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RESILIENT NEW JERSEY

RARITAN RIVER & BAY COMMUNITIES

PROJECT OVERVIEW

What Is Resilient NJ?

The **Resilient New Jersey Raritan River and Bay Communities program** aims to develop a roadmap to address flooding in the municipalities of Carteret, Old Bridge, Perth Amboy, South Amboy, Sayreville, South River, and Woodbridge. This joint effort between the municipalities, the New Jersey Department of Environmental Protection (NJDEP), YMCA, and Middlesex County provides an opportunity for the area to address flood-related hazards at a regional scale, to become more resilient, and to improve the quality of life for its more than 300,000 residents. In addition to the Raritan River and Bay Communities program, communities are partnering with NJDEP to lead similar projects in three other areas: Northeastern NJ, Long Beach Island, and Atlantic County Coastal Region.

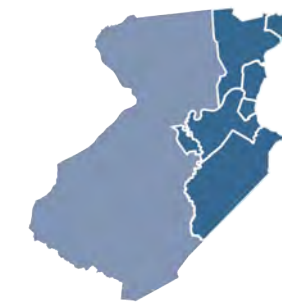
PROCESS & OUTCOMES

This effort will develop a regional resilience action plan to address flood-related hazards. This plan will be completed in Spring 2022. The diagram below summarizes how the regional resilience action plan will be developed.



GOALS

The project is focused on developing a **regional resilience action plan** to address flood-related hazards. Input from the people who live, work, and play in the region will be critical to the success of the program. The project goals have been developed based on what we have heard from people so far. **We welcome your continued input to refine these goals !**



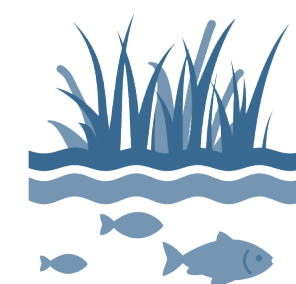
Build on ongoing resilience planning by addressing gaps and opportunities within the region.



Ensure representation and participation from socially vulnerable populations to address their needs and risks.



Develop innovative and implementable solutions that increase resilience in both the short- and long-term.



Enhance the value and integrity of ecological, recreational, and economic resources in the region.



Ensure collaboration among a wide variety of stakeholders.

SHARED RISK, SHARED RESILIENCE

The Resilient NJ Raritan River and Bay Communities lie at the confluence of the Raritan River and the Arthur Kill. The diverse residents of the region have experienced flooding in the past caused by heavy precipitation or coastal storms. The region lies at the intersection of three major watersheds and watershed management areas: the **Arthur Kill**; the **Monmouth**; and the **Lower Raritan, South River, and Lawrence**.



HOW TO GET INVOLVED

ATTEND PUBLIC MEETINGS
Visit resilientnewjersey.com
& sign up for our emails.

DOWNLOAD THE IRYS APP
available in Android & iOS



FOLLOW US
on social media
  
[@resilientrrbc](https://twitter.com/resilientrrbc)



SHARE YOUR THOUGHTS THROUGH OUR SURVEY

LEAVE A VOICEMAIL
on our project hotline at
732-661-3808

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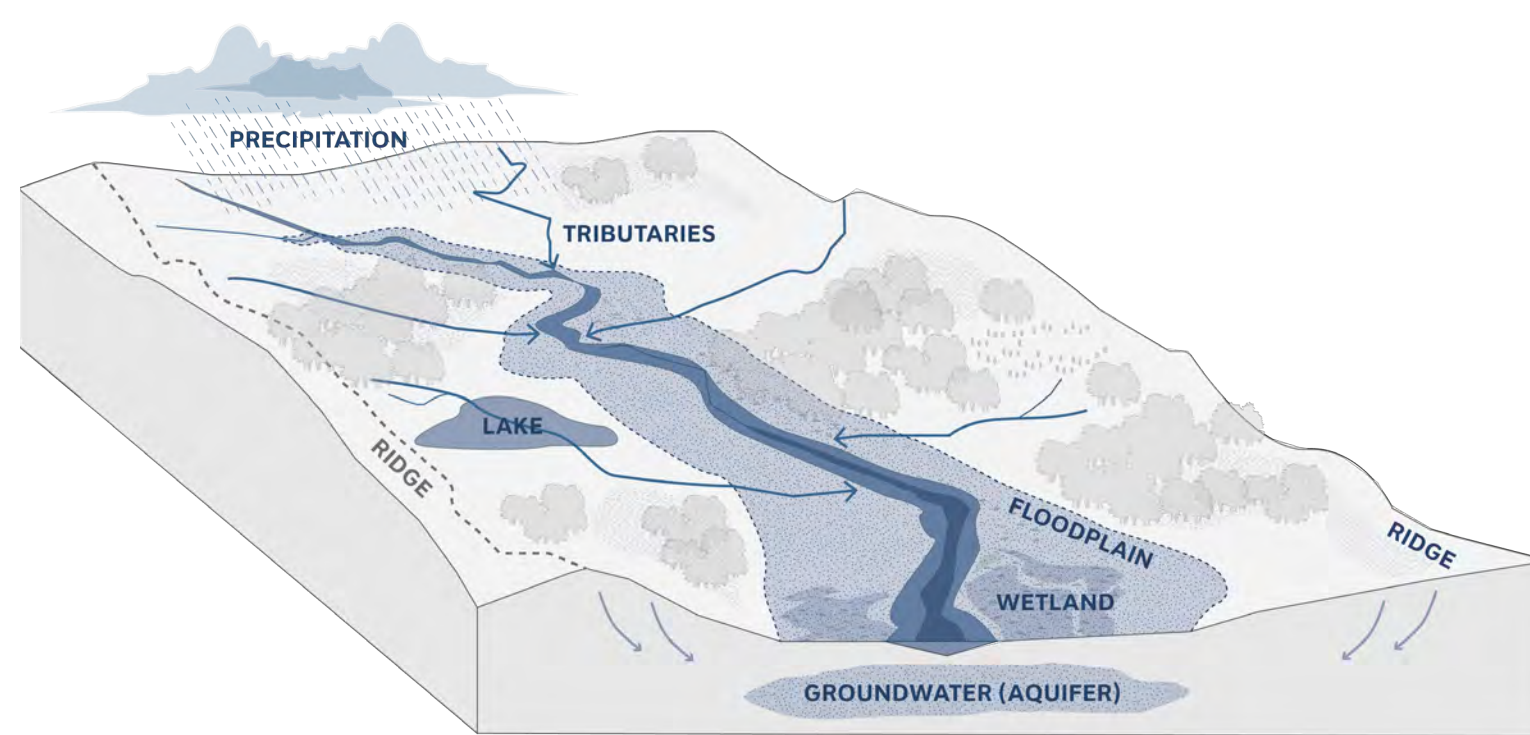
RESILIENT NEW JERSEY

RARITAN RIVER & BAY COMMUNITIES

FOCUS AREAS

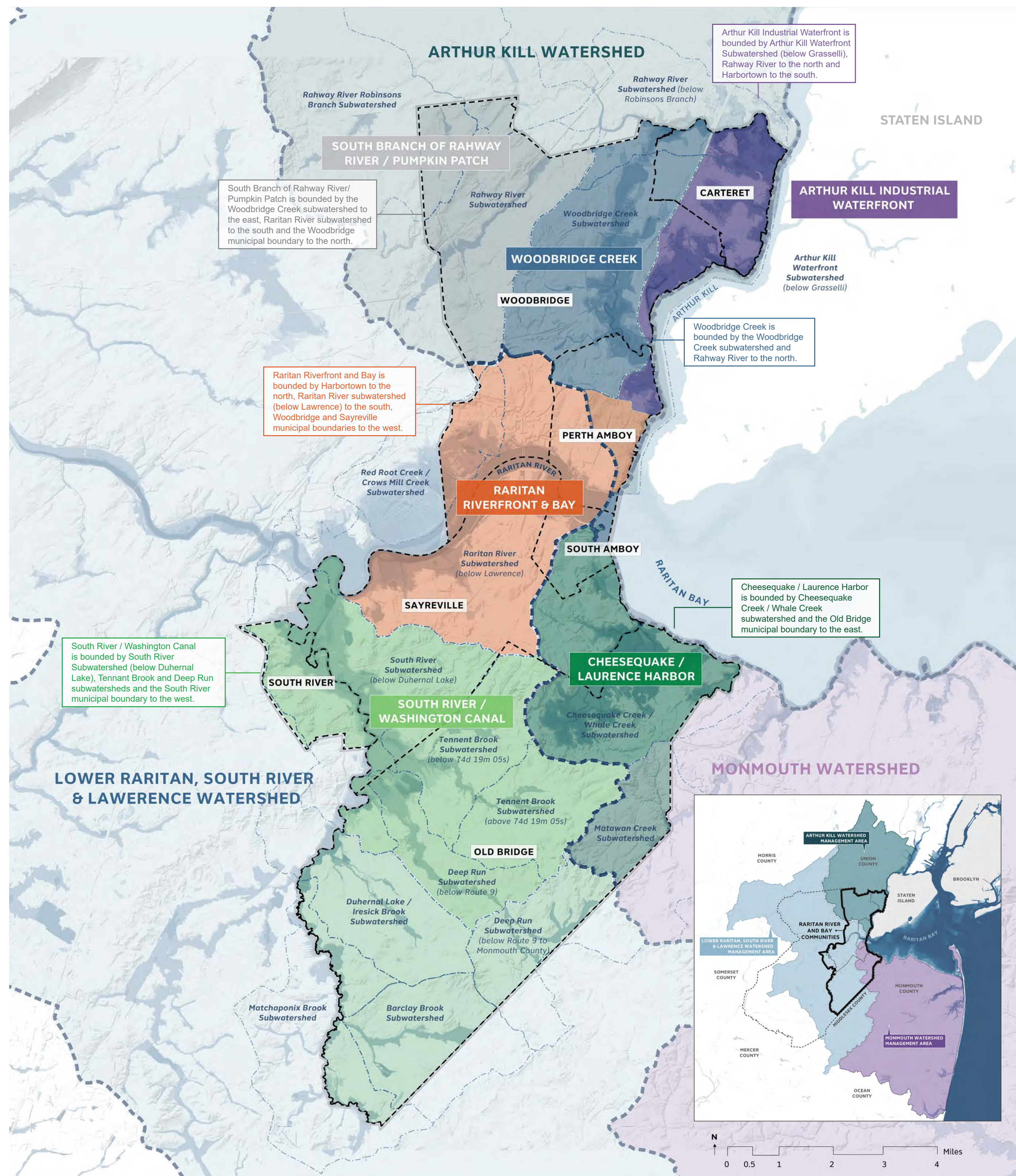
What is a Watershed?

A watershed can most easily be thought of as an area within which, wherever water falls, it will all eventually flow to the same place. Watersheds can cross municipal and state boundaries, which can present a challenge when planning for flooding and risk reduction. Water doesn't obey our municipal boundaries. The actions in one municipality can affect flood risk in another.



FOCUS AREAS

FOCUS AREAS AND SUB-WATERSHEDS IN RARITAN RIVER AND BAY COMMUNITIES. A watershed-based approach to planning will lead to more effective outcomes in reducing flood risk. The Raritan River and Bay Communities study area is divided into six focus areas based on local sub-watersheds and land uses. Though feedback for this project will primarily be collected at the municipal level, the project team will use the focus areas to develop resilience strategies that adress flood risks across municipal boundaries.



FLOOD RISK TYPES

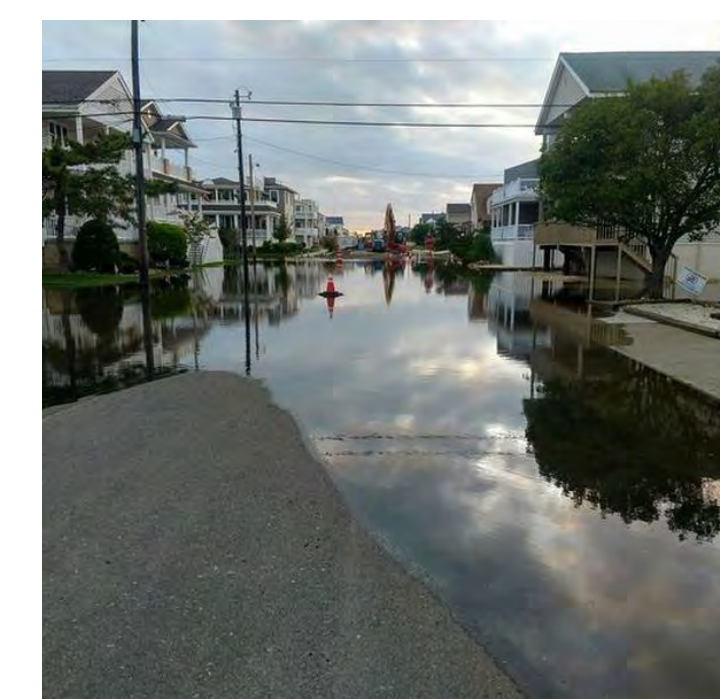


New Jersey Coast - Aerial views of damage caused by Hurricane Sandy to the New Jersey coast - US Air Force photo archive

COASTAL STORM FLOODING

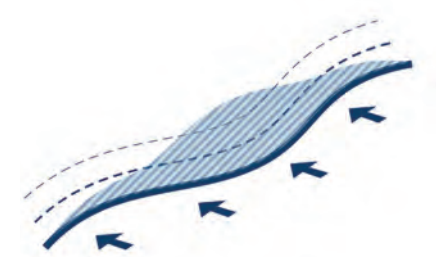


Coastal storms create flooding due to surge—a rise in water levels due to storm pressure and waves—which can also lead to coastal erosion.

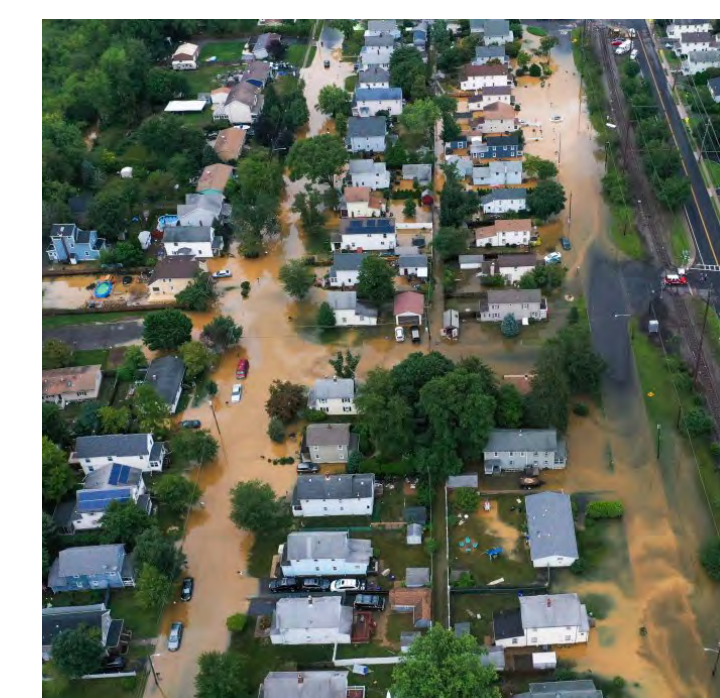


Ocean City, NJ - Sunny day flooding in Ocean City during evening high tide on June 12, 2018. Photo courtesy of Suzanne Leary Hornick.

TIDAL FLOODING

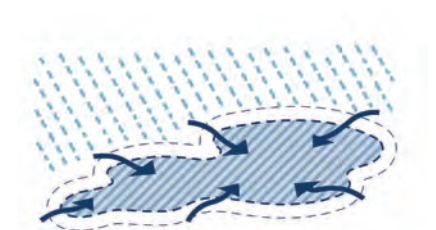


Low-lying coastal areas flood when water levels rise above ground elevation due to high tides.



An aerial view of flooded streets are seen in Helmetta of New Jersey, United States on August 22, 2021 as Tropical Storm Henri hit east coast. (Photo by Tayfun Coskun/Anadolu Agency)

RAINFALL FLOODING

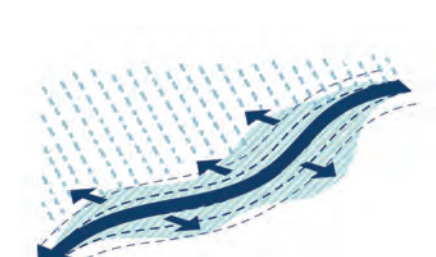


Lower lying areas, both along waterways and inland, can flood due to heavy rain events overwhelming drainage infrastructure.

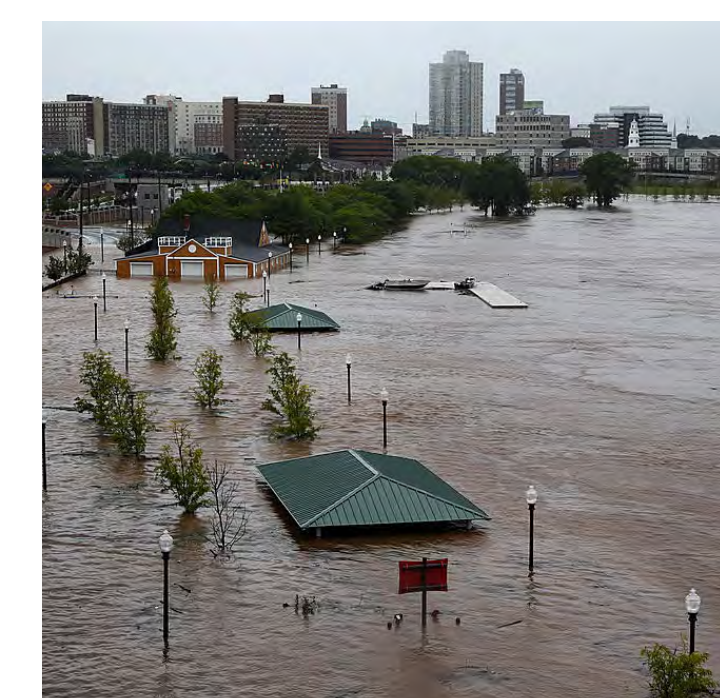


Raritan, NJ - Hurricane Ida - Remnants of Hurricane Ida created widespread flooding along areas of Route 206 and surrounding roads in Somerville and Raritan. Source: Iola Register.

RIVERINE FLOODING

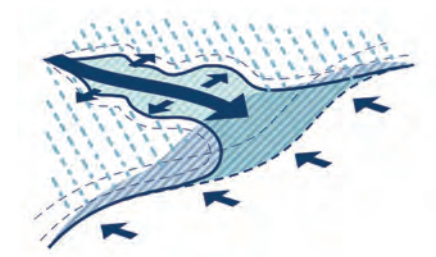


Occurs when rivers, streams, lakes, reservoirs, or canals overflow due to extreme rainfall or rapid snowmelt.



New Brunswick, NJ - Hurricane Irene led to joint flooding along Raritan River. Source: AP

JOINT FLOODING



Combination of riverine and coastal flooding along tidally influenced rivers.

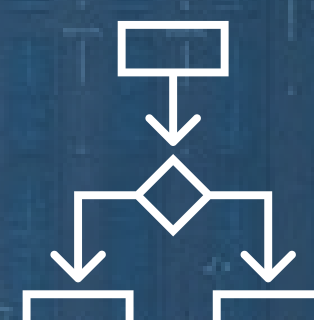
WHAT WE WANT TO HEAR FROM YOU



What are the critical places and spaces in your community?



How have you been impacted by flooding?



What factors are most important when making decisions to reduce flood risk?



What do you want to see in your community?

CRITICAL ASSETS & FLOOD RISK

Risk is the potential for a hazard to have negative impacts. For flooding, this means the potential for water to damage and disrupt our communities. Flood risk is the interaction between flood hazards, where people live, and the systems and structures that support our way of life. Risk increases when the hazard itself increases, such as by climate change, or when more people and their belongings are located in harm's way. **The map includes FEMA flood extents and some assets that we've already heard about as being important community places, like public housing, hospitals, child care centers, parks, schools, and more.**

Coastal flooding primary pathway through Raritan Bay from the Atlantic Ocean, leading into low-lying wetland areas

SOUTH RIVER

Coastal flooding primary pathway from Raritan Bay up the Raritan River, and up South River.

Heavy rainfall within the watershed can bring substantial flows to the river and its tributaries, potentially causing additional flooding.

OLD BRIDGE

LEGEND - CRITICAL ASSETS

New Jersey Department of Environmental Protection (NJDEP) defines a critical asset as "an asset whose failure would have significant consequences, either in the ability of the system to provide service to its customers, comply with regulatory requirements, or adversely affect the environment."

- INFRASTRUCTURE**

 - Stormwater & Wastewater Infrastructure
 - Wastewater Treatment
 - Stormwater Discharge
 - Combined Sewer Outfall
 - Energy Infrastructure
 - Substations
 - Power Generation
 - Natural Gas Pipelines
 - Powerlines
 - Communications
 - Cell Towers
 - Other
 - Heavy Industry
 - Warehousing
- TRANSPORTATION**

 - Bike Lanes
 - Light Rail/Commuter Rail
 - Primary & Secondary Roads
 - Ferry Terminal
 - Rail Stations
 - Bridges
 - Gas Stations

ECOSYSTEM & ENVIRONMENTAL HEALTH

 - Parks (Municipal and State Parks)
 - Cemetery

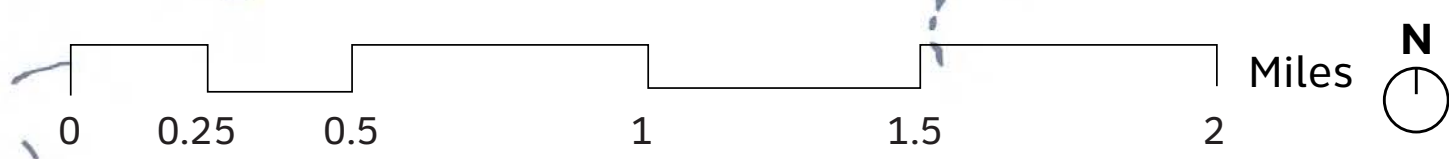
EMERGENCY RESPONSE

 - EMS
 - Fire Stations
 - Police Stations
 - Hurricane Evacuation Route
- PUBLIC HEALTH, WELL-BEING & QUALITY OF LIFE**

 - Hospitals/Medical Centers
 - Municipal Building
 - Public Housing
 - Senior Housing
 - Shelters
 - Nursing Homes
 - Child Care Centers
 - Places of Worship
 - Schools & Colleges
 - Library

FEMA FLOOD EXTENTS

 - 1% annual chance flood zones
 - 0.2 % annual chance flood zones
 - Subwatersheds
 - Municipal Boundaries



WHAT WE WANT TO HEAR FROM YOU



What other types of critical places and spaces are in your community?



Why are these places/spaces important to you and your community?



Have any of these places flooded in the past?



Share Your Thoughts With Use Through Our Survey

SCAN ME

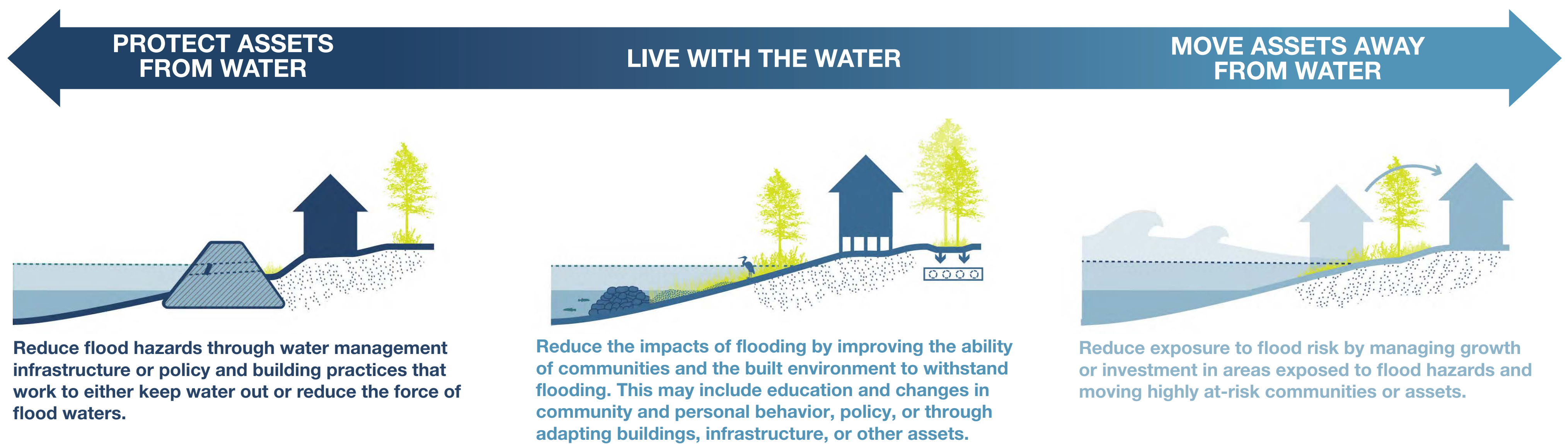
RESILIENT NEW JERSEY

RESILIENCE STRATEGIES

OLD BRIDGE

RESILIENCE STRATEGIES

Resilience is the ability of communities and systems to withstand and recover from extreme damaging conditions, including weather and other shocks or stresses. Building resilience will require a range of actions by individuals, communities, and governments. Three general approaches to creating more resilient communities are shown below. There are a variety of different strategies within each of these categories; physical interventions (e.g. flood defense systems or green infrastructure), changes to policy or regulations (e.g. building codes or zoning), or new operations or emergency response strategies (e.g. early warning systems or storm drain maintenance).^{*} Ultimately, a mix of these approaches will be needed, in addition to governance tools, outreach, and capacity building.



^{*}For a comprehensive list of potential resilience strategies, please see the "Resilience Toolkit" booklet.

APPLYING RESILIENCE STRATEGIES

Example: Possible Strategies for Waterfront Residential and Mixed-Use Neighborhoods



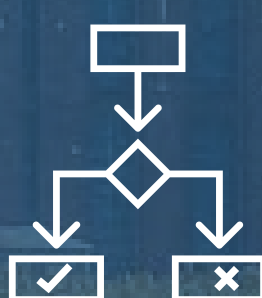
WHAT WE WANT TO HEAR FROM YOU



What do you want to see in your community?



Are there specific resilience strategies you want to learn more about?



Are there any strategies that might work for your community?

Are there any strategies that would NOT work for your community?



SCAN ME

Share Your Thoughts With Use Through Our Survey