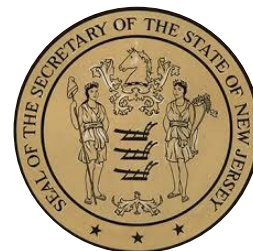


New Jersey's Draft Climate Change Resilience Strategy





Interagency Council on Climate Resilience



Rising Temperatures



New Jersey is warming faster than the rest of the Northeast region and the world.

Heatwaves are expected to impact larger areas, with more frequency and longer duration by 2050.

Increasing Precipitation



Annual precipitation in New Jersey is expected to increase by 4% to 11% by 2050.

The intensity and frequency of precipitation events is anticipated to increase due to climate change.

Sea-Level Rise



Sea-levels are increasing at a greater rate in New Jersey than other parts of the world.

By 2050, there is a 50% chance that sea-level rise will meet or exceed 1.4 feet and a 17% chance it will exceed 2.1 feet. Those levels increase to 3.3 and 5.1 feet by the end of the century (under a moderate emission scenario).

Ocean Acidification



Since the industrial age, ocean pH levels have declined and the ocean is now 30% more acidic.

If carbon dioxide emissions continue at current rates, ocean pH levels are expected to fall, creating an ocean that is more acidic than has been seen for the past 20 million years.

Decreased Water Quality



Surface and groundwater quality will be impaired as increased nutrients and contaminants enter waters due to runoff from more intense rain events.

Freshwater intakes and aquifer recharge areas may be threatened if sea-level rise pushes the salt front further upriver.

Extreme Weather



Tropical storms have the potential to increase in intensity due to the warmer atmosphere and warmer oceans that will occur with climate change.

Over the last 50 years, in New Jersey, storms that resulted in extreme rain increased by 71% which is a faster rate than anywhere else in the United States.

Drought



Droughts may occur more frequently due to the expected changes in precipitation patterns.

It is anticipated that droughts lasting three to six months and longer may slightly increase in frequency in the Northeastern United States under a low emissions scenario and will significantly increase under a high emissions scenario.

Decreased Air Quality



Despite on-going efforts to reduce ground-level ozone precursor emissions, New Jersey's air quality will be impacted due to changes in meteorological conditions, often referred to as the ozone-climate penalty which is "the deterioration of air quality due to a warming climate."

The Resilience Strategy intentionally follows the release of the New Jersey's first Scientific Report on Climate Change. The report, released in June 2020, summarizes 480 scientific research papers and studies to detail how climate change is and will continue to affect New Jersey.





Socially Vulnerable Populations

- Young children, elderly, socially or linguistically isolated, economically disadvantaged, and those with preexisting health conditions will be more at risk to health impacts from the combination of heat stress and poor urban air quality.

Infrastructure

- Aging public water supply infrastructure and demands are vulnerable to the consequences of climate change.
- Existing treatment infrastructure in New Jersey is not designed to treat elevated salt levels and drinking water standards do not exist for the primary components of saltwater.



Health and Wellbeing

- The effects of climate change are likely to contribute to an increase in air pollution, lead to increased respiratory and cardiovascular health problems.
- Urban populations are particularly vulnerable as climate models predict an increase in the number of days per year with temperatures affecting human health due to heat stress.



Ecosystems and Wildlife

- Climate change is likely to facilitate expansion of invasive plant species.
- 29% of New Jersey's bird species are vulnerable to climate change.



Coastal Communities

- "Sunny day flooding" will occur more often across the entire coastal area of New Jersey due to sea-level rise.
- Coastal areas are particularly vulnerable to flooding from storm surge and increased intensity of coastal storms.



Agriculture and Food Supply

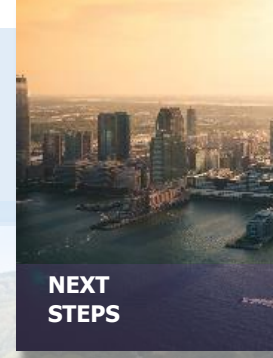
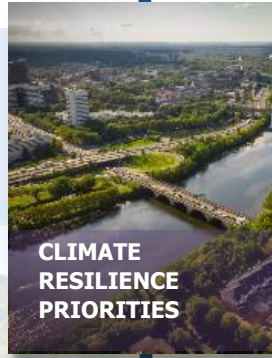
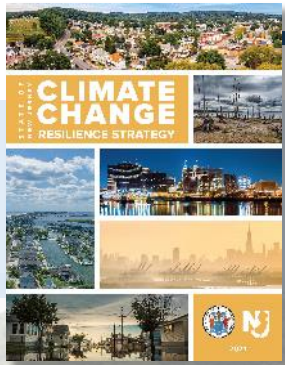
- The productivity of crops and livestock are expected to change due to the climate-induced changes in temperature and precipitation patterns.



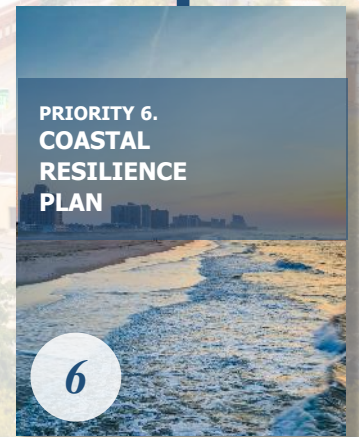
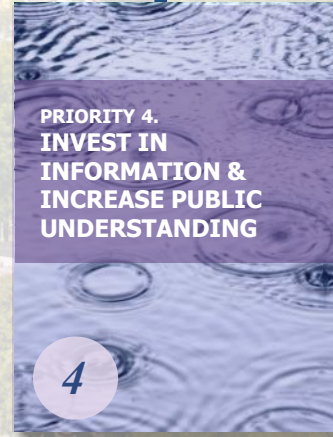
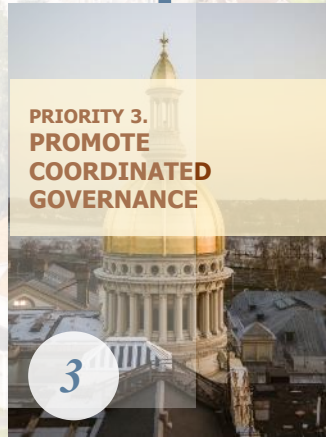
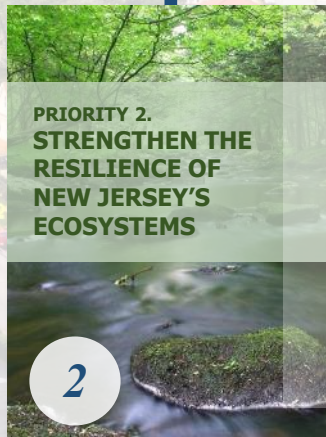
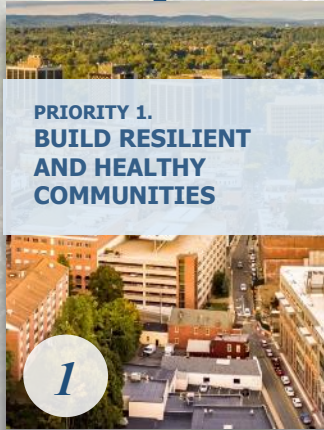
Oceans and Marine Life

- Ocean acidification not only threatens the health of the oceans, but also the economic value that people and industries depend on.





CLIMATE RESILIENCE PRIORITIES



**Build
Resilient
and Healthy
Communities**



**Strengthen
the Resilience
of New Jersey's
Ecosystems**



**Promote
Coordinated
Governance**



**Invest in
Information &
Increase Public
Understanding**



**Promote
Climate-Informed
Investments &
Innovative Financing**



**Coastal
Resilience
Plan**



PRIORITY 1. BUILD RESILIENT AND HEALTHY COMMUNITIES

STRATEGIES

- 1. Integrate Resilience into Local and Regional Planning**
- 2. Increase Technical Assistance Programs to Address Community Resilience**
- 3. Modify Regulatory Programs to Address Climate Change Impacts and Encourage Adaptation Over Time**
- 4. Decrease Vulnerability of Existing Infrastructure and Development**
- 5. Incentivize Sustainable Growth and Redevelopment that Incorporates Resilience and Relocation to Safe Places**
- 6. Integrate Public Health into Community Resilience Planning and Activities**





PRIORITY 1. BUILD RESILIENT AND HEALTHY COMMUNITIES

SHORT TERM

- 1. Resilient NJ: Guidance on planning for climate change**
- 2. NJ PACT Rules**
- 3. Statewide resilience technical assistance program**

LONG TERM

- 1. Increase flood insurance penetration statewide**
- 2. Promote risk disclosure for property owners in current and future hazard areas**

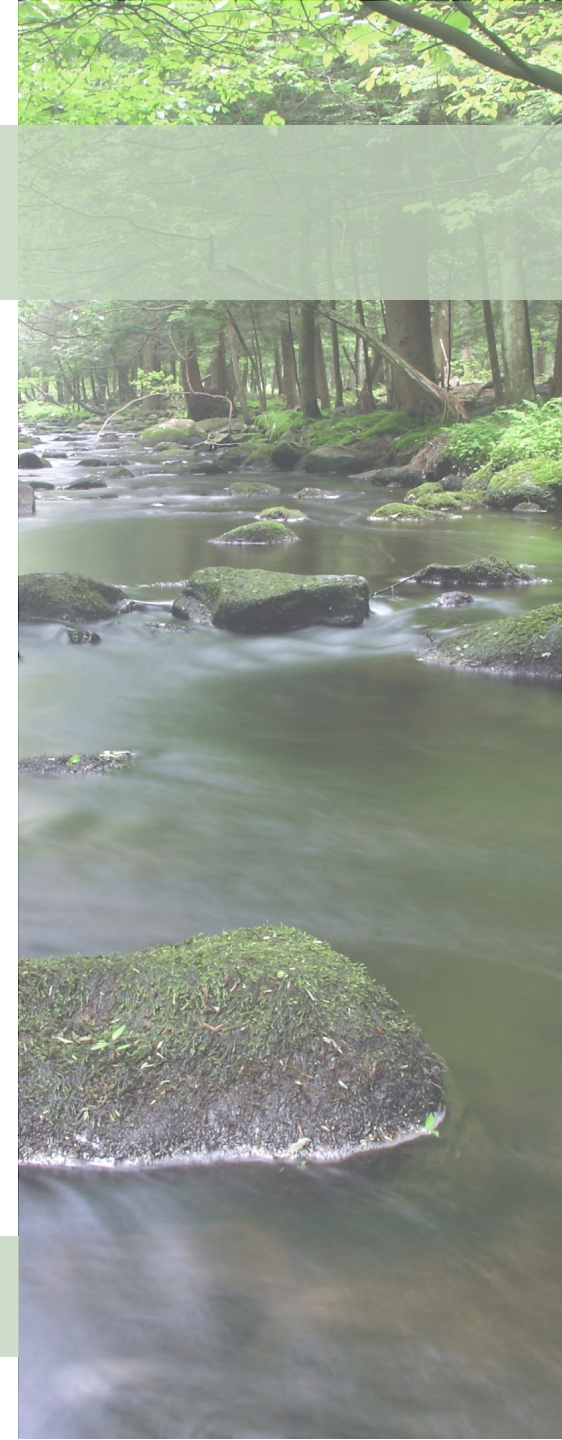




PRIORITY 2. STRENGTHEN THE RESILIENCE OF NEW JERSEY'S ECOSYSTEMS

STRATEGIES

- 1. Promote Resource Conservation and Natural Lands Management to Strengthen Ecological Resilience**
- 2. Manage Agricultural Lands, Forests, and Other Ecosystems for Climate Impacts and Environmental Stressors**
- 3. Deploy Ecosystem-Based Solutions for Resilience**





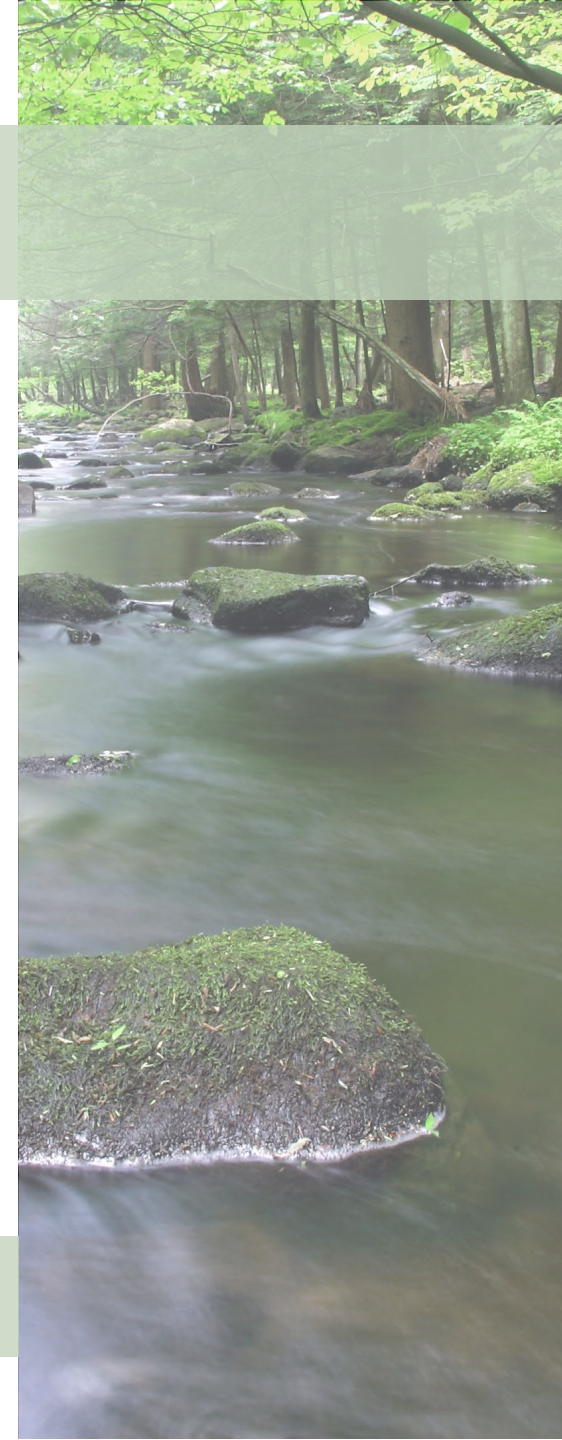
PRIORITY 2. STRENGTHEN THE RESILIENCE OF NEW JERSEY'S ECOSYSTEMS

SHORT TERM

- 1. Wildfire Risk Assessment Portal**
- 2. Habitat connectivity (CHANJ)**
- 3. Ocean Acidification Plan**

LONG TERM

- 1. Targeted assistance program for farmers and resource managers**
- 2. Expanded conservation and restoration programs**





PRIORITY 3. PROMOTE COORDINATED GOVERNANCE

STRATEGIES

- 1. Ensure Continuing Efforts by the Interagency Council on Climate Resilience to Lead a Coordinated, Whole-of-government Approach to Resilience**
- 2. Actively Engage Local Governments and Other Partners to Develop Resilience Solutions**
- 3. Incorporate Equity and Inclusion in Resilience Decision-making**





PRIORITY 3. PROMOTE COORDINATED GOVERNANCE

SHORT TERM

- 1. Interagency Council work plan**
- 2. Develop work plans for each agency**
- 3. Formally identify resilience officers**

LONG TERM

- 1. Regular public engagement with IAC**
- 2. Interagency data sharing portal**





PRIORITY 4. INVEST IN INFORMATION AND INCREASE PUBLIC UNDERSTANDING

STRATEGIES

- 1. Expand Public Communication Efforts on Climate Change and Impacts on New Jersey**
- 2. Expand Climate Change Education and Training Opportunities**
- 3. Develop a State-wide Climate Change Vulnerability Assessment**
- 4. Build a Collaborative Research Agenda to Guide Future Climate Resilience Research Across State Agencies**





PRIORITY 4. INVEST IN INFORMATION AND INCREASE PUBLIC UNDERSTANDING

SHORT TERM

- 1. Develop a collaborative research agenda**
- 2. Expand public climate resilience communications**
- 3. Update state precipitation and storm data**

LONG TERM

- 1. Climate change trainings for state employees**
- 2. Workforce development trainings**

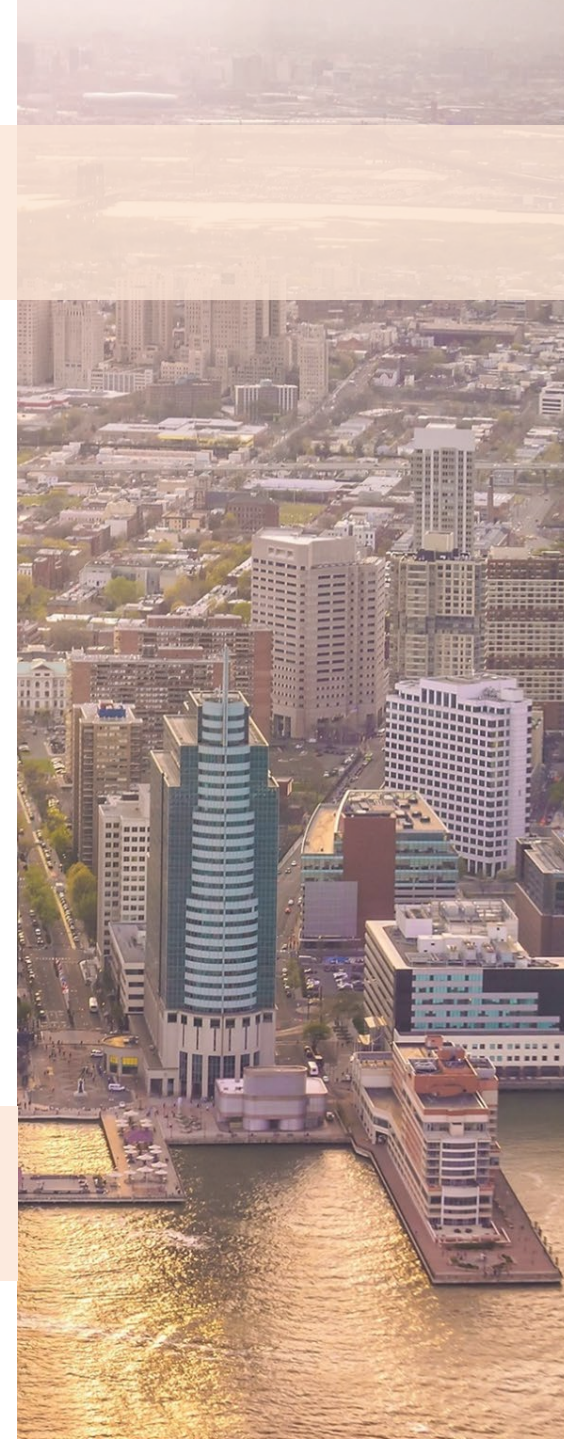




PRIORITY 5. PROMOTE CLIMATE-INFORMED INVESTMENTS AND INNOVATIVE FINANCING

STRATEGIES

- 1. Integrate Climate Change into Existing State Investments and Funding Decisions**
- 2. Expand the Availability of Financing for Resilience Investments from Public and Private Sources**
- 3. Ensure Equity and Transparency in Resilience Investments**





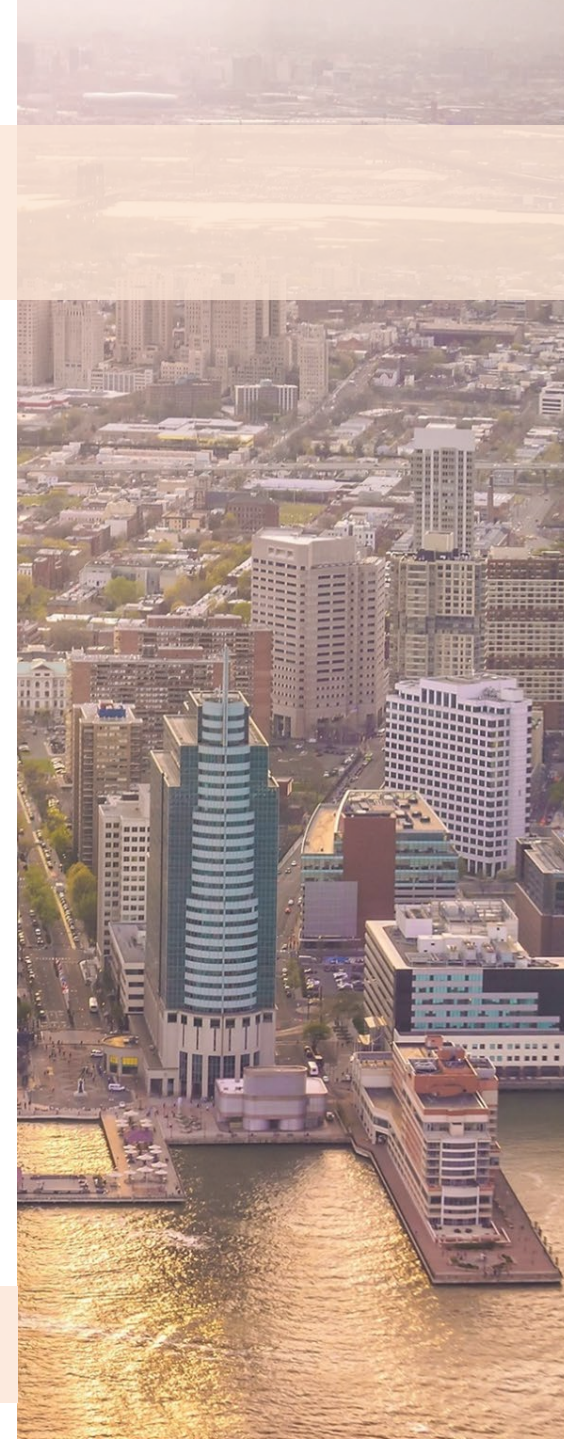
PRIORITY 5. PROMOTE CLIMATE-INFORMED INVESTMENTS AND INNOVATIVE FINANCING

SHORT TERM

- 1. Expand funding through I-Bank and RGGI**
- 2. Incorporate climate change into some investment criteria (Brownfields loans)**
- 3. Leverage multiple funding sources**

LONG TERM

- 1. Incorporate climate risk assessment into state investments**
- 2. Update funding criteria to include equity considerations**

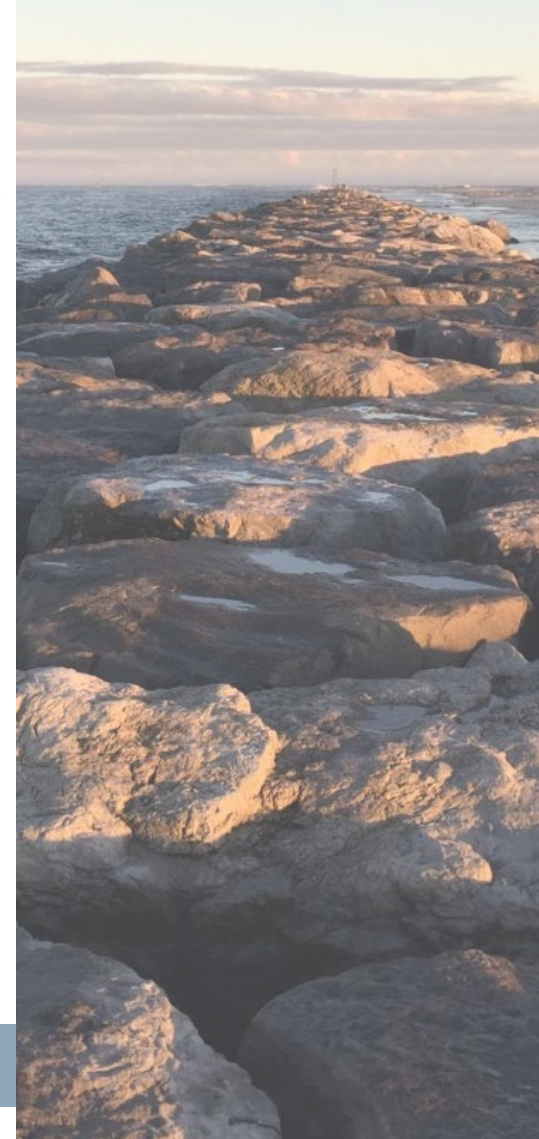




PRIORITY 6: COASTAL RESILIENCE PLAN

STRATEGIES

- 1. Incentivize and Support Community Resilience Planning**
- 2. Update Coastal Management Regulations to Reflect Sea-Level Rise and Other Climate Change Projections**
- 3. Sustain and Strengthen Tidal Marshes to Provide Ecological and Community Resilience**
- 4. Manage Shoreline Stabilization with Nature-Based Features**
- 5. Manage Coastal Beaches and Dunes to Reduce Erosion and Storm Damage**
- 6. Reduce Flood Risk to Existing Buildings and Infrastructure**
- 7. Make Smarter and More Coordinated Investments in Coastal Resilience**
- 8. Share Financial Responsibility for Resilience**
- 9. Support and Incentivize Movement to Safer Areas**





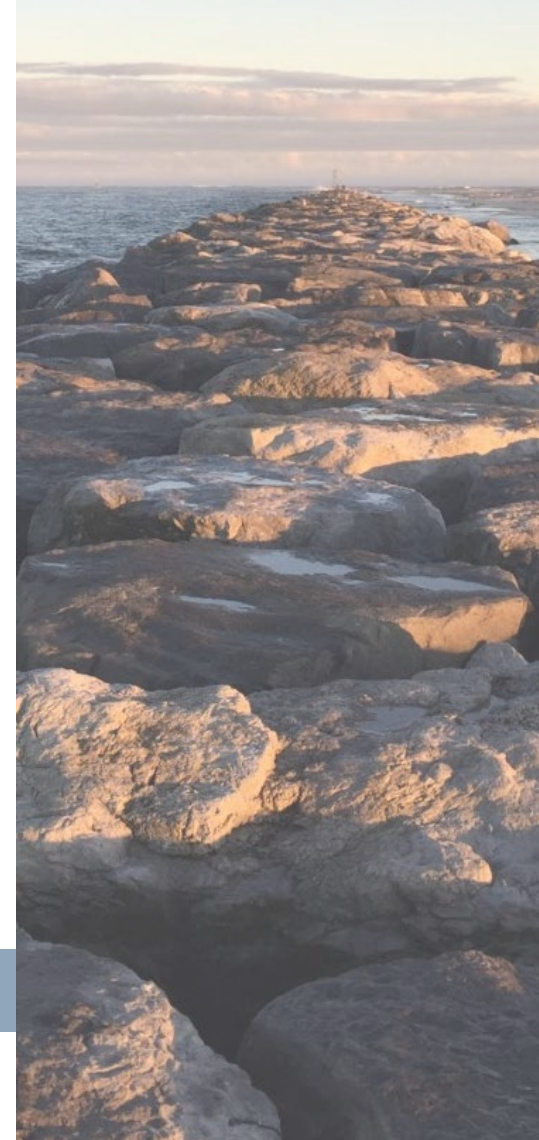
PRIORITY 6: COASTAL RESILIENCE PLAN

SHORT TERM

1. Coastal Ecological Restoration and Adaptation Plan (CERAP)
2. Sea-level rise guidance
3. Establish sea-level rise zones

LONG TERM

1. Evaluate relocation
2. Regional sediment management plans



INTERAGENCY COUNCIL NEXT STEPS

- 1. Develop a work plan for Interagency Council on Climate Resilience, including issue-specific working groups**
- 2. Coordinate the work of the Interagency Council on Climate Resilience with the Environmental Justice Interagency Council**
- 3. Develop agency climate change action plans**
- 4. Schedule meetings with local government official groups**
- 5. Conduct broad outreach and engagement with stakeholders and the public**



THANK YOU

*What questions do you have?
How can you help?*

Scientific Report on Climate Change

<https://www.nj.gov/dep/climatechange/docs/nj-scientific-report-2020.pdf>

Climate Change Resilience Strategy & Comment Form

<https://www.nj.gov/dep/climatechange/resilience-strategy.html>

New Jersey Protecting Against Climate Threats (NJ PACT)

<https://www.nj.gov/dep/njpact/>

