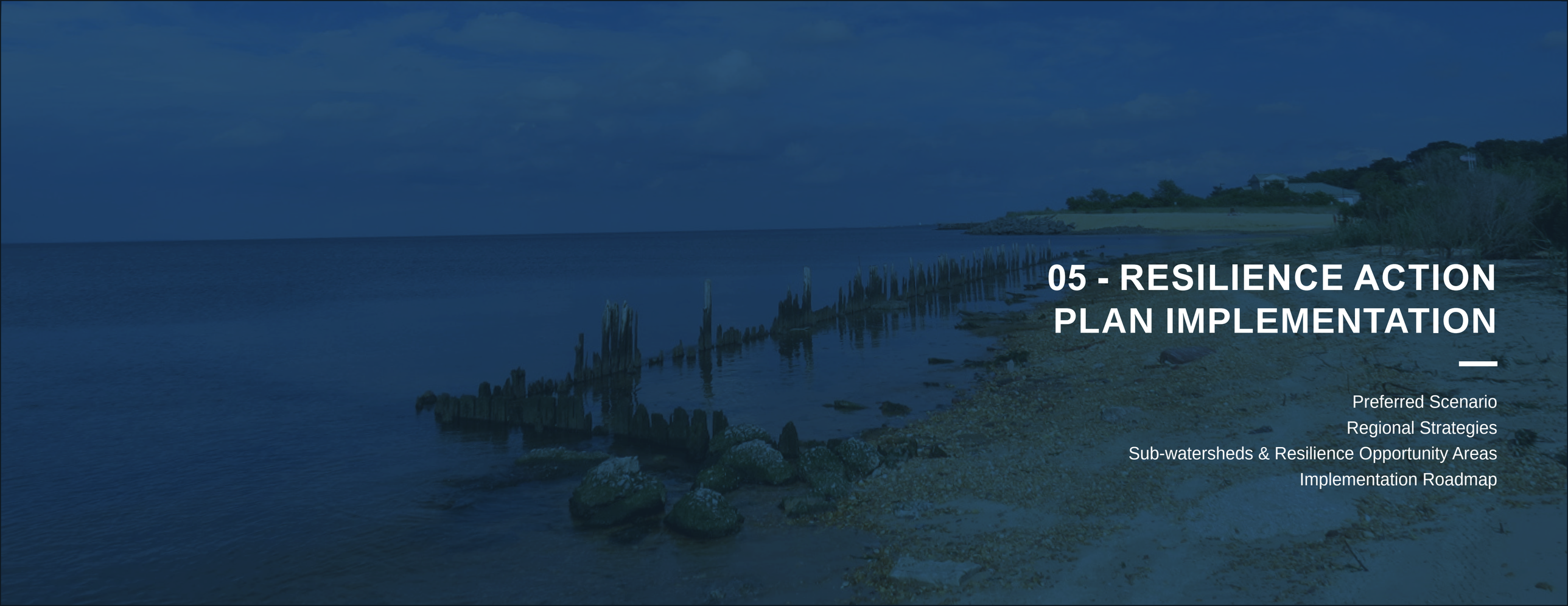


05 - RESILIENCE ACTION PLAN IMPLEMENTATION

Preferred Scenario
Regional Strategies
Sub-watersheds & Resilience Opportunity Areas
Implementation Roadmap

PREFERRED SCENARIO: PROTECT, RESTORE, AND TRANSITION

In the process of collaborating with RRBC communities and evaluating the preliminary scenarios based on the process described above, it became clear to the project team that achieving the community vision will likely require a hybrid strategy that includes a careful balance between protecting, restoring, and transitioning.

The preferred scenario, which serves as the foundation of this *Action Plan*, combines elements of all three preliminary scenarios to generate a long-term plan that synthesizes more resilient development patterns, feasible flood mitigation projects, and transformational open space and ecological improvements into a cohesive plan for a more resilient region. It seeks to achieve this by simultaneously implementing physical and nature-based infrastructure strategies (e.g., flood barriers, stormwater infrastructure, and wetland restoration); policy and governance actions to promote more resilient development and improve coordination across multiple levels of government; and outreach, education, and capacity building programs to improve flood risk awareness and promote community adaptation.

In addition to reducing flood risk, this scenario provides secondary benefits, called "co-benefits," that will improve quality of life in the region, such as:

- Additional access to open space, improved waterfront access, and recreational opportunities, which provide a multitude of benefits for both people and the environment—from public health benefits to increased biodiversity and reduced urban heat islands
- Building local capacity for resilience planning, which strengthens community ties and improves overall community resilience, connecting communities with the resources they need and improving social cohesion
- Remediation of brownfield sites, thereby reducing pollution
- Improving mobility and concentrating density, which can reduce greenhouse gas emissions and improve air quality.
- Restoring wetlands and riparian areas, which can improve water quality, result in cleaner water for recreation, and improved habitat quality

By taking a multi-pronged approach, the preferred scenario aims to protect the most vulnerable while achieving a variety of co-benefits for all. The preferred scenario also seeks to bolster the adaptive capacity of communities across the region while also leveraging these initiatives to promote the substantive and transformative civic and governance changes required to achieve long-term, sustainable outcomes. The following section describes the categories of actions included in the preferred scenario in more detail.

RESILIENCE STRATEGIES

ZONING AND LAND USE


Preserve existing Open Space/ Conservation Zones, Green & Blue Acres properties


Expand local conservation/ open space zones & ordinances


Strategic buyouts in high risk areas


Resilient Waterfront Redevelopment (light industrial / warehousing)


Resilient Waterfront Redevelopment (mixed-use residential)


Enable greater density/ floor area in low flood risk areas near transit

PROTECTION OF CRITICAL FACILITIES


Site or building level adaptation of critical facilities


Retrofit and protect existing pump station

RESILIENCE OF MOBILITY SYSTEMS


Elevate or harden roadways in flood- prone areas


Elevate or harden rail lines in flood- prone areas

STORMWATER MANAGEMENT


Restore natural features for stormwater storage and infiltration


Retrofit parks & open space for stormwater management


Opportunity for regional consolidated conveyance along publicly owned corridors


Stream corridor restoration and riparian zone expansion


Increase stormwater system capacity or diversion upstream


Culvert enlargements


New Pump Station


Increase stormsewer capacity - deep storage tunnel


Stormsewer separation (study & prioritize)

COASTAL RESILIENCE


Construct multi-purpose coastal flood barrier (with bike & pedestrian paths)


Integrate coastal flood defense into new waterfront redevelopment (tide/surge gate)


Construct Living Shorelines or Vegetated Berms to enhance shoreline ecology


Protect and manage tidal wetlands for sea level rise


Implement beach and dune restoration and renourishment


Living breakwaters

PREFERRED SCENARIO

REGIONAL BIRD'S EYE VIEW OF PREFERRED SCENARIO
See pages 84-85 for keystone actions legend.

IMPLEMENTING THE PREFERRED SCENARIO

The magnitude of flood risk in the RRBC region both today and in the future demands coordinated action at multiple scales by every level of government. Successful implementation of the preferred scenario will require a range of strategies with action on multiple scales and recognition that resilience building in the region is truly a shared responsibility.

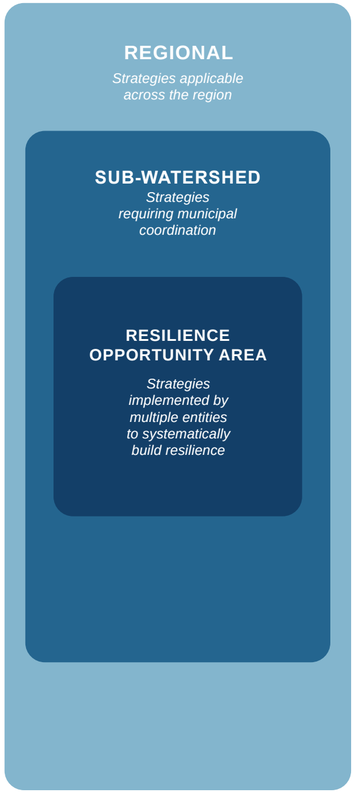
To guide the implementation of the preferred scenario, this *Action Plan* details risk reduction and resilience building strategies that can be undertaken by various entities at both regional and sub-watershed scales. Within the sub-watershed, more detailed strategies can also be implemented within specific Resilience Opportunity Areas. Recommended strategies span three broad approaches:

1. Policy and governance
2. Physical and nature-based infrastructure
3. Outreach, education, and capacity building

Regional strategies are relevant across the region, may be led by a county or state entity, and/or likely benefit from ongoing coordination of various entities within the region. Within the regional strategies included in this *Action Plan*, priority actions have been identified that should be implemented in the near-term.

Various combinations of regional strategies can be applied at the **sub-watershed** scale, based on unique land use characteristics, and shared risks within each sub-watershed. These strategies address the fact that flooding does not stop at municipal boundaries and encourage coordination to proactively reduce flood risks.

Within the sub-watersheds, the project team zoomed in on local **Resilience Opportunity Areas** as specific geographies where there are significant risks to the populations and critical assets. Within these Opportunity Areas, this *Action Plan* recommends a series of targeted actions to be implemented by multiple entities. The intent of these areas is to demonstrate how coordinated actions across jurisdictions can result in improved resilience and other improvements. Taking actions in these areas can also be a catalyst to advancing additional related actions across the region.



Regional Strategies

Sub-Watersheds

Resilience Opportunity Areas

The regional resilience strategies recommended fall under nine strategy types, based on the broad approach:

Policy and Governance

1. Governance and continued coordination
2. Zoning and land use policy

Physical and Nature-Based Infrastructure

3. Adapt or protect critical facilities
4. Resilient mobility systems
5. Stormwater management
6. Coastal resilience
7. Resilient transformation of contaminated sites and brownfields

Outreach, Education, and Capacity Building

8. Flood awareness outreach campaigns
9. Technical support for property owners

The sub-watersheds include the following:

- Arthur Kill Waterfront
- Woodbridge Creek
- Raritan Riverfront and Bay
- South River / Washington Canal
- Cheesequake / Laurence Harbor
- Rahway River and Tributaries

Resilience Opportunity Areas include the following:

- Noe's Creek *(Arthur Kill Waterfront)*
- Heards Brook *(Woodbridge Creek)*
- Middlesex County Greenway Extension *(Raritan Riverfront and Bay)*
- South River and Sayreville Main Street *(South River / Washington Canal)*
- Cheesequake Inlet *(Cheesequake / Laurence Harbor)*

The Implementation Roadmap lists every strategy identified within the action plan and includes additional detail about specific recommended locations, lead entities, immediate next steps, partners, and costs.