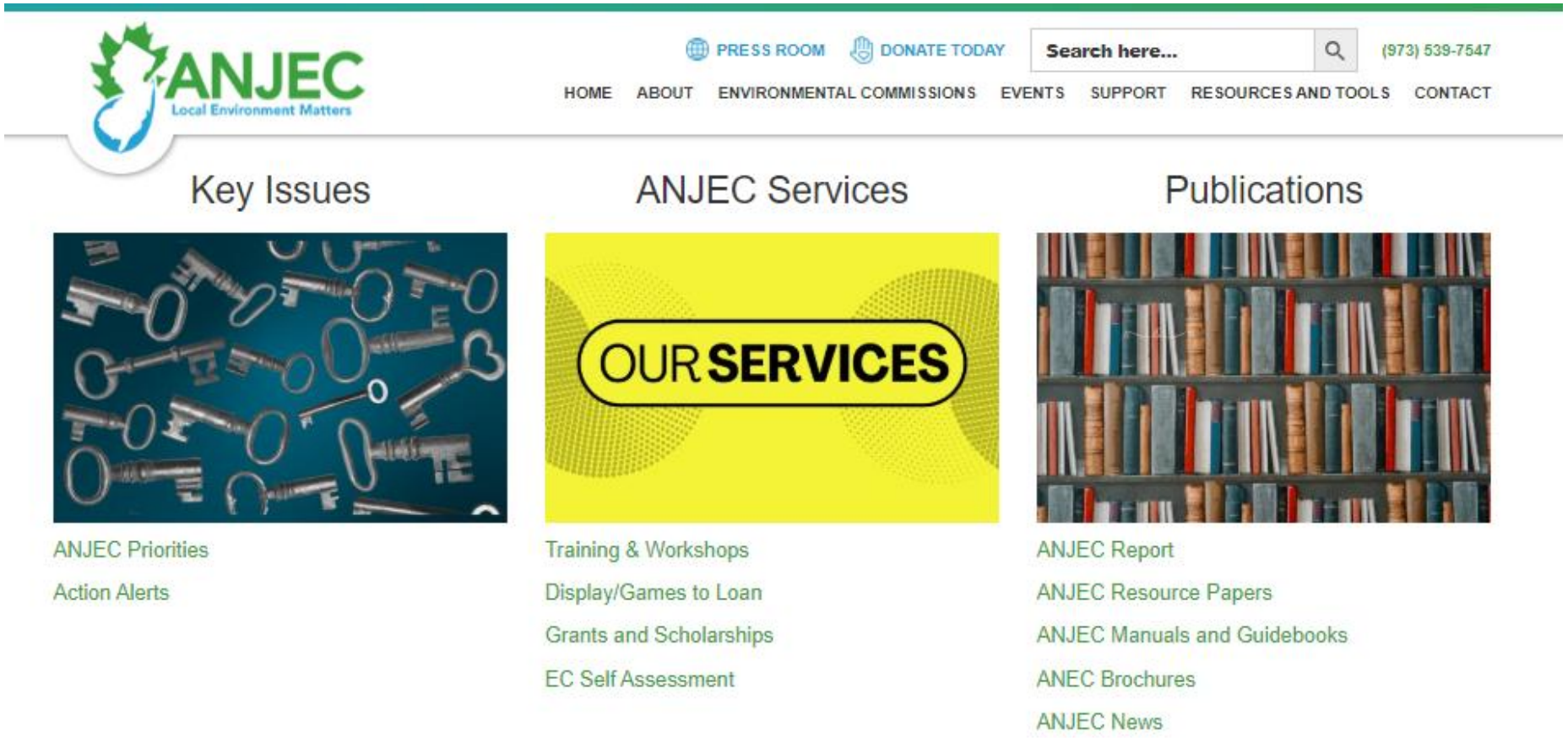
No. Impervious coverage on the site will increase by less than 400 square feet, and the existing drainage path and stormwater system is not proposed to change.

Image source: Princeton Environmental Commission

***Share in the chat**: What are other methods ECs could use to promote resilience policy?*

Resource Spotlight: ANJEC Resource Library

The ANJEC Resources and Tools page is a great source for environmental resources, including ANJEC services, land use initiatives, climate change impacts, and environmental justice fact sheets.



Conclusion

Local leaders must consider resilience to prepare communities for climate change and intensifying natural hazards.

Environmental Commissions play a critical role in promoting resilience in the community by:

- Highlighting the **importance** of resilience
- **Sharing resources** with local government leaders
- **Communicating** climate information with the community
- Advocating for **increased resilience** components in local projects

Thank you! Questions?