



# Resilient NENJ Appendix E – Initial Policy Recommendations

VERSION 2022.0



# CONTENTS

- Overview
- Governance and policy tools
- Ordinance review summaries
- Near-term and long-term recommendations

## Attachment:

- Appendix E Policy Index (Excel file)

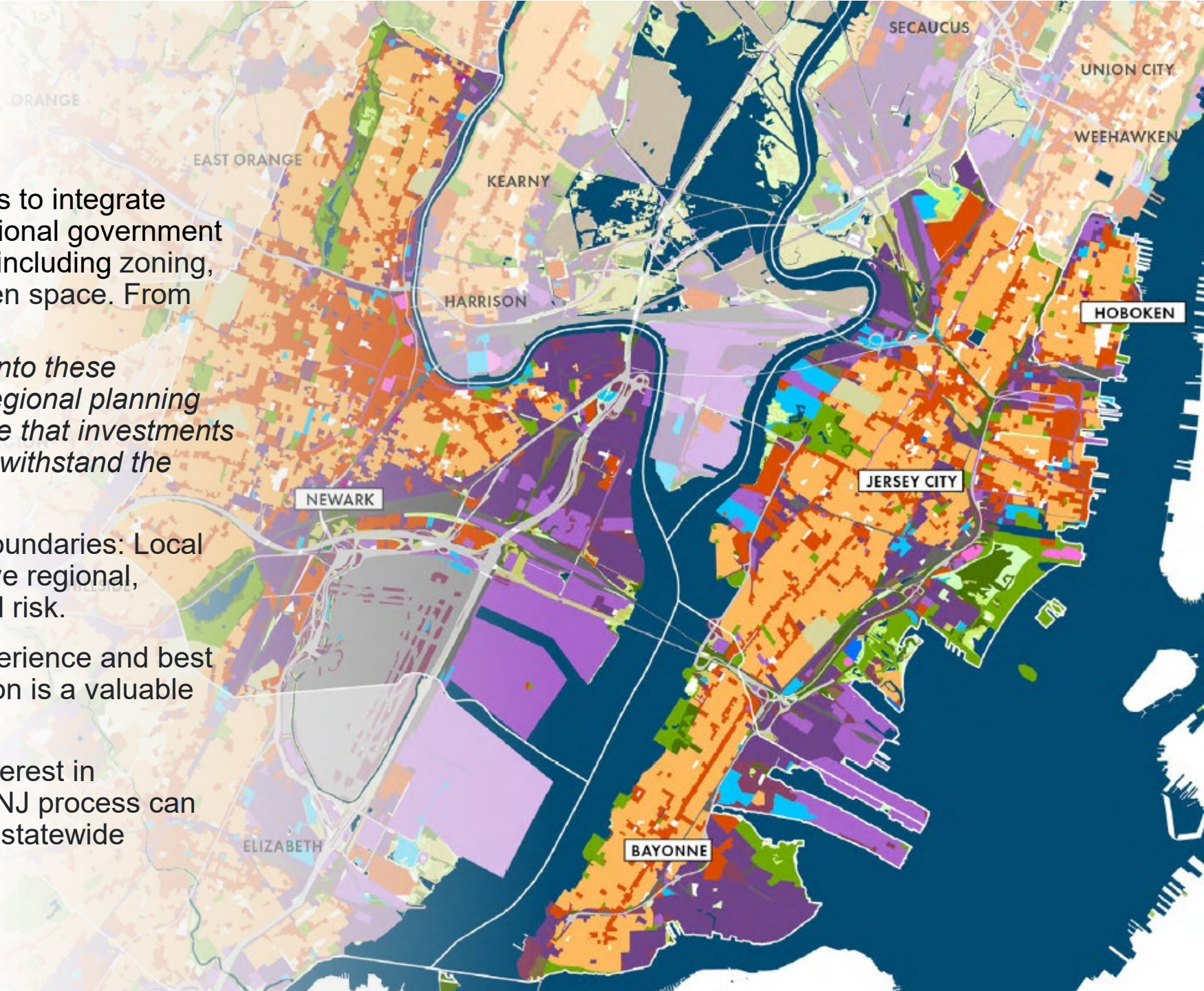


# OVERVIEW

- One of the goals of Resilient NJ is to integrate climate change into local and regional government decision making about land use, including zoning, redevelopment, housing, and open space. From NJDEP's website:




*“Integrating climate change into these decisions and all local and regional planning efforts is imperative to ensure that investments made today are designed to withstand the conditions of tomorrow”*

- Water doesn't follow municipal boundaries: Local decisions about land use can have regional, watershed-scale impacts on flood risk.
- Municipalities can learn from experience and best practices – sharing this information is a valuable resource.
- Municipalities have expressed interest in understanding how the Resilient NJ process can support local efforts to meet new statewide planning and code requirements.



# GOVERNANCE AND POLICY TOOLS





## FEDERAL AGENCIES AND PROGRAMS

FEDERAL	
 FEMA	<ul style="list-style-type: none"><li>• Creates <b>maps of current flood risk</b> and sets national <b>floodplain construction standards</b></li><li>• Administers the <b>National Flood Insurance Program (NFIP)</b>, through which people in participating municipalities can purchase flood insurance. Reduced rates are available for municipalities that adopt higher construction standards through the Community Rating System (CRS).</li><li>• Provides <b>hazard mitigation and disaster recovery funding to governments, businesses, and individuals</b>. To be eligible for hazard mitigation funds, states and local entities must have developed a Hazard Mitigation Plan (HMP).</li></ul>
 US Army Corps of Engineers®	<ul style="list-style-type: none"><li>• Conducts flood risk reduction studies</li><li>• Implements flood risk reduction projects</li><li>• Coordinates with NJ Department of Environmental Protection (NJDEP) on hazard mitigation and disaster recovery funding efforts</li></ul>
 NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE	<ul style="list-style-type: none"><li>• Manages the federal Coastal Zone Management Program</li></ul>



# GOVERNANCE AND POLICY TOOLS

## STATE AGENCIES AND PROGRAMS

STATE	
	<ul style="list-style-type: none"><li>• Coordinates federal, state and local floodplain management programs. These include statewide floodplain management standards and model local ordinances</li><li>• Leading developing of statement climate resilience planning initiatives, including NJPACT and Resilient NJ.</li><li>• Relatedly, oversees the Site Remediation Program and sets requirements for combined sewer systems / LTCPs, which are being evaluated through Task 6</li></ul>
	<ul style="list-style-type: none"><li>• Enforces construction codes</li><li>• Administers CDBG funds received by the State for Hurricane Sandy assistance</li></ul>
	<ul style="list-style-type: none"><li>• Regulates utilities, including electricity, gas, telecommunications, and water supply.</li></ul>
	<ul style="list-style-type: none"><li>• Coordinates with FEMA on hazard mitigation, preparedness, response, and disaster recovery funding</li></ul>

# GOVERNANCE AND POLICY TOOLS

## COUNTY, REGIONAL, AND LOCAL PROGRAMS

<b>Essex County</b>	<ul style="list-style-type: none"><li>• Responsible for managing county roads, infrastructure, parks</li><li>• Can adopt site plan and subdivision standards as development impacts their assets</li><li>• Maintain County Hazard Mitigation Plans</li></ul>
<b>LTCP stakeholders (e.g. PVSC, etc.)</b>	<ul style="list-style-type: none"><li>• Responsible for wastewater conveyance and treatment and development of Long-Term Control Plans to mitigate impacts on water quality</li><li>• Advanced internal planning for climate risks and implementation of flood mitigation projects</li></ul>
<b>Municipality</b>	<ul style="list-style-type: none"><li>• As a home rule state, land use, zoning, development regulation rest in local decision makers</li><li>• Required to have Flood Damage Prevention Ordinances and Municipal Separate Storm System (MS4) “Stormwater Management” plans</li><li>• Must adopt a Master Plan that meets statewide requirements</li><li>• Develop hazard mitigation plans and capital improvement programs to address infrastructure and flood protection needs</li><li>• Submit grant applications to support funding</li><li>• Raise funding through property taxes, municipal bonds, and improvements associated with redevelopment projects</li></ul>

# STATEWIDE PLANNING AND GUIDANCE

## Municipal Land Use Law Amendments

- *2021 Land Use Element Climate Change Assessment* - includes analysis of threat and vulnerabilities related to climate change, build-out analysis, identification of facilities and roadways necessary for evacuation and sustaining quality of life, strategies and design standards to avoid or reduce risk.
- *2017 Smart Growth and Resiliency Strategy* - When updating / adopting a Master Plan Land Use Element, municipalities are required to include a statement of strategy concerning smart growth, location of electric vehicle charging stations, storm resiliency, and environmental sustainability.

## NJDEP Model Ordinances

- *2021 Coastal and Riverine Model Flood Damage Prevention Ordinances*
  - Update previous model ordinances to be “Code Coordinated” with the Uniform Construction Code and NJ Flood Hazard Area Control Act

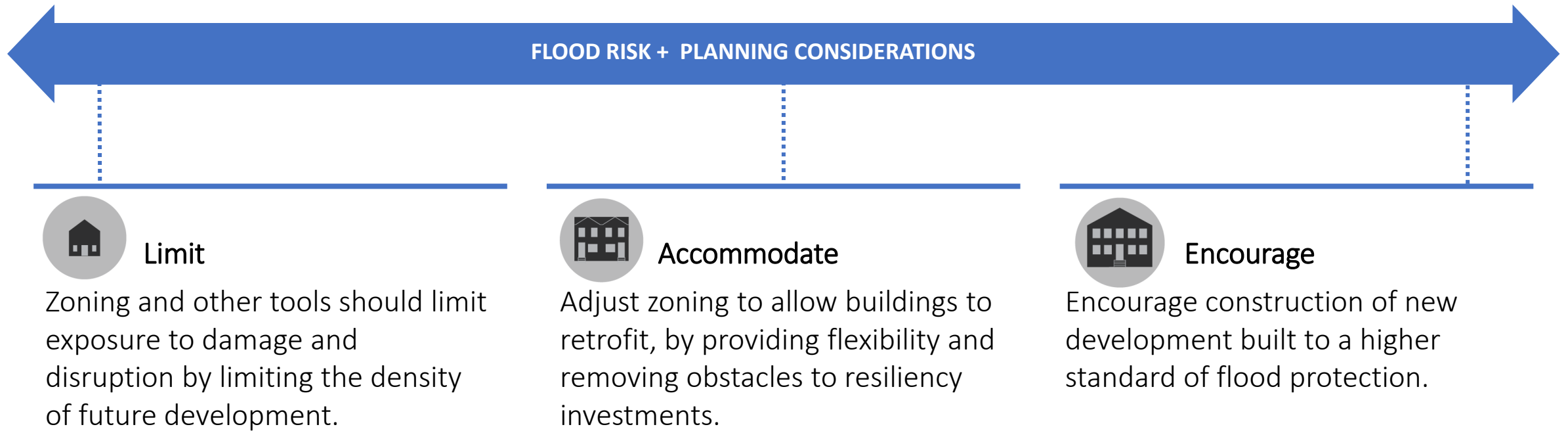
## State Climate Change Resiliency Strategy

- Policies to promote long-term resilience, framework for regulatory, investment, and operational decisions.
- *Priority Areas* include: Resilient and Healthy Communities, Resilient Ecosystems, Coordinated Governance, Increasing Public Knowledge, Climate-Informed Financing, Coastal Resilience

# A FRAMEWORK FOR RESILIENT LAND USE

*Where flood risk is exceptional, including where sea level rise will lead to future daily tidal flooding.*

*Where risk from extreme events can be managed through infrastructure and context can support growth.*





# Land Use Governance and Policy Toolkit

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

- **The Community Rating System (CRS) spells out numerous technical actions and scoring metrics that go above and beyond the minimum requirements for participation in FEMA's National Flood Insurance Program (NFIP).**
- **Participation in the CRS rewards communities for doing more than the minimum - insurance policy holders receive discounts based on the number of points achieved.**
- **Some actions are being undertaken already by the cities that can earn CRS points.**
- **Best practice recommendations can be undertaken for points toward CRS or for their own sake as resilience measures.**

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
<b>300 – Public Information Activities</b>	
310 – Elevation Certificates / Floodproofing Certificate	Include language in the Ordinance requiring submission of the certificate. Set a deadline for submission e.g. prior to issuing a CO. Jersey City requires certification of the elevation by the Construction Official, but does not appear to require a technical “Elevation Certificate”
320 – Map Information Service	Provide a clear home for the regulatory flood map that is accessible and easy to understand.
• 322.d – Flood Depth Data (MI4) – how deep flood waters can be anticipated to be	Modeling opportunity – Resilient NJ / NJDEP may help provide this information.
340 Hazard Disclosure	<ul style="list-style-type: none"><li>• Require recorded subdivision plats and/or deeds to display flood hazard area. Ordinance - Subdivision Requirement</li><li>• Require title / deed records to show floodplain and drainage conditions. Ordinance - Subdivision / Site Plan Requirement</li><li>• Require landlords to advise potential renters about the flood hazard – Include documentation as part of property registration / CO / Inspection</li><li>• Require disclosure at property transfer (see Jersey City 257-4 lead-based paints disclosure as potential model for this type of action)</li></ul>

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
410 – Flood Hazard Mapping	<ul style="list-style-type: none"><li>Higher standards can be developed through Local Studies – Monitor this with forthcoming NJPACT rules.<ul style="list-style-type: none"><li>Provide Base Flood Elevations for A or V zones that are unnumbered</li><li>Include BFE for X Zone (500-year flood) and regulate it.</li><li>High-water marks from flood of record, if higher than BFE can be used. Record keeping is essential.</li></ul></li></ul>
412.d – Higher Study Standards	
<ul style="list-style-type: none"><li>Mapping base flood elevation plus freeboard.</li></ul>	<p>Municipalities may adopt higher standards – Jersey City requires new residential construction / substantial improvements to have the lowest floor, including basement, elevated to or above base flood elevation.</p> <p>The forthcoming NJDEP NJPACT rules may bring these requirements to a higher standard.</p>

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
430 – <i>Higher Regulatory Standards</i>	
432.a – Development Limitations	<ul style="list-style-type: none"><li>• Prohibition of All Buildings – This is an extreme measure in the most sensitive areas. NJDEP NJPACT rules may impact development ability in certain areas.</li><li>• Prohibition of outdoor storage of materials in FHA (3 tiers under CRS) – 1) all materials 2) hazardous materials 3) storage of hazardous materials only indoors above BFE – Review industrial / warehousing zones to determine if one of these standards would be effective.</li></ul>
432.b – Freeboard - In A Zones, freeboard is measured from the top of the lowest floor. In V Zones, freeboard is measured from the bottom of the lowest horizontal structural member.	<ul style="list-style-type: none"><li>• Make sure measurement definitions are consistent<ul style="list-style-type: none"><li>• Freeboard must be applied to the elevation of the lowest floor (or horizontal structural member) or to the elevation to which a non-residential building is dry floodproofed. - All components of the building including utilities, ductwork, attached garages.</li><li>• All portions below the freeboard level must be constructed using flood-damage resistant materials. Garages must meet the opening and wet floodproofing requirements for enclosures – The Jersey City Ordinance (172-5.2) includes some of this language, but a review and additional standards may be beneficial.</li></ul></li><li>• Can require elevation above the 500 year flood. Establish a BFE and required 1' of freeboard for CRS credit</li></ul>



# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
430 – Higher Regulatory Standards	
432.d – Cumulative Substantial Improvements	<ul style="list-style-type: none"><li>• Adopt municipal Ordinance specifying standards<ul style="list-style-type: none"><li>• 10- or 5-year period of cumulative improvements; when 50% threshold is reached during that period, substantial improvement requirements are triggered.</li><li>• Can require that any addition (not just a substantial improvement) to a building be protected from damage from the base flood.</li><li>• Regulatory language can be included to qualify properties for Increased Cost of Compliance insurance coverage for repetitive losses.</li></ul></li></ul>
432.e – Lower Substantial Improvements Threshold	<ul style="list-style-type: none"><li>• Adopt municipal ordinance to lower substantial improvement requirement threshold<ul style="list-style-type: none"><li>• Credit under CRS if threshold is reduced to less than 50%</li><li>• Credit for limiting expansions of the building to no more than 25% of the square footage of the lowest floor.</li><li>• Can apply a lower threshold to either improvements or to repairs to damaged buildings</li></ul></li></ul>
432.f – Protection of Critical Facilities	<ul style="list-style-type: none"><li>• Prohibit critical facilities within 500-year flood plain –or- Require facilities be protected at least one foot above the 500-year flood level – to the extent feasible</li></ul>

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
430 – Higher Regulatory Standards	
432.g – Enclosure Limits	<ul style="list-style-type: none"><li>• Municipal Ordinance to prohibit or restrict enclosures below BFE<ul style="list-style-type: none"><li>• Consider prohibiting enclosures with certain height (prevent spaces tall enough to be potentially converted into livable space)</li><li>• Establish a maximum square footage for enclosures – CRS points for prohibiting building enclosures &gt; 300 sf</li><li>• Require deed restriction to prevent conversion of enclosure below BFE</li></ul></li></ul>
432.i – Local Drainage protection	<ul style="list-style-type: none"><li>• Review Existing Drainage / Grading Requirements, even for developments that do not need land use board approval.<ul style="list-style-type: none"><li>• Require preparation of a site / plot plan that accounts for street flooding and local drainage from and onto adjoining properties and protects the building from local drainage flows.</li><li>• Require positive drainage away from the building site to an approved point of collection that does not create a hazard or problem for neighboring properties.</li></ul></li></ul>
432.o – Other Higher Standards	<ul style="list-style-type: none"><li>• Prohibit floodproofing as a flood protection measure for any new building – all new buildings including non-residential must be elevated.</li><li>• Require new streets in floodplain to be at or above the BFE</li><li>• Require all new multi-family and commercial buildings to provide access to dry land<ul style="list-style-type: none"><li>• NJDEP Flood Hazard Permitting already requires this for some developments; new NJPACT rules may impact these requirements.</li></ul></li></ul>

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
<i>440 – Flood Data Maintenance</i>	
<i>440 – Flood Data Maintenance – Additional Mapping</i>	<ul style="list-style-type: none"><li>• GIS based mapping that shows flood data – Jersey City has a “make a map” section on the Open Data website that does not include any flood layers.</li><li>• Parcel-based records that show parcels either “in” or “out” of flood hazard – Binary coding so there is no visual interpretation.</li><li>• Benchmark maintenance - require submission of survey data for all projects in flood hazard area (not just land use board applications) that locates benchmarks to CRS standard.</li><li>• Erosion Data maintenance</li></ul>
<i>450 – Stormwater Management</i>	<ul style="list-style-type: none"><li>• Public inspection and maintenance of private stormwater facilities.<ul style="list-style-type: none"><li>• Require deed of access / easement as part of approval.</li></ul></li><li>• Soil Erosion and Sediment Control regulations – Decrease area threshold for which SESC is required.<ul style="list-style-type: none"><li>• Could require it for disturbed land greater than 1,000 square feet (consistent with City’s Stormwater Management minor development). NJ requirement is typically 5,000 sf with single-family residences exempt.</li></ul></li></ul>

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
<b>500 – Flood Damage Reduction Activities</b>	
503 – Repetitive Loss Areas	Identify and map areas that experience repetitive loss and those subject to the same risk
504 – Repetitive Loss Outreach	Annual outreach to properties in repetitive loss areas. Provide info about risk, flood mitigation measures, and flood insurance.
510 – Floodplain Management Planning	<ul style="list-style-type: none"><li>• Floodplain management plan that follows 10-step process defined by CRS. City has undertaken different projects that may include elements of the plan, but if interested in CRS points, a specific format is required.</li><li>• Repetitive Loss Area Analyses.</li><li>• Natural Floodplain Functions Plan.</li></ul>
520 – Acquisition and Relocation	In NJ, Blue Acres program provides a funding source. Relocated buildings need to be moved out of regulatory floodplain. Maximum credit is given to preserving building sites as open space.

# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
<b>530 – Flood Protection</b>	
532 – Flood Protection Elements	<ul style="list-style-type: none"><li>• The City Flood Damage Prevention Ordinance (Chapter 172) includes basic requirements. Additional specific standards, or higher standards could be included. Many are discussed in earlier sections.<ul style="list-style-type: none"><li>• Retrofitting buildings so that they suffer no or minimal damage when flooded. Constructing small flood control projects that reduce the risk of flood waters reaching buildings. More credit is available for critical facilities.</li><li>• Building elevation</li><li>• Dry Floodproofing (building is watertight)</li><li>• Wet Floodproofing (flood water is allowed into the building, measures are taken to minimize damage)</li><li>• Sewer Backup Protection</li><li>• Install Barriers, Levees, or Floodwall</li><li>• Channel modification, storm sewer improvements, diversions</li><li>• Storage Facilities – stormwater basins, storage tanks, etc.</li></ul></li></ul>



# GOVERNANCE AND POLICY TOOLS

## Community Rating System (CRS) Actions

CRS Actions	Potential Municipal Actions
<b>540 – Drainage System Maintenance</b>	
542 – Drainage System Elements	Channel debris removal – Public and Private Property
	Known Problem Flooding Sites – Map areas with known issues, inspect them regularly including after each major storm, take action on maintenance and cleaning.
	Capital Improvement Programs to correct drainage problems – <ul style="list-style-type: none"><li>• Enlarge culvert and bridge openings</li><li>• Install permanent hard or soft bank protection measures</li><li>• Install grates to catch debris during high flows</li><li>• Build new retention basins to reduce flows</li><li>• Convert problem channels into low-maintenance channels</li><li>• Improvements to the underground system</li></ul>
	Stream Dumping Regulations - Signage, Education, Ordinances and Penalties. Jersey City has ordinances prohibiting general dumping, no specific language about streams / watercourses.

# STORMWATER POLICY

# SW Ordinance Review

## NJDEP SW Management Rules: Applicability

- Applies to all major developments:
  - Disturb 1 acre or more of land (2004)
  - Create 0.25 acre or more of regulated impervious surface (2004)
  - Create 0.25 acre or more of regulated motor vehicle surface (2021)
  - Create 0.25 acre or more of combined regulated impervious surface and regulated motor vehicle surface
- Additional details
  - Impervious surface is any surface covered with material that is highly resistant to infiltration by water
    - Includes porous pavement, as well as pavers with less than 20% void ratio
  - Motor vehicle surface is any pervious or impervious surface that is intended to be used by motor vehicles and/or aircraft and is directly exposed to precipitation

# SW Ordinance Review

## NJDEP SW Management Rules

- General requirements
  - SW management plans
  - SW control ordinances
- Planning and Implementation
  - Regional SW management plans
  - Municipal SW management plans
- **Design and performance standards**
- Safety standards for SW management basins

# SW Ordinance Review

## NJDEP SW Management Rules: Design & Performance Standards

- Performance standards
  - Erosion control
  - Groundwater recharge
  - Runoff quality treatment
  - Runoff quantity control
  - Maintenance plan
- Green infrastructure design
  - Practice types and applications
  - Design requirements
  - Design considerations
  - Maintenance considerations
  - Alternatives



# SW Ordinance Review

## NJDEP SW Management Rules: Design & Performance Standards

- Performance standards
  - Reduce flood damage, including damage to life and property;
  - Minimize, to the extent practical, any increase in stormwater runoff from any new development;
  - Reduce soil erosion from any development or construction project;
  - Assure the adequacy of existing and proposed culverts and bridges, and other instream structures;
  - Maintain groundwater recharge;
  - Prevent, to the greatest extent feasible, an increase in nonpoint pollution;
  - Maintain the integrity of stream channels for their biological functions, as well as for drainage;
  - Minimize pollutants in stormwater runoff from new and existing development...; and
  - Protect public safety through the proper design and operation of stormwater management basins.

# SW Ordinance Review

## NJDEP SW Management Rules: Design & Performance Standards

- Performance standards
  - Erosion control
    - Meet Soil Erosion and Sediment Control Act
  - Groundwater recharge
    - Maintain 100% of average annual pre-construction groundwater recharge volume; or
    - Pre-to-Post runoff volume increase of 2-year storm is infiltrated
    - Pre-condition is lowest runoff potential condition over previous 5-years
    - Exceptions for high pollutant load areas and urban redevelopment areas
  - Runoff quality treatment
    - Applies to increase in regulated motor vehicle surface
    - 80% total suspended solids (TSS) removal and nutrient removal to maximum extent feasible for water quality event
    - Water quality event is 1.25 over 2-hours, rainfall distribution is provided
    - Exceptions where TMDL plans for TSS govern and for single-family homes with permeable motor vehicle surfaces
    - Additional requirements for certain discharges within 300-feet of riparian zone per flood hazard control act (95% TSS removal)
  - Runoff quantity control
    - No increase in Pre-to-Post runoff rates (at any time) for 2/10/100-year events, or
    - No increase in Pre-to-Post peak rates for 2/10/100-year events and no adverse impacts due to changes at other times; or
    - Use BMPs to reduce Pre-to-Post peak rates for 2/10/100-year events by 50/75/80 percent, respectively; or
    - In tidal flood hazard area, show Pre-to-Post changes cause no additional flood damage below point of discharge
    - Pre-condition is lowest runoff potential condition over previous 5-years
  - Maintenance plan
    - Required for SW management measures
    - Must cover preventative and corrective maintenance tasks
    - Includes maintenance tasks, schedules, costs, and responsible party

# SW Ordinance Review

## NJDEP SW Management Rules: Design & Performance Standards

- Green infrastructure design
  - Must be used to meet SW management criteria
  - Follow NJ Stormwater BMP Manual and design criteria in NJDEP rules

# SW Ordinance Review

## NJDEP SW Management Rules: Design & Performance Standards

- Green infrastructure design
  - Must be used to meet SW management criteria
  - Follow NJ Stormwater BMP Manual and design criteria in NJDEP rules
- Additional details
  - Practice types and applications
    - All: cistern, dry well, swales, green roof, MTD, pervious pavement, bioretention, infiltration basin, sand filter, filter strip
    - Quantity: bioretention, infiltration, sand filter, constructed wetland, wet pond
    - With variance: blue roof, extended detention, MTD, sand filter, subsurface wetland, wet pond
  - Design requirements
    - Maximum drainage areas, slopes
    - Minimum separation from groundwater table
    - Required permeability for infiltration practices
  - Design considerations
    - Existing site conditions, environmentally critical areas, wetlands, flood prone areas, slopes
    - Depth to groundwater, soil type, permeability, soil texture
    - Drainage area, drainage patterns, and presence of karst geography
  - Maintenance considerations
    - Practices designed to minimize maintenance needs and facilitate maintenance and repairs
    - Install trash racks at the intake to outlet structure
    - Designed constructed and installed to be strong, durable, and corrosion resistant
  - Alternatives
    - Manufactured treatment devices (MTD)

# SW Ordinance Review

## Municipal SW Management Rules

- NJDEP SW Management rules apply to all major development in NJ
- Local ordinances must meet the minimum standards of the State rules, but may impose a stricter threshold
- Jersey City, Hoboken, and Bayonne have updated their Stormwater Management Ordinance pursuant to the new NJDEP rules that went into effect in March 2021.
  - Jersey City has adopted higher thresholds than in the model ordinance
  - Newark has not yet updated its ordinance to the state model



# SW Ordinance Brainstorm

## Overview

- Potential Goals
  - Increase Green Surfaces
  - Improve Water Quality
    - MS4 areas: Increase Treatment
    - CSS areas: Reduce CSOs
  - Manage Water Quantity
    - Mitigate Flood Risks
    - Control Sewer Rates
- Potential Mechanisms
  - Zoning/Building Codes
  - SW Management Rule Enhancements
  - Sewer Connection Permits

# SW Ordinance Brainstorm

## Zoning/Building Codes

- Zoning - minimum green area ratios
- Building Code – require green/solar rooftop
- Building Code – require blue rooftops or detention tanks

### LEGEND

Increase Green Surfaces

Improve Water Quality

Manage Water Quantity

# SW Ordinance Brainstorm

## SW Management Rule Enhancements

### LEGEND

Increase Green Surfaces

Improve Water Quality

Manage Water Quantity

Both Quality & Quantity

- Implement Green-First BMP hierarchy
- Modify thresholds for “major development” to expand applicability
  - Area of disturbance, regulated impervious surface, and/or regulated motor vehicle surface
  - Include replaced surfaces in the accounting of regulated surfaces, rather than just newly created
- Create “minor development” definition to mitigate the impacts of smaller projects
  - Note – There have been successful legal challenges to "overreach" on stormwater requirements associated with one- and two-family residential developments.
- Modify water quality criteria to increase the total area to be managed
  - Require management of replaced motor vehicle surfaces, rather than just newly created
- Modify water quantity criteria to reduce allowable peak discharges
  - Currently Pre-to-Post peak rates can be reduced 50/75/80 percent for 2/10/100-year events respectively
- Redefine pre-construction condition to recognize historical green spaces
  - Consider using lowest runoff potential in past 10-years or 25-years, rather than 5-years

# SW Ordinance Brainstorm

## Sewer Connection Permits

### LEGEND

Increase Green Surfaces

Improve Water Quality

Manage Water Quantity

Both Quality & Quantity

- Require permit for connections to the City sewer system
  - Applicable when making a new connection or when an existing connection must be replaced
- Set maximum allowable discharge rate to the sewer connection for specific event(s)
  - Maximum discharge rate could be set based on CSO reduction, flood mitigation, and/or impact on sewer operations
- Allow use of green infrastructure to meet requirements

# **MUNICIPAL POLICY – NEAR TERM RECOMMENDED UPDATES**

# Municipal Policy –Near-term Recommended Updates

## Jersey City

- Code compliant flood damage prevention ordinance – adopt the new NJDEP Model
- Consider enhancements to the local floodplain ordinance
  - Require elevation certificate prior to issuing a CO
  - Require disclosure of flood hazard to renters as part of property registration
  - Require disclosure of flood hazard during property transfer – Deed Notice
  - Limit outdoor storage of materials in flood hazard areas (unenclosed and/or hazardous materials)
  - Specific standards for cumulative substantial improvements, and/or lower substantial improvement threshold
- Regulate the 500-year floodplain where design flood elevations are available.

# Municipal Policy –Near-term Recommended Updates

## Newark

- Code compliant flood damage prevention ordinance – adopt the new NJDEP Model
- Consider enhancements to the local floodplain ordinance
  - Require elevation certificate prior to issuing a CO
  - Require disclosure of flood hazard to renters as part of property registration
  - Require disclosure of flood hazard during property transfer – Deed Notice
  - Limit outdoor storage of materials in flood hazard areas (unenclosed and/or hazardous materials)
  - Specific standards for cumulative substantial improvements, and/or lower substantial improvement threshold
- Adopt updated stormwater management ordinance based on the state model and include a minimum threshold of 5,000 or 10,000 square feet for "Major Developments"

# Municipal Policy –Near-term Recommended Updates

## Hoboken

- Code compliant flood damage prevention ordinance – adopt the new NJDEP Model
- Consider enhancements to the local floodplain ordinance
  - Require elevation certificate prior to issuing a CO
  - Require disclosure of flood hazard to renters as part of property registration
  - Require disclosure of flood hazard during property transfer – Deed Notice
  - Limit outdoor storage of materials in flood hazard areas (unenclosed and/or hazardous materials)
  - Specific standards for cumulative substantial improvements, and/or lower substantial improvement threshold
- Stormwater Management Threshold – Amend the stormwater management to establish a minimum threshold of 5,000 or 10,000 square feet for "Major Developments"



# Municipal Policy –Near-term Recommended Updates

## Bayonne

- Code compliant flood damage prevention ordinance – adopt the new NJDEP Model
- Consider enhancements to the local floodplain ordinance
  - Require elevation certificate prior to issuing a CO
  - Require disclosure of flood hazard to renters as part of property registration
  - Require disclosure of flood hazard during property transfer – Deed Notice
  - Limit outdoor storage of materials in flood hazard areas (unenclosed and/or hazardous materials)
  - Specific standards for cumulative substantial improvements, and/or lower substantial improvement threshold
- Stormwater Management Threshold – Amend the stormwater management to establish a minimum threshold of 5,000 or 10,000 square feet for "Major Developments"

# Flood Damage Prevention Ordinance

## NENJ Coordination – “Low Hanging Fruit”

- Each municipality is due to adopt the new NJDEP model, a collaborative effort could be a proof of concept for coordination at the regional level.
- Steering Committee / RNJ can take the lead on suggesting a set of optional higher standards
  - Model Ordinance -  
<https://www.nj.gov/dep/floodcontrol/modelord.htm#:~:text=The%20Model%20Ordinance%20now%20requires,Higher%20Standards.>
- Optional higher standards
  - Regulated flood hazard areas (500-year, USACE maps, etc.)
  - Design Elevation (additional freeboard requirements)
  - Cumulative calculation toward substantial improvements (with a proposed mechanism for tracking and enforcement)
  - Prohibition on enclosures below BFE, or regulation of size
- A consistent model with the same standards could be prepared (potentially as part of Task 6), reviewed, and adopted by each of the NENJ municipalities

# Redevelopment Plan Reviews

## Jersey City

- Bayfront
  - Review standards for waterfront resiliency and open space
  - Incorporate green infrastructure requirements – application of Green Area Ratio standards?
  - Require complete and green streets within new grid
  - Ensure that all infrastructure considers resiliency
- Canal Crossing
  - Incorporate green infrastructure requirements – application of Green Area Ratio standards?
  - Require complete and green streets within new grid
  - Ensure that all infrastructure considers resiliency
- Liberty Harbor / Liberty Harbor North
  - Incorporate best practices related to green infrastructure and resiliency for portions of the Plan still pending redevelopment
- Morris Canal
  - Incorporate green infrastructure requirements – application of Green Area Ratio standards?
  - Require complete and green streets within new grid
  - Ensure that all infrastructure considers resiliency

# Redevelopment Plan Reviews

## Newark

- River Public Access and Redevelopment Plan
  - Incorporate enhanced flood hazard area design standards
  - Consider further enhancement to green infrastructure standards
  - Identify additional open space opportunities and linkages between Ferry Street and waterfront
  - Review standards for industrial districts
  - Review parking standards
  - Incorporate physical intervention recommendations into plan
- Living Downtown Redevelopment Plan / Broad Street Station / Downtown Core / Lincoln Park
  - Include / expand green infrastructure standards – require green roof for high building coverage parcels?
  - Review parking standards
  - Enhance landscaping standards to combat urban heat island effect

# Redevelopment Plan Reviews

## Hoboken

- Hoboken Yard Redevelopment
  - Review waterfront design standards, access alignments, and Rebuild by Design infrastructure in the context of new NJDEP regulations.
  - Mandate, rather than recommend additional green infrastructure standards
- Other Redevelopment Plans
  - Review older plans to ensure that green infrastructure and resilience standards and best practices are reflected.

# Redevelopment Plan Reviews

## Bayonne

- Review existing redevelopment plans with remaining development potential to include:
  - Green infrastructure requirements
  - Waterfront access and/or public dedication requirements
  - Complete and green streets standards
  - Green building elements
  - Enhanced landscaping requirements

# **MUNICIPAL POLICY – LONG TERM RECOMMENDED UPDATES**

# LAND USE, DEVELOPMENT, AND INFRASTRUCTURE

## Potential Enhancements to Land Development Ordinances

### What more could be done?

- Downzoning in hazard prone areas to limit new development
- Restrictions on scale of new development in areas subject to most severe flooding
- Reductions in impervious surface standards
- Mandate green / blue roofs
- Establish Flood Hazard Overlay Districts beyond 1.0% Flood Hazard Area (0.2% Flood Hazard Area or Modeled Area)
- Green Building Design Requirements [Energy efficiency, extreme heat]
  - Renewable Energy – Net Zero
  - Passive heating and cooling
  - Heat pumps for HVAC
  - Elimination of natural gas hook-ups
  - Natural ventilation, reduction in indoor environmental hazards



# INTER-GOVERNMENTAL COORDINATION & DECISION-MAKING

## Consistency in decision-making related to resilience

- Clear guidance for projections and models to use
- Communicate this guidance to local developers and businesses

## Improved coordination between agencies and governments on resilience projects

- Overcome barriers to project implementation
- Allow for information sharing / lessons learned

## Clear role for resilience-building

- Create leadership positions dedicated to resilience (e.g. Chief Resilience Officer)

***How are we responding?***  
**Framework for Infrastructure Coordination Council**

POLICY AND  
GOVERNANCE