

New Jersey Ida Action Plan Programs

Incorporating Mitigation
& Climate Resilience
in DR Activities

March 21, 2022



Resilience – Sandy and Ida



Compare and Contrast

» Elevation Level:

- Flood +1 foot or local standard – Then
- Flood +3 foot or local standard – Now

» Elevation:

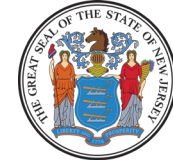
- Allowed non-substantially damaged properties to elevate – Then
- Only substantially damaged properties can elevate - Now

» Design Standards

- Energy Star - Then
- ICC – 700 – Now



Resilience – Sandy Example



Sandy Optional Storm Resiliency Measures in the RREM Program

➤➤ Increase the structural resiliency of non-substantially damaged homes from future storms and floods without elevating them

➤➤ Including:

- Relocation of utilities (mechanical, electrical and plumbing)
- Abandon and in fill lower level including basement and crawlspaces
- Relocate habitable area to an area less prone to flood damage
- Installation of flood venting
- Professional design services for alternative mitigation
- Building permits for alternative mitigation
- Install window protection
- Structural changes needed for alternative mitigation
- Strengthening doors
- Flood proofing modifications of existing structural and finish materials
- Site modification of discharged flood waters that mitigate future flood damage
- Securely anchor air ducts, large pipes, storage tanks, and other similar objects to prevent flotation

Ida Infrastructure

Resilient Communities



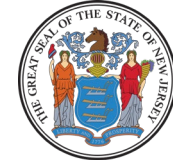
Infrastructure projects that will help impacted communities become more resilient to current and future natural hazards.



Mitigation Requirements

- Only mitigation activities eligible
- Aligned with FEMA's Building Resilient Infrastructure Communities (BRIC)
- Projects will reduce risks but also provide additional environmental, social, and economic benefits
- Applicants set up for future BRIC applications

“Increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, injury, damage to and loss of property, and suffering and hardship, by lessening the impact of future disasters.”



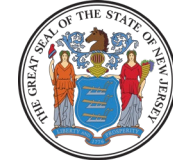
Scoring Criteria Includes:

- Cost Effectiveness
- Risk Reduction/Resilience Effectiveness
- Climate Change
- Implementation Measures
- Population Impact
- Community Engagement
- Leveraging Partnerships
- Mitigates Risk to Critical Infrastructure
- Incorporation of Nature-Based Solutions



Ida Resilience Planning

Resilient New Jersey



A comprehensive climate resilience planning, guidance, and technical assistance program set up following Superstorm Sandy to support local and regional climate resilience planning.

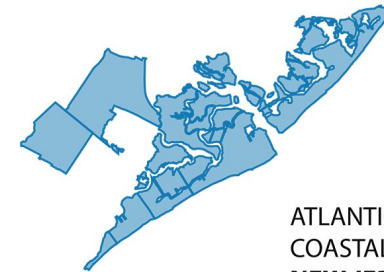


Localized Investments

- Create plans that address housing development, economic revitalization, public land use and infrastructure
- Update local codes and standards to improve resilience
- Cultivate community-led Resilience and Adaptation Action Plans



RESILIENT
NORTHEASTERN
NEW JERSEY



ATLANTIC COUNTY
COASTAL REGION
NEW JERSEY

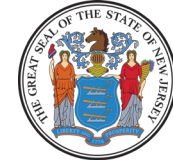


RARITAN RIVER
AND BAY
NEW JERSEY



LONG BEACH
ISLAND
NEW JERSEY

Decision-Making Tool



Ida Statewide Housing Mitigation Strategy Tool

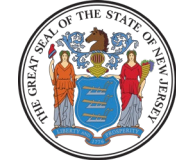


New Jersey will develop this tool to determine the housing stock exposed to repetitive flooding.

- Special attention will be focused on LMI communities
- Cataloging homes that have previously been mitigated or in need of mitigation
- Target resources to elevate structures, create buyout strategies, and develop land use plans that take into consideration flooding risks when planning future development

The State and local governments and partners can use this tool to make **informed development and floodplain management decisions** and to target resources toward the greatest need.

Ida Housing Rehab & Reconstruction



Homeowner Assistance & Recovery Program (HARP) & Small Rental Repair Program (SRRP)



In addition to reconstruction and rehabilitation the program allows for mitigation activities designed to make their home more resilient in future storm events including:

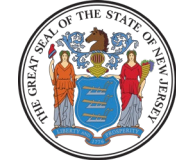
- Structural and utility retrofits
- Grading and slope stabilization and other drainage practices

Elevation is required for substantially damaged and substantially improved properties in the Special Flood Hazard Area or other areas designated by the State

The lowest habitable floor must be elevated to Base Flood Elevation (BFE) plus 3 feet, or as required by the local jurisdiction.



Ida Housing Rehab & Reconstruction



Green and Resilient Building Standards

- For Reconstruction & Substantial Improvement
- ICC-700 will be the standard and checklist used for all projects
 - Incorporates resiliency as well as energy efficiency
 - Building techniques: impact resistant doors, attachment of shingles, and flash and seal roof penetrations
 - Focus on resource efficiency, indoor environmental quality, homeowner operation and maintenance



Figure 2. Damaged Shingles and Rotted Roof Deck. (Source: mullinsgc.com)



Figure 3. Integrating Roof Penetration Flashing with Shingle. (Source: finehomebuilding.com)

Ida New Housing Development



Smart Move Program

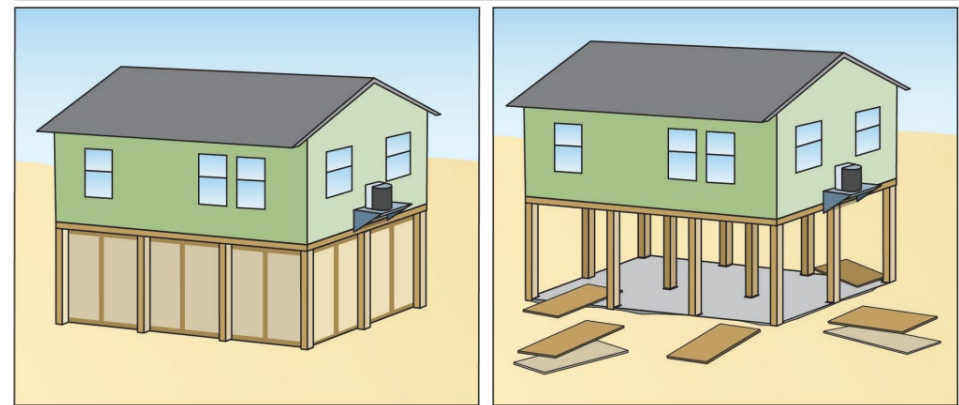


A pilot program that subsidizes the new development of quality, energy-efficient, resilient, and affordable housing in lower-risk areas within or near disaster-impacted communities that are participating in Blue Acres or other buyout programs.



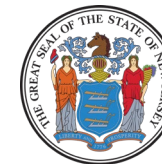
Mitigation Measures

- Building outside the floodplains
- Complying with elevation requirements
- Development in low-risk flood areas
- Resilient building measures



New Housing Development

Smart Move Program

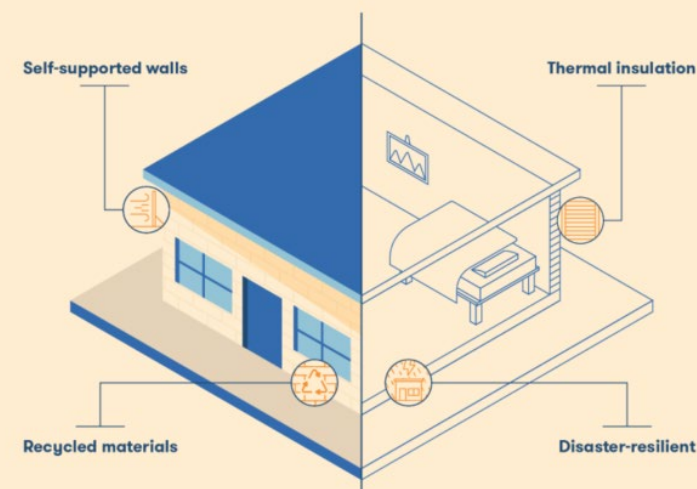


Incorporation of Unique Building Standards

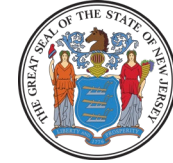


WHAT IS A 3D PRINTED HOME?

3D printed homes are printed layer by layer using concrete "ink" and have four distinct qualities.



Ida Voluntary Buyouts



Blue Acres



Voluntary acquisition of residential properties in the floodway, floodplains, or other high-risk locations. State-acquired homes will then be demolished to restore as wetlands, floodplains, or green space.

- Building on 50 years of land restoration and buyouts
- Improvements include proactive, climate resilience planning
- Includes Safe Housing Incentives

“Based on feedback provided during the public comment period, the State added an additional \$5 MILLION to Blue Acres.”

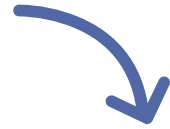
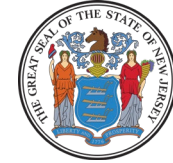


Property Selection Informed by Data

- ✓ Flood risk based on the history of hazards
- ✓ Current flood risk as reflected by FEMA FIRMs
- ✓ Flood risk associated with future conditions, including future development, a rise in sea level, and climate change

Ida Voluntary Buyouts

Blue Acres



Fostering Resilience

- Helps mitigate risk by correcting outdated land use patterns
- Buying out flood-prone properties removes both people and property from harm's way
- Allows the land to return to its natural function
- Reduces flood insurance for community
- Addresses NJ environmental justice goals by prioritizing LMI persons
- Contributes to NJ's Climate Change Resilience Strategy

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NJ DCA Disaster Recovery and Mitigation
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