

5.0 CAPABILITY ASSESSMENT



SECTION 5.0 CAPABILITY ASSESSMENT

5.0-1 CHANGES FROM THE 2019 PLAN

- State and local capabilities have been comprehensively reviewed, updated, and reformatted.
- Discussion of the administration of hazard mitigation programs in the State has been revised and updated to reflect significant changes in the structure of emergency management since the 2019 State Hazard Mitigation Plan (SHMP).
- Discussion of the processes utilized by the State to support and promote mitigation planning at the county level and processes to help counties obtain funding and technical assistance for mitigation planning have been reviewed and updated to reflect current procedures.
- Mitigation capability challenges and barriers to implementing mitigation and building resilience were identified in collaboration with plan stakeholders. These challenges and associated opportunities to overcome these barriers were summarized.
- Stakeholder workshops and meetings were held with various State agencies, non-profits, and academic organizations to gather information on (1) capabilities to address climate change, hazard mitigation, and disaster response/recovery support for socially vulnerable and underserved populations and (2) challenges and obstacles to hazard mitigation implementation. The information collected during these workshops was incorporated into this section.
- The State agency/department hazard mitigation capability summaries in Appendix C – Capability Assessment Supplement were expanded to include the following new elements: capability category, effect on future mitigation, connection to addressing climate change impacts, equitable outcomes, connection to community lifelines, and 2024 SHMP goal(s) met.

Mitigation Capabilities provide the means to accomplish desired mitigation outcomes. Capabilities include laws, regulations, policies, programs, administrative and technical staffing and resources, funding, and people-powered capabilities such as volunteer groups.

5.0-2 OVERVIEW

This section provides a comprehensive review and evaluation of state and local capabilities used to support and facilitate mitigation activities and describes the process used by the State of New Jersey to support, promote, and coordinate mitigation planning at the county level.

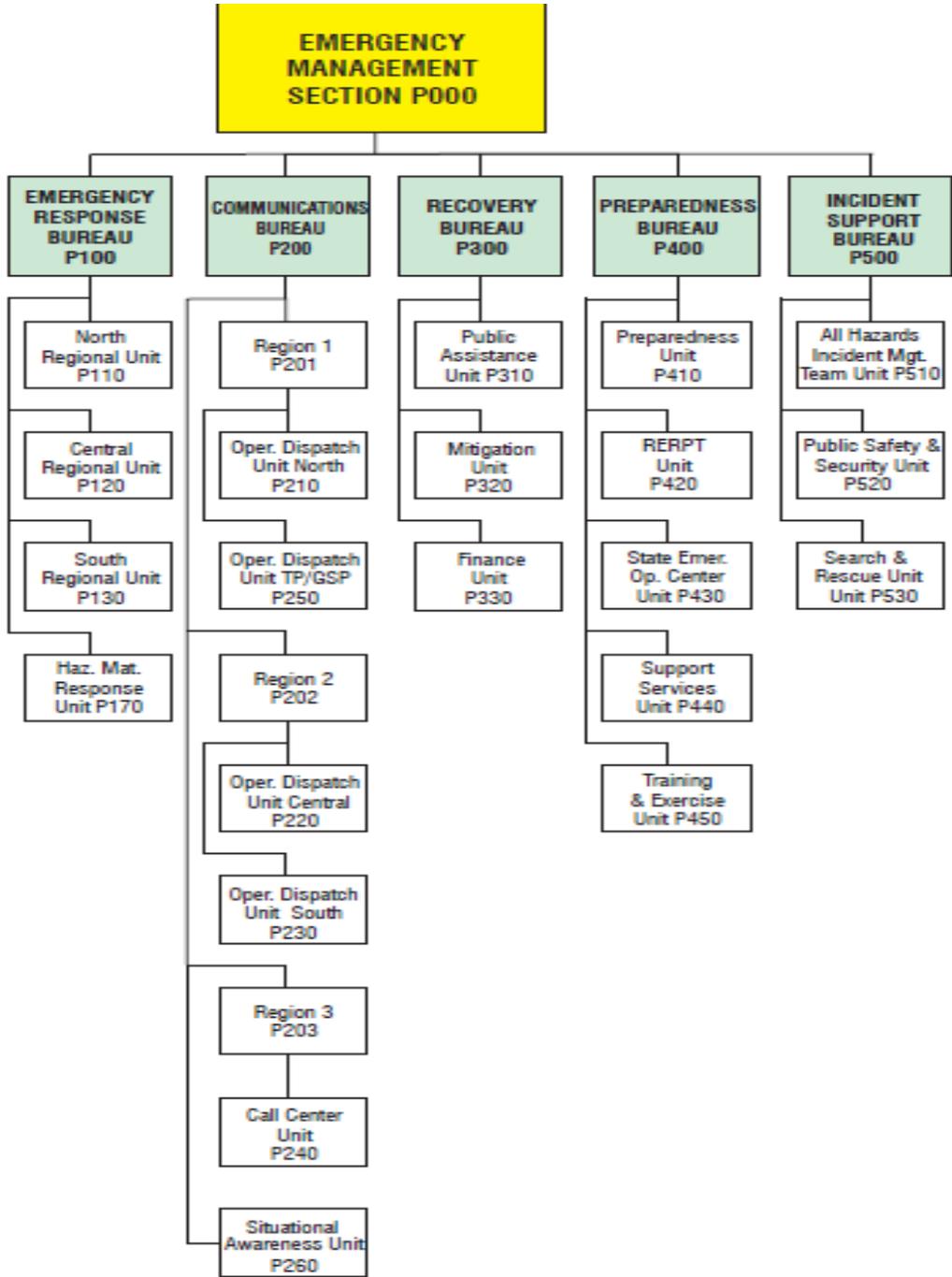
State agencies with identified capabilities in the 2019 SHMP were asked to review their capabilities, provide updates on changes to those capabilities, and add additional information such as effects on future mitigation, equitable outcomes, connection to community lifelines, and the associated 2024 SHMP goals met by the capability. Surveying of State agencies aimed to identify capabilities not captured in the 2019 SHMP, including new or emerging capabilities. The information collected was used to update and improve this section.

Agencies were invited to participate in stakeholder workshops in April and May 2023. In total, six workshops were held with a variety of focus areas, including healthcare systems and services; land use and economic development; natural and cultural resources; housing and social services; transportation; and water resources. A closing open house workshop was held, featuring breakout discussions with neighboring state agencies, county coordinators, and leaders of local HMPs. These workshops gathered information on capabilities, how agencies are addressing climate change, how agencies work to support socially vulnerable and underserved populations, and obstacles and opportunities for future implementation of hazard mitigation measures. Additionally, agencies built upon discussions of their current capabilities to begin brainstorming of problems and solutions to support the development of the mitigation strategy. Including representatives that attended multiple workshops, roughly 76 participants participated in these stakeholder workshops. Additionally, one-on-one meetings were held with agencies that were unable to attend the workshops or had more information to provide. Information collected from the stakeholder workshops and other meetings was used to improve information on the State's capabilities and included in the sections below.

5.0-3 ADMINISTRATION OF HAZARD MITIGATION PROGRAMS IN THE STATE

The Governor of the State of New Jersey is responsible for overseeing hazard mitigation activities in the State and for ensuring the State is adequately prepared for emergencies and disasters of all types and sizes. During an emergency, the Governor also plays a key role in communicating with the public during an emergency, providing advice and instructions, and maintaining calm and public order (National Governors Association 2023).

Figure 5.0-1 New Jersey Office of Emergency Management Organizational Chart



5.0-4 EMERGENCY MANAGEMENT

The Office of the Attorney General has the overall responsibility for emergency management activities in the State and exists in the Department of Law and Public Safety. Emergency management functions at the State level are coordinated by the Emergency Management Section (NJOEM) of the New Jersey State Police (NJSP). The Emergency Management Section Supervisor holds the rank of Major and serves as Assistant Deputy State Director, Office of Emergency Management (New Jersey State Police 2023). Hazard mitigation efforts in the State are largely coordinated through NJOEM's Recovery Bureau and Preparedness Bureau. The Emergency Management Section organizes, directs, staffs, coordinates, and reports the activities of the Emergency Response Bureau, Recovery Bureau, and Preparedness Bureau. The Emergency Management Section is under the command of the Deputy Superintendent of Homeland Security, who is the Deputy State Director, Office of Emergency Management. The section is also responsible for planning, directing, and coordinating emergency operations within the State that are beyond local control (New Jersey State Police 2023).

New Jersey State Hazard Mitigation Officer

Lt. Dinan Amin is the State of New Jersey State Hazard Mitigation Officer (SHMO) and serves as the official designated point of contact for New Jersey's mitigation program requirements. The SHMO serves within the NJOEM Mitigation Unit that administers the State's hazard mitigation program.

New Jersey Governor's Disaster Recovery Office (GDRO)

The GDRO's mission is to coordinate the multi-agency response to large-scale disaster events, such as COVID-19, Tropical Storm Ida, Superstorm Sandy, and other disasters, to ensure that every possible avenue of relief is pursued to assist in the recovery and rebuilding of the State. The GDRO also focuses on disaster resilience activities and sources of funding to mitigate damages from future events. The GDRO serves in a vital compliance role to ensure that federal disaster funds are expended in accordance with federal rules and are reported to the public in a transparent manner.

The GDRO officially assumed the role of the Governor's Office of Recovery and Rebuilding (GORR) in 2020 through the issuance of Governor Murphy's Executive Order (EO) No. 166. EO 166 formalized the GDRO's role for the Superstorm Sandy response and recovery, along with appointing the GDRO as the central point for oversight and coordination of COVID-19 federal funds and funding for all future disaster events. The GDRO works with other State agencies, including NJOEM (Federal Emergency Management Agency [FEMA] funding), New Jersey Department of Community Affairs's (NJCA) Disaster Recovery and Mitigation Division (HUD funding), and New Jersey Department of Environmental Protection (NJDEP) (United States Army Corps of Engineers [USACE] and FEMA/HUD funding) to ensure that the funding received from Congress is put toward the most effective uses, including those related to hazard mitigation.

The GDRO works closely with NJOEM, NJDEP, NJCA, and other areas of the Governor's Office in developing long-term hazard mitigation strategies. Important focus areas include updating the Flood Hazard Area Control Act, deploying pre-disaster programs, and weighing in on State legislation that might fund hazard mitigation activities or change flood hazard understanding.

New Jersey State Hazard Mitigation Team (SHMT)

The SHMT is an advisory committee that serves as a coordination point for all FEMA-funded natural hazard risk reduction and mitigation activities and projects that will be evaluated in conjunction with other federal- and State-funded recovery and resilience activities. The SHMT is responsible for periodically updating the SHMP and has the authority to call upon any other state, county, or local government agency, academic institutions, and nongovernmental entities to provide input to the SHMP. The SHMT meets following a Presidentially declared disaster event that results in FEMA funding for hazard mitigation or resilience being made available to the State of New Jersey to coordinate recovery activities. In lieu of a presidentially declared disaster, the SHMT meets annually.

Executive Order No. 344 was signed by Governor Murphy on October 6, 2023 to replace Executive Order No. 115 (1994). The updated Executive Order reorganized the SHMT and outlines the membership, roles, and responsibilities of the SHMT members.

The updated SHMT is comprised of seven members, which includes:

- The Executive Director of the GDRO;
- The SHMO;
- The Chief Resilience Officer, or designee;
- The State Director of Emergency Management, who is the Superintendent of State Police, or designee;
- The Commissioner of Community Affairs, or designee;
- The Commissioner of Transportation, or designee; and
- The Attorney General, or designee.

The Governor also can appoint additional members to the SHMT. The SHMT is co-chaired by the Executive Director of the GDRO and the SHMO.

5.0-5 STATE PRE- AND POST-DISASTER CAPABILITIES

Element S8 and 44 CFR § 201.4(c)(3)(ii): The State plan must include a discussion of the evaluation of the State’s hazard management policies, programs, capabilities, and funding sources to mitigate the hazards identified in the risk assessment. This includes an evaluation of State laws, regulations, policies, and programs related to hazard mitigation; State funding capabilities for mitigation actions and projects; and obstacles, challenges, and proposed solutions.

This section identifies and evaluates the State’s pre- and post-disaster capabilities, including:

- Legal, regulatory, planning, and programmatic capabilities
- Participation in national programs
- Funding capabilities

The sections below discuss the codes, ordinances, policies, laws, plans, and programs that guide growth and development. Section 5.0-6: State Participation in Federal Mitigation-Related Programs discusses the administration and application of national programs that incentivize or support mitigation activities, including the National Flood Insurance Program (NFIP), Community Rating System (CRS), and Risk Mapping, Assessment, and Planning (Risk MAP). Section 5.0-9: Funding Capabilities evaluates the State’s funding capabilities, including a summary of funding resources that the State has access to or is eligible to use, a description of how the State has used its own funding for hazard mitigation, and how FEMA funds have been used.

County capabilities are discussed in Section 5.0-12: Summary of Effectiveness of Local Mitigation Capabilities.

Legal, Regulatory, and Planning Capabilities

Federal and state departments and agencies, in coordination with the NJOEM, conducted a thorough review of their legal, regulatory, planning, and programmatic capabilities relating to hazard mitigation. The responsible agency for each capability and the hazard(s) of concern that the capability helps to mitigate were identified and updated, as appropriate.

Federal Capabilities

Table 5.0-1 lists the federal planning and regulatory pre- and post-disaster capabilities that are available to the State of New Jersey. These planning and regulatory capabilities are described in detail in Appendix C – Capability Assessment Supplement.

Table 5.0-1 Summary of Planning and Regulatory Pre- and Post-Disaster Capabilities – Federal

Agency, Program, or Regulation	Details	
Disaster Mitigation Act of 2000 (DMA 2000) P.L. 106-390	Responsible Agency: Hazard:	FEMA All natural hazards
	Responsible Agency:	FEMA

Agency, Program, or Regulation	Details	
Code of Federal Regulations, Standard State Mitigation Plans (44 CFR PART 201.4)	Hazard:	All natural hazards
Robert T. Stafford Disaster Relief and Emergency Assistance Act	Responsible Agency: Hazard:	FEMA All natural hazards
Disaster Recovery Reform Act	Responsible Agency: Hazard:	FEMA All natural hazards
Presidential Policy Directive 8 (PPD-8)	Responsible Agency: Hazard:	Department of Homeland Security and NJ Office of Homeland Security and Preparedness All hazards
National Flood Insurance Program (NFIP)	Responsible Agency: Hazard:	FEMA Flood
Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004	Responsible Agency: Hazard:	FEMA. NJDEP and NJOEM at State level. Flood
Biggert Waters National Flood Insurance Reform Act of 2012	Responsible Agency: Hazard:	FEMA Flood
Homeowner’s Flood Insurance Affordability Act	Responsible Agency: Hazard:	FEMA Flood
NFIP CRS	Responsible Agency: Hazard:	FEMA Flood
U.S. Army Corps of Engineers – Dam Safety Program	Responsible Agency: Hazard:	USACE Dam & Levee Failure
Emergency Support Function (ESF) #14, Long-Term Recovery Planning	Provides Funding for Mitigation: Hazard:	No All hazards

State Capabilities

State laws set regulations or grant authorities for counties and municipalities. Table 5.0-2 lists the State-level planning and regulatory pre- and post-disaster capabilities in the State of New Jersey.

Table 5.0-2 Summary of Planning and Regulatory Pre- and Post-Disaster Capabilities –State

Capability	Details	
Municipal Land Use Law	Responsible Agency: Hazard:	State of New Jersey All Hazards
New Jersey Soil Erosion and Sediment Control Act (N.J.S.A. 4:24)	Responsible Agency: Hazard:	Soil Conservation Districts Geological Hazards, Flood
Uniform Construction Code (UCC)	Responsible Agency: Hazard:	NJDCA All Hazards
Growth Management Policy	Responsible Agency: Hazard:	State Planning Commission All Hazards
Flood Hazard Area Control Act (N.J.S.A. 58:16A-52) Flood Hazard Area Control Regulation (N.J.A.C. 7:13)	Responsible Agency: Hazard:	NJDEP Coastal Erosion, Flood
Wetlands Act of 1970 (N.J.S.A. 13:9A – 1 to 10) Coastal Zone Management Rules Program (N.J.A.C.7:7E) Coastal Zone Management Adopted Amendment (N.J.A.C. 7:7-16.9)	Responsible Agency: Hazard:	NJDEP Coastal Erosion, Flood, Hurricane/Nor’easter/Tropical Storm
Coastal Zone Management Rules Program (N.J.A.C.7:7E) Coastal Zone Management Adopted Amendment (N.J.A.C. 7:7-16.9)	Responsible Agency: Hazard:	NOAA, NJDEP Coastal Erosion, Flood, Hurricane/Nor’easter/Tropical Storm
	Responsible Agency:	NJDEP

Capability	Details	
Freshwater Wetland Protection Act (N.J.S.A. 13: B:1) Freshwater Wetland Protection Rules (N.J.A.C. 7:7A)	Hazard:	Flood, Harmful Algal Bloom
Waterfront Development Statute (N.J.S.A. 12:5-1) Coastal Permit Program (N.J.A.C. 7:7)	Responsible Agency:	NJDEP
	Hazard:	Coastal Erosion, Flood, Hurricane/Nor'easter/Tropical Storm
Coastal Area Facility Review Act (CAFRA) (N.J.S.A. 13:19)	Responsible Agency:	NJDEP
	Hazard:	Coastal Erosion, Flood, Hurricane/Nor'easter/Tropical Storm
Pinelands Protection Act (N.J.S.A. 13: 18A-30 to 49)	Responsible Agency:	Pinelands Commission
	Hazard:	Flood, Wildfire
Pinelands Comprehensive Management Plan (N.J.A.C.7:50)	Responsible Agency:	Pinelands Commission
	Hazard:	Flood, Wildfire
Highlands Water Protection and Planning Act (N.J.S.A. 13:20-1)	Responsible Agency:	NJDEP
	Hazard:	Drought, Geological Hazards
Tidelands Act (N.J.S.A 12:3)	Responsible Agency:	Tidelands Resource Council
	Hazard:	Coastal Erosion, Flood, Hurricane/Nor'easter/Tropical Storm
State Planning Act (N.J.S.A. § 52:18A-196 et seq)	Responsible Agency:	New Jersey State Planning Commission (SPC)
	Hazard:	All Hazards
Stormwater Management Rules (N.J.A.C.7:8)	Responsible Agency:	NJDEP
	Hazard:	Flood
New Jersey Pollutant Discharge Elimination System (NJPDDES) Stormwater Regulation Program (NJPDDES) Rules (N.J.A.C.7:14A)	Responsible Agency:	NJDEP
	Hazard:	Flood, Harmful Algal Blooms, Hazardous Substances
Construction Permits (N.J.S.A. 13: 1D-29 to 34)	Responsible Agency:	NJDEP
	Hazard:	Flood
New Jersey Green Acres Land Acquisition Act of 1961	Responsible Agency:	NJDEP
	Hazard:	Coastal Erosion, Flood, Hurricane/Nor'easter/Tropical Storm, Severe Weather
Emergency Building Inspection Act (N.J.S.A. 52:27D-126.3)	Responsible Agency:	NJDCA
	Hazard:	All Hazards
New Jersey Civilian Defense and Disaster Control Act	Responsible Agency:	NJOEM
	Hazard:	All Hazards
N.J.S.A. 38A:17-1	Responsible Agency:	NJOEM
	Hazard:	All Hazards
Forest Fire Prevention and Control Act (N.J.S.A. 13:9-44 to 44.10)	Responsible Agency:	New Jersey Forest Fire Service
	Hazard:	Wildfire
N.J.S.A. 52:14E-11 (3-10-2003) The Fire Service Resource Emergency Deployment Act	Responsible Agency:	NJDCA, New Jersey Forest Fire Service
	Hazard:	All Hazards
Best Management Practices for Creating and Maintaining Wildfire Fuelbreaks in New Jersey's Wildland Urban Interface, 2011	Responsible Agency:	New Jersey Forest Fire Service
	Hazard:	Wildfire

5.0-6 STATE PARTICIPATION IN FEDERAL MITIGATION-RELATED PROGRAMS

There are several national programs that incentivize or support mitigation activities, including the NFIP, CRS, Risk MAP, and the newly established Community Disaster Resilience Zones Act. These programs are a key component of State hazard mitigation capabilities. The following sections discuss the administration and application of these programs in the State of New Jersey.

National Flood Insurance Program (NFIP)

The NFIP is a federal program that was established to allow property owners in participating communities to purchase insurance protections against losses from flooding. Participation in the NFIP is based on an agreement between local communities and the federal government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction and substantial improvements in Special Flood Hazard Areas (SFHA), the federal government will make flood insurance available within the community (FEMA 2020).

The NFIP is administered by the Federal Insurance and Mitigation Administration (FIMA) and the Mitigation Directorate, components of the FEMA. The NJDEP provides floodplain management assistance to local communities throughout the State through the NFIP Community Assistance Program. NJDEP currently carries out its responsibilities under the Community Assistance Program with its current floodplain staff within the Flood Engineering and Climate Resilience Design section. As of June 2023, 552 of the State's 566 municipalities and the New Jersey Sports and Exposition Authority participate in the NFIP (NJDEP 2023). As of July 31, 2023, there are 178,285 flood insurance policies in force within the State, totaling more than \$46.9 billion in insurance and more than \$146 million in annual premiums (National Flood Insurance Program 2023).

NFIP Staffing, Resources, and General Administration of Program

The Floodplain Management Section of the NJDEP, the Bureau of Dam Safety and Flood Control, is divided into three main units consisting of the Flood Risk Mitigation Unit, the Flood Risk Analysis and Mapping Unit, and the Community Assistance Program Unit. The Floodplain Management Section also includes the Office of the NJ State NFIP Coordinator, which is responsible for coordinating NFIP program aspects of floodplain management throughout the State of NJ (NJDEP Division of Land Resource Protection 2022). NJOEM provides support to increase floodplain management and awareness throughout the State.

Risk Rating 2.0: Equity in Action

Since the 2019 SHMP, FEMA introduced Risk Rating 2.0: Equity in Action to consider specific characteristics of a building to provide a more modern, individualized, and equitable flood insurance rates. The new rating methodology considers frequency of flooding, multiple flood types, proximity to flood sources, and building characteristics such as first floor heights and costs to rebuilt. The update was rolled out in October 2021 through April 2022, and as of April 1, 2023, has been fully implemented (FEMA 2022). According to a July 10, 2023, article by NJ Spotlight News, 12,000 NFIP flood insurance policies in the State of New Jersey have been dropped since Risk Rating 2.0 became effective. The drop in flood insurance coverage has been attributed to rising flood insurance costs based on Risk Rating 2.0's new flood insurance calculations (NJ Spotlight News 2023). Homeowners that elect to drop NFIP insurance policies will no longer have access to FMA funding for future mitigation efforts. At the time of this SHMP update, it is difficult to determine what the aggregate cost increase through Risk Rating 2.0 will be on post-mitigation properties.

The State NFIP Coordinator's Office is finding it to be increasingly difficult to communicate the benefits of mitigation to some property owners where insurance rates are likely to stay high even after mitigation due to factors such as proximity to flood sources and frequency of flooding. Continued shifts in flood insurance costs, coverage, impacts to mitigation of floodprone properties, and potential updates to Risk Rating 2.0 will be monitored by the State throughout the period of performance of the 2024 SHMP.

Community Rating System (CRS)

The CRS is a voluntary program within the NFIP that encourages floodplain management activities that exceed the minimum NFIP requirements. For participating communities, flood insurance premium rates are discounted in increments of 5 percent. For example, a Class 1 community would receive a 45 percent premium discount, and a Class 9 community would receive a 5 percent discount. Class 10 communities are those that do not participate in the CRS; they receive no discount. CRS activities can help to save lives and reduce property damage. Communities participating in the CRS represent a significant portion of the nation's flood risk; over 66 percent of the NFIP's policy base is located in these communities. As of October 2023, 92 municipalities in New Jersey participate in the CRS program. 16 municipalities are Class 5, 2 municipalities are Class 4, and 1 municipality is Class 3 (FEMA 2023).

Community Assistance Visits (CAV) and Community Assistance Contacts (CAC)

FEMA evaluates NFIP minimum compliance through compliance audits known as CAVs or CACs. CAVs and CACs are performed to ascertain community compliance with the NFIP, at entry into the CRS, and to maintain participation in the CRS. FEMA may conduct these with Region 2 staff, with NJDEP staff under the Compliance Assistance Program – State Support Services Element (CAP-SSSE) grant, or with private contractors. While there is some flexibility in how a CAV or a CAC is conducted, CAVs are generally more rigorous than CACs (NJDEP 2023).

FEMA evaluates the following key areas in a compliance audit:

- The Community's Flood Damage Prevention Ordinance
- Mapping Products and other Ordinances used to regulate floodplain development
- Floodplain Development Permitting Procedures
- Floodplain Permit Applications and other Forms/Records, including Substantial Damage and Improvement Determinations
- Floodplain Development Review and Performance Standards
- Floodplain Development Permits Issued to Applicants (NJDEP 2023)

Risk Mapping, Assessment, and Planning (Risk MAP)

FEMA works with federal, state, tribal, and local partners across the nation to identify flood risk and promote informed planning and development practices to help reduce that risk through the Risk MAP program. Risk MAP provides high-quality flood maps and information, tools to better assess the risk from flooding, and planning and outreach support to communities to help them take action to reduce (or mitigate) flood risk. Each Risk MAP flood risk project is tailored to the needs of each community and may involve different products and services.

According to the Risk MAP Progress interactive map available online at the time of this plan update, there are numerous active Risk MAP projects taking place throughout New Jersey (FEMA n.d.). FEMA coordinates and works directly with municipal floodplain managers during the Risk MAP project process. The State NFIP Coordinator is kept apprised of project activities and consults as needed.

Since 2006, the NJDEP and FEMA have maintained a Cooperating Technical Partnership Agreement (CTP) to perform map production together to build the next generation of FEMA and State flood mapping. New Jersey will continue to take the lead in prioritizing projects, coordinating available data sources, conducting outreach, and all essential components of data production and map adoption. Moving forward, NJDEP will be developing new floodplain data, producing digital Flood Insurance Rate Maps (FIRMs) and post-preliminary processing (NJDEP Bureau of Flood Engineering 2023).

New Jersey will integrate its mapping program with the FEMA program. This integration hinges on creating FEMA FIRMs for New Jersey, which delineate the New Jersey Flood Hazard Area Design Flood (NJFHADF) on the mapping and plots the NJFHADF water levels on the stream profiles, the State's regulatory standard. The NJFHADF is based on the 100-year flood discharge plus 25 percent. The State is obligated to compare the State flood elevations and floodway with the FEMA data for higher flood levels and wider floodways. By including the NJFHADF on the FIRM, the State would be able to use the FEMA FIRMs as the single source for both federal and state floodplain management, freeing up staff resources and reducing errors (NJDEP Bureau of Flood Engineering 2023).

Inland Flood Protection Rule

As a result of increasing flooding from extreme rainfall events, NJDEP has developed the Inland Flood Protection Rule, which consists of revisions to portions of both the Flood Hazard Area Control Act Rules and the Stormwater Management rules. The Inland Flood Protection Rule became effective July 2023 and aims to ensure that areas at most significant risk to inland flooding are better defined and that new and reconstructed assets in these areas are designed and constructed using the best available climate-informed precipitation data (NJDEP 2023). The Rule accomplishes the following:

- Establishes the new Design Flood Elevation (DFE), which raises fluvial (non-tidal) flood elevation mapped by NJDEP by 2 feet

- Requires use of future projected precipitation when calculating flood elevations
- Ensures that NJDEP’s Flood Hazard Area permits conform to NJ UCC standards and meet or exceed minimum FEMA NFIP requirements
- Requires stormwater Best Management Practices (BMPs) to be designed to manage runoff for both today’s storms and future storms
- Removes use of Rational and Modified Rational methods for stormwater calculations
- Requires use of NOAA Atlas 14 precipitation data circa 1999 to be updated to the present day when calculating floodway limits (NJDEP 2023)

NJDEP is currently developing a complimentary coastal rule changes to address increasing flood risk in coastal areas due to increased precipitation, sea-level rise, and storm surge threats. This rule is anticipated to be released in 2024.

Community Disaster Resilience Zones

The Community Disaster Resilience Zones Act was signed into law on December 20, 2022. The Act amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act and requires FEMA to utilize a natural hazard risk assessment index to identify census tracts which are most at risk from the effects of natural hazards and climate change. Using the National Risk Index datasets, FEMA has identified the most at-risk and in-need communities to create resilience zones. These designated zones will provide geographic focus for financial and technical assistance from public, private, and philanthropic agencies and organizations for the planning and implementation of resilience projects (FEMA 2023). Community Disaster Resilience Zones (CDRZs) have been identified by FEMA on September 6, 2023 in Atlantic, Bergen, Cumberland, and Hudson counties. NJOEM and FEMA are identifying opportunities to provide technical assistance to these CDRZs.

5.0-7 REGIONAL, COUNTY, AND LOCAL PLANNING

Plans are often developed at the county and regional level in the State of New Jersey, but the majority of regulations are adopted and enforced by local municipalities. New Jersey’s municipalities are granted the ability to establish and enforce various ordinances and planning requirements. New Jersey’s Home Rule Act (1917) grants municipal governments broad authorities to enact ordinances and regulations providing for public welfare and order and stands as one of the major sources of authorization for local autonomy in the State. Municipalities can leverage these powers to address local conditions that affect their residents. To ensure a minimum set of standards, New Jersey has passed laws and regulations mandating that each municipality adopt local ordinances with the same basic criteria so that jurisdictions may add additional requirements but cannot have fewer requirements than the State.

Master Plans

The Municipal Land Use Law (MLUL) of 1975 (N.J.S. 40:55D-1 et seq.) grants municipalities the power to enact a master plan which has a land use element. Master plans create the foundation for the local zoning and land ordinances that govern development. These plans help jurisdictions review their land use plans and policies with public participation. The MLUL provides the required components of a municipal master plan and requires all zoning ordinances to be consistent with the master plan. The local zoning administrator as well as the volunteer planning and zoning board members have the responsibility to interpret and enforce the municipality’s master plan.

In recognition of the critical need for climate science to inform land use planning, on February 4, 2021, Governor Phil Murphy signed into law P.L. 2021, c6. This law requires municipalities to incorporate a climate change-related hazard vulnerability assessment into any Master Plan Land Use Element adopted after the signing.

According to the amended law, these vulnerability assessments must rely on the most recent natural hazard projections and best available science provided by the NJDEP. They must also consider environmental effects associated with climate change, including but not limited to temperature, drought, and sea-level rise, and contain measures to mitigate reasonably anticipated natural hazards, such as coastal storms, shoreline erosion, flooding, storm surge, and wind.

Zoning Ordinances

The authority to regulate land use is encompassed within the powers granted to the legislative branch of government by Article III of the New Jersey Constitution of 1947. The legislature, however, is authorized by Article IV, Section VI, paragraph 2, to delegate some of its power to municipalities. This has been done by virtue of several land use laws, including the MLUL, which grants municipalities the power to enact a master plan which has a land use element and to adopt a zoning ordinance (N.J.S. 40:55D-28 and 40:55D-62). Under the MLUL, each municipality must adopt a zoning ordinance. A property owner can request a variance from the municipality, and if granted, the owner can use the land in a way that is ordinarily not permitted by the local zoning ordinance. Zoning ordinances have three major constraints:

- Municipalities may not exercise authority in ways that conflict with provisions of the federal or state constitutions.
- Municipal authority may not be exercised in conflict with authority exercised by the county, state, or federal governments.
- Municipal authority must be exercised in strict conformity with the provisions of the MLUL.

Each municipal clerk is required to file a copy of the planning and zoning ordinances of the municipality with the county planning board (NJ Statute 40:27-6.10). The local zoning administrator, as well as the volunteer planning and zoning board members, have the responsibility to interpret and enforce the municipality's zoning and other land development ordinances.

Subdivisions

The MLUL also dictates subdivisions in New Jersey. The MLUL allows every municipality in the State to adopt its own building and land use laws within a municipal boundary, and all property owners must abide by these laws.

The board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities (NJ Statute 40:27-6.2).

Building Codes

Building codes mandate best practices and technology, much of which is designed to reduce or prevent damage from occurring when structures are under stress. As evidenced during recent storm events (e.g., Hurricane Irene and Superstorm Sandy), structures built to code and sufficiently elevated suffer far less damage during hazard events. In New Jersey, municipalities are required to adopt the New Jersey State Uniform Construction Code (UCC). The MLUL (N.J.S.A. 40:55D-1) permits every municipality in the State to adopt its own building regulations, in which all property owners must abide by these regulations at a local level. Building regulations can be amended to be more stringent than the requirements of the UCC but not to be more lax.

The UCC Act authorizes the Commissioner of the Department of Community Affairs to adopt and enforce rules pertaining to construction codes and provides for the administration and enforcement of those rules throughout the State. The UCC (N.J.A.C. 5:23) contains the UCC Act and all rules issued under the Act relating to the administration and enforcement of construction regulations. The UCC is composed of four basic technical subcodes for construction: building, electrical, fire protection, and plumbing. In addition, the UCC contains technical subcodes for fuel gas installations; mechanical installations; one- and two-family dwellings; accessible (barrier free) construction; the rehabilitation of existing buildings; the construction of manufactured homes; asbestos hazard abatement; radon hazard abatement; and playground safety. In New Jersey, State-licensed, municipally employed code enforcement professionals (construction officials, subcode officials, and inspectors) are responsible for the enforcement of the UCC (NJDC n.d.). The State is conducting ongoing efforts to educate local building code officials about the requirements and enforcement of the UCC.

Stormwater Management Ordinances

Title 7 of the NJ Administrative Code (N.J.A.C. 7:8) establishes design and performance standards for management of stormwater that address water quality, water quantity, and recharge. All municipal stormwater control ordinances must be designed to:

- 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.
- Maintain ground water 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 in order to restore, enhance and maintain the chemical, physical, and biological integrity of the waters of the State, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial and other uses of water.
- Protect public safety through the proper design and operation of stormwater management basins.

Municipal ordinances can be amended to be more stringent than the requirements of the Stormwater Management rules but not to be more lax. The Residential Site Improvement Standards (RSIS) allow municipalities to require stormwater runoff controls for development falling below major development to address groundwater recharge and stormwater runoff quantity, but not for water quality as provided in the RSIS at N.J.A.C. 5:21-7.1 (NJDEP 2023).

Amendments to New Jersey's stormwater management rules in 2021 include the required use of green infrastructure practices that use or mimic the natural water cycle to capture, filter, absorb, and/or re-use stormwater.

Stormwater Management Plans

In response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999, the NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.) was developed. This rule includes establishment of the Municipal Stormwater Regulation Program and four NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities as well as public complexes and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s). These rules set forth the required components of regional and municipal stormwater management plans.

A municipal stormwater management plan (MSWMP) documents the strategy of a specific municipality to address stormwater-related impacts. A plan may address an existing water quantity issue, such as localized flooding; an existing water quality issue, such as excess pollutant loading; or issues of water quantity and quality that may be generated by future development. MSWMPs provide the structure and process for addressing stormwater management in the municipality. They are required by the Environmental Protection Agency's Phase II Stormwater Permitting Rules; the mandatory elements of the plan are described in the Stormwater Management Rule. Counties can also develop stormwater management plans to identify and develop solutions to problems that can be managed most effectively on a regional basis (NJDEP 2004).

Shoreline Management

The Coastal Area Facility Review Act (CAFRA) (N.J.S.A. 13:19) regulates almost all development along the coast involved in residential, commercial, or industrial sectors for activities including construction, relocation, and enlargement of buildings or structures; and all related work, such as excavation, grading, shore protection structures, and site preparation. This law is implemented through New Jersey's Coastal Zone Management Rules (N.J.A.C. 7:7E-1.1 et seq). The law divides the CAFRA area into pieces or zones and regulates different types of development in each zone. Generally, the closer a structure is to the water, the more rigorous the development regulations.

Table 5.0-3 lists the regional, county, and local planning and regulatory pre- and post-disaster capabilities in the State of New Jersey.

Table 5.0-3 Summary of Planning and Regulatory Pre- and Post-Disaster Capabilities – Regional, County, and Local

Capability	Details	
Land Use Planning Policy	Responsible Agency: Hazard:	Local Planning Boards, Zoning Boards of Adjustment, and County Planning Boards All Hazards
Building Codes Policy	Responsible Agency: Hazard:	Local Building Departments Earthquake, Extreme Temperatures, Flood, Hurricane/Nor'easter/Tropical Storm, Severe Weather, Severe Winter Weather, Wildfire
Floodplain Management Policy	Responsible Agency: Hazard:	NJDEP Flood
Growth Management Policy	Responsible Agency: Hazard:	State Planning Commission, county boards of commissioner, local municipalities All Hazards
New Jersey State Emergency Operations Plan	Responsible Agency: Hazard:	NJOEM All hazards
County and Local Emergency Operation Plans	Responsible Agency: Hazard:	County and Local Offices of Emergency Management All Hazards
Connections 2050 Plan for Greater Philadelphia, September 2021	Responsible Agency: Hazard:	The DVRPC and the four NJ participating counties. Climate Change and Sea-Level Rise, Flood, Severe Weather
Climate Change Vulnerability and Risk Assessment of New Jersey's Transportation Infrastructure (December 2011)	Responsible Agency: Hazard:	NJTPA All Hazards
Resilient NJ Program	Responsible Agency: Hazard:	NJDEP All Hazards
NJTPA Passaic River Climate Resilience Planning Study	Responsible Agency: Hazard:	NJTPA Flood, Sea-Level Rise, Extreme Heat, Storm Surge, Extreme Precipitation
New York/New Jersey Harbor & Tributaries Focus Area Feasibility Study	Responsible Agency: Hazard:	USACE, New York District Coastal Erosion, Flood, Hurricane/Nor'easter/Tropical Storm
New Jersey Back Bays Coastal Storm Risk Management Study	Responsible Agency: Hazard:	USACE, Philadelphia District Coastal Erosion, Flood, Hurricane/Nor'easter/Tropical Storm

5.0-8 POLICIES AND PROGRAMMATIC CAPABILITIES

Federal Pre- and Post-Disaster Hazard Management Policies, Programs, and Capabilities

Numerous federal agencies have specific capabilities that support pre- and post-disaster hazard management in the State of New Jersey.

FEMA

FEMA is responsible for providing assistance before, during, and after disasters. FEMA is the federal reviewer of hazard mitigation plans, sets federal standards for local and state hazard mitigation plans, and funds hazard mitigation plans.

National Dam Safety Program (NDSP): The NDSP is a partnership of state and federal agencies, and other stakeholders that encourages individual and community responsibility for dam safety to protect people from dam failures. It is administered through the Department of Homeland Security and FEMA. The program improves safety and security around dams by providing assistance grants to state dam safety agencies to assist them in improving their regulatory programs; producing educational materials for dam owners; funding research to enhance technical expertise as dams are built and rehabilitated; establishing training programs for dam safety inspectors; and creating a National Inventory of Dams (NID) (FEMA 2023).

Joint Field Office (JFO): FEMA establishes a JFO in support of every federally declared disaster in the State. Once a disaster is declared by the President, federal disaster recovery resources undertake efforts to build and staff a JFO where FEMA and the State can coordinate disaster recovery within three days. From the JFO, FEMA and the State coordinate the disaster response and recovery efforts for areas affected by disasters. Staffing at the JFOs includes FEMA, NJOEM, and various State agencies. Other possible agencies staffing and providing services at the JFO include the Small Business Administration, U.S. Environmental Protection Agency, and others. The JFO facilitates interagency cooperation between federal and state agencies. The JFO support includes personnel to assist with Preliminary Damage Assessments, Public Assistance, and Hazard Mitigation Assistance activities (FEMA 2006).

Federal Energy Regulatory Commission Dam Safety Program

The Federal Energy Regulatory Commission (FERC) has the largest dam safety program in the United States, cooperating with many federal and state agencies to ensure and promote dam safety and, more recently, homeland security, on dams associated with hydropower. Currently, there are approximately 7 dams in New Jersey regulated and inspected by FERC. Every five years, an independent consulting engineer, approved by the FERC, must inspect and evaluate projects with dams higher than 32.8 feet (10 meters) or with a total storage capacity of more than 2,000 acre- feet (FERC, 2011).

HURREVAC

HURREVAC is the decision support tool of the National Hurricane Program, administered by FEMA, the United States Army Corps of Engineers (USACE), and the National Atmospheric and Oceanic Administration (NOAA) National Hurricane Center (HURREVAC n.d.). The NJOEM has established a strong working group with all 21 county Offices of Emergency Management (OEMs) to use HURREVAC software for tracking hurricanes. HURREVAC allows NJOEM and counties to work as a unified team, coordinating notification, communication, activations, public warning, and evacuation and sheltering efforts. By operating together, the State and the counties serve the public better by providing the same advisories and actions.

National Weather Service (NWS)

The NWS monitors weather and delivers weather forecasting for New Jersey. Most of the State is serviced by the Mount Holly weather forecast office (WFO). Passaic, Bergen, Essex, Hudson, and Union County are covered by the New York WFO. NJOEM uses conference calling with the NWS and county OEMs to share specific information and needs when severe weather is forecast. When an approaching storm warrants monitoring, NJOEM sends out e-mails with State Emergency Operations Center (SEOC) status information and advice embedded in jpeg files to keep all emergency managers statewide up to date with NJOEM's direction. Resources are deployed as early as possible to prepare for storm impacts. The NWS also offers various education and training programs on weather-related hazards (NWS 2023).

StormReady Program: The NWS operates the StormReady program, which encourages communities to take a new, proactive approach to improving local hazardous weather operations by providing emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. To be recognized by the program, a community must establish a 24-hour warning point and emergency operations center; have more than one way to receive severe weather warnings and forecasts and to alert the public; create a system that monitors weather conditions locally; promote the importance of public readiness through community seminars; and develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises (NWS n.d.).

U.S. Army Corps of Engineers (USACE)

The USACE works to strengthen the nation's security by building and maintaining America's infrastructure and providing military facilities where servicemembers train, work, and live. Projects include dredging, storm damage reduction, and ecosystem restoration in and near waterways (USACE n.d.). New Jersey is serviced by the Philadelphia and New York districts. USACE has numerous initiatives to support hazard mitigation measures, which are described below.

Silver Jackets: Silver Jackets, developed by USACE, is the State-level implementation program for the National Flood Risk Management Program. The program's goals are to leverage information and resources from federal, state, and local agencies to improve flood risk management; improve public risk communication through a united effort; and create a mechanism to

collaboratively solve issues and implement initiatives beneficial to local communities. The USACE Philadelphia District organizes this program in New Jersey.

Climate Preparedness and Resilience Community of Practice: The Practice develops and implements practical, nationally consistent, and cost-effective approaches and policies to reduce potential vulnerabilities to the nation's water infrastructure resulting from climate change and variability (USACE n.d.).

Planning Assistance to States (PAS) Program: Section 22 of the 1974 Water Resources Development Act provides authority for the USACE to assist states, local governments, Native American Tribes, and other non-federal entities in the preparation of comprehensive plans for the development and conservation of water and related land resources. Types of work that can be done include: Water Quality Studies, Wetland Evaluation Studies, Flood Plain Management Studies, Coastal Zone Management/Protection Studies, Harbor/Port Studies, or other water resource planning investigations. The individual non-federal sponsors determine the needed planning assistance (USACE n.d.).

Flood Plain Management Services Program (FPMS): Section 206 of the 1960 Flood Control Act (PL 86-645), as amended, provides the authority for the USACE to provide assistance and guidance on all aspects of floodplain management planning. The program develops or interprets site-specific data on obstructions to flood flows, flood formation, and timing and the extent, duration, and frequency of flooding. Upon request, program services are provided to the State, regional, and local governments, Native American Tribes, and other non-federal public agencies without charge (USACE n.d.).

Inspection of Completed Works (ICW) Program: Civil works structures whose failure or partial failure could jeopardize the operational integrity of the project, endanger the lives and safety of the public, or cause substantial property damage, are periodically inspected and evaluated to ensure their structural stability, safety, and operational adequacy. For those structures constructed by the USACE and turned over to others for operation and maintenance, the operating entity is responsible for periodic inspection and evaluation. The USACE may conduct the inspection on behalf of the project sponsor provided appropriate reimbursement to the USACE is made. However, the USACE may participate in the inspection with the operating entity at the government's expense (USACE 2023).

Rehabilitation and Inspection Program (RIP): The Rehabilitation and Inspection Program is a USACE program that provides for inspection of flood control projects, the rehabilitation of damaged flood control projects, and the rehabilitation of federally authorized and constructed hurricane or shore protection projects (USACE n.d.).

Dam Safety Program: The USACE is responsible for safety inspections of some federal and non-federal dams in the United States that meet the size and storage limitations specified in the National Dam Safety Act. USACE has inventoried dams and has surveyed each state and federal agency's capabilities, practices, and regulations regarding design, construction, operation, and maintenance of the dams. USACE has also developed guidelines for inspection and evaluation of dam safety (USACE 1997).

U.S. Geological Survey (USGS)

USGS maintains a network of gauges across New Jersey that continuously measure lake, reservoir table, stream, and tidal levels. These data sets are transmitted to the USGS and made available over the Internet. As project needs and funding levels change, gauges may be added or deactivated, and deactivated gauges may be reactivated (USGS 2023). USGS provides data to the Department of Environmental Protection for drought determinations. USGS also recovers high water marks post-coastal flooding (USGS 2018).

State and Regional Pre- and Post-Disaster Hazard Management Policies, Programs, and Capabilities

Numerous agencies and organizations in the State of New Jersey have policies, programs, and other related capabilities that support pre- and post-disaster hazard management.

Delaware River Basin Commission (DRBC)

The DRBC provides a unified approach to managing the Delaware River without regard to political boundaries. Commission programs include water quality protection; water supply allocation, water conservation initiatives and watershed planning; regulatory review (permitting); flow and drought management; flood loss reduction; and recreation (DRBC 2023). The signatory members of this regional body include the state governors of Delaware, New Jersey, New York, and Pennsylvania and the Division Engineer, North Atlantic Division, U.S. Army Corps of Engineers, who serves as the federal representative. The DRBC also established an Advisory Committee on Climate Change in 2019 to provide the Commission with vital expertise, information, and advice as the DRBC endeavors to maintain and improve stream flows, water quality, habitat, wetlands, and watersheds in the face of changing hydrologic conditions and sea-level rise.

Flood Early Warning System

The Flood Hazard Area Control Act (N.J.S.A. 58:16A-66 et seq.) granted the Commissioner of the Department of Environmental Protection authority to develop a flood early warning system in consultation with the USACE and in coordination with NJOEM in the Division of State Police. NJDEP/NJOEM have led the efforts for the development of the flood early warning system. NJOEM and several of the counties in the central and northern tier of the State above the coastal plain have live rain, stream, and flood gauges. In the back bays and along tidal waters in 14 coastal counties, the U.S. Geological Survey (USGS) manages the New Jersey Tide Telemetry System. All systems transmit telemetry continuously to the NWS, USGS, State Climatologist, NJDEP, NJOEM, and all affected counties and many municipalities. These systems were created and installed with federal assistance through NOAA and USACE.

Monmouth University's Urban Coast Institute (UCI)

The UCI maintains a principal focus on the interactions between humans and the coastal and ocean environment and sustainable coastal development along New Jersey's coasts and watersheds. The UCI seeks to foster collaboration among citizens, watershed and community organizations, governmental agencies, business, the scientific community, and other parties interested in coastal and watershed management, conservation, and restoration. UCI offers trainings and seminars related to coastal issues and floodplain management (Monmouth University 2023).

New Jersey Association of Floodplain Managers (NJAFM)

NJAFM is a statewide organization of over 500 members and is a chapter of the National Association of State Floodplain Managers (ASFPM). NJAFM offers an annual conference, training, seminars, and certification in floodplain management, the National Flood Insurance Program, the Certified Floodplain Manager (CFM) Program for local officials, and NFIP's CRS (NJAFM n.d.).

New Jersey Board of Public Utilities (BPU)

BPU works with private utility companies to provide analysis of natural hazard information affecting the provision of electric power, telecommunications, public water, sewage collection and treatment, and other regulated public utilities. The data is used during response and recovery efforts in the event of emergency or disaster and is also used to analyze impact of mitigation plans and projects. BPU also provides technical assistance for the Energy Resiliency Program.

New Jersey Cultural Alliance for Response (NJCAR)

NJCAR is a network of organizations, associations, agencies, and persons dedicated to safeguarding the cultural heritage of New Jersey. Through communication and training, the Alliance empowers New Jersey's cultural community to preserve assets and sustain operations before, during, and after disasters (NJ State Library 2023).

New Jersey Department of Agriculture (NJDA)

NJDA promotes, protects, and serves the State's diverse agriculture and agribusiness industries. NJDA manages programs that conserve soil and water resources and protects farmland from development (NJDA 2016). NJDA coordinates with the U.S. Department of Agriculture (USDA), the National Association of State Departments of Agriculture, the Northeastern Association of State Departments of Agriculture, and the Communications Officers of State Department of Agriculture to participate in national and regional planning and crisis communications initiatives regarding agriculture and agricultural livestock. NJDA coordinates with both governmental agencies and industry groups and maintains emergency response procedures for agricultural emergencies, including serving as central communications point for those agencies and groups. Agricultural groups such as the New Jersey

Agricultural Society and New Jersey Farm Bureau, as well as individual agricultural commodity groups, participate in routine communications with NJDA on severe weather warnings, potential agricultural diseases, and manmade agricultural emergencies. NJDA's County Animal Response Teams (CART) ensure potential disaster evacuees are aware not to leave pets behind but instead to seek out animal-friendly shelters and/or other temporary housing.

New Jersey Department of Banking and Insurance (DOBI)

DOBI regulates the banking, insurance, and real estate industries.

DOBI mandates (through A07-126) companies authorized to sell homeowner insurance to have a prepared Business Continuation Plan to ensure all insurance entities prepare and maintain a disaster response preparation measure playbook. Any updates to plans are due June 30 of each year.

Through Bulletin No. 19-09, DOBI mandates companies authorized to sell insurance to submit primary and secondary person information for those individuals designated to be contacted in the event of a disaster or catastrophic event. Bulletin No. 19-11 mandates that all state financial institutions (i.e., State Chartered Banks, Savings Banks, Savings and Loan Associations, Credit Unions, Check Cashers, and Money Transmitters) submit primary and secondary person information for those individuals designated to be contacted in the event of a disaster or catastrophic event. Any changes to contact information must be submitted to the Department within 30 days of the change.

Following catastrophic disasters and major property and casualty insurance losses, DOBI mandates companies who write business in the state of New Jersey to submit claim information on a continuous basis until 95-percent of their total claims (residential and commercial) have been closed, either with or without payment transfers.

New Jersey Department of Community Affairs (DCA)

DCA provides administrative guidance, financial support, and technical assistance to local governments, community development organizations, businesses, and individuals to improve the quality of life. DCA administers the U.S. Department of Housing and Urban Development (HUD) CDBG-DR funding (through Reconstruction, Rehabilitation, Elevation and Mitigation Program (RREM) and other State programs). DCA offers a wide range of programs and services that respond to issues of public concern, including fire and building safety, housing production, community planning and development, and local government management and finance. DCA's programs and services are provided through, among others, the following Divisions: Division of Codes and Standards, Division of Community Resources, Division of Fire Safety, and the Division of Local Government Services.

Division of Disaster Recovery and Mitigation (DRM): In the housing elevation programs, both those funded by CDBG-DR funds and those funded by FEMA, DRM is now requiring the structure to be raised at least three feet above base flood elevation, or more if required by the local standard. DRM is focusing CDBG-DR funds to require elevation for substantially damaged properties. DRM will require all new construction and substantial rehabilitation to meet the ICC-700 design standard, which incorporates resiliency as well as energy efficiency and includes building techniques like impact-resistant doors, attachment of shingles, and flash and seal roof penetrations. This allows DRM to focus on resource efficiency, indoor environmental quality, and homeowner operation and maintenance. DRM has also designed housing recovery programs to allow for mitigation activities to make homes more resilient to future storm events. These activities include structural and utility retrofits, grading and slope stabilization, and other drainage practices. DRM is also financing infrastructure projects that will help impacted communities become more resilient to current and future natural hazards. The scoring is aligned with FEMA's Building Resilient Infrastructure and Communities (BRIC) program and takes into account climate change, risk reduction/resilience effectiveness, and risk to critical infrastructures. DRM is incorporating climate resilience into the policies of all the CDBG-DR programs. This ensures that disaster response funding is not wasted on homes and infrastructure that will not be able to withstand the next natural weather event.

New Jersey Economic Development Authority (NJEDA)

NJEDA works in partnership with a diverse range of stakeholders to implement programs and initiatives that improve quality of life, enhance economic vitality, and strengthen New Jersey's long-term economic competitiveness. The NJEDA provides small and medium-sized businesses and non-profits with low-interest financing grant funding for short-term operating costs following disaster events.

New Jersey Department of Environmental Protection (NJDEP)

NJDEP is responsible for protecting environmental quality and public health. Priorities include to reduce and respond to climate change; protect New Jersey's water; revitalize communities and protecting public health; and manage and promote thriving natural and historic resources (NJDEP 2023). NJDEP participates, as a member, in the Regional Catastrophic Planning Team. NJDEP coordinates with FEMA, USEPA, NJOEM, NJDSS, the New Jersey Department of Military and Veterans Affairs, and the NJSP to participate in State, county, and local planning initiatives. NJDEP has a wide array of bureaus, divisions, and offices that contribute to the State's pre- and post-disaster capabilities.

Fish and Wildlife

Fish and Wildlife's mission is to protect and manage the State's wildlife resources to maximize their long-term biological, recreational, and economic values for all New Jerseyans. Nine bureaus and two offices collectively oversee and execute all of Fish and Wildlife's activities and programs throughout the State of New Jersey. NJDEP coordinates with the U.S. Department of Commerce, NOAA/National Marine Fisheries Service (NMFS) and the U.S. Department of the Interior, Fish and Wildlife Service in fishery mitigation programs. The Governor may apply to the NMFS for financial assistance to address fishery failures. The Fish and Wildlife Councils and Committees of the State of New Jersey have a unique role in managing our fish and wildlife resources. The Governor appoints members of the Councils as unpaid volunteers who act in the best interest of the State's fish and wildlife resources on behalf of the public. The Councils help create and finalize each year's hunting and fishing regulations and enable our resources' professional and scientific management (NJDEP 2023).

Parks, Forests, and Historic Sites

Parks, Forests, and Historic Sites oversees and administers many of the preserved natural and historical resources for the State of New Jersey.

New Jersey Forest Fire Service: The New Jersey Forest Fire Service is the agency responsible for protecting life and property as well as the State's natural resources from wildfire. The Fire Service Section provides a full-time and a part-time staff of wildland firefighters. Staff provide continuing mechanical thinning and prescribed fire used to reduce hazardous wildland fuel accumulations statewide, particularly in high-risk areas. The Forest Fire Service encourages community acceptance and inclusion of FireWise concepts in municipal and regional planning; develops and implements effective silviculture strategies that improve the health of forests and reduce the number of fuels available for wildland fires from dead and dying trees. The Fire Service also strives to educate the public through outreach programs and hazard mitigation workshops (NJDEP 2020).

New Jersey Forest Service: Through sustainable science-based management and conservation practices, the New Jersey Forest Service promotes the resilience of New Jersey's forests and their interdependent natural systems in the face of societal needs and a climate crisis that demands urgent and decisive action. The Service's 2020 NJ State Forest Action Plan (NJ SFAP) reassesses the State's forest resources and provides forest owners, land managers, and other natural resource professionals with the ability to make informed decisions about forest resources across the State (NJDEP 2023).

- *New Jersey Urban & Community Forestry Program (NJUCF):* NJUCF works to encourage, promote, and support the local stewardship and effective management of trees and forest ecosystems in New Jersey's communities through technical assistance and financial assistance.

New Jersey State Park Service: The New Jersey State Park Service administers over 452,000 acres of land comprising parks, forests, historic sites, and other recreation areas actively working to manage and promote thriving natural and historic resources (NJDEP 2023).

Air, Energy, and Materials Sustainability

The mission of Air, Energy, and Materials Sustainability is to protect human health and the environment from all air contaminants, including those that cause climate change, and to protect the public from unnecessary radiation exposure (NJDEP 2022).

Bureau of Environmental Radiation: The Bureau of Environmental Radiation addresses the protection of the public from excessive exposure to radiation, exclusive of x-ray and nuclear powerplant sources. This includes the State's program to reduce radon gas

exposure in homes and other buildings; licensing the use of certain radioactive materials in medicine, industry, and research; supporting the clean-up of the State's radioactively contaminated sites; and the control of nonionizing radiation from industrial microwave and radiofrequency sources of such radiation.

Division of Air Quality: The Division manages air quality with ambient air monitoring, inventories of sources, emission reduction plans, rules, permits, and air quality modeling and risk assessment (NJDEP 2023).

Division of Sustainable Waste Management: This division administers contracts for post-disaster debris management for land and water and oversees permitting for pre-approved areas for temporary debris management following disaster events.

- *Bureau of Solid Waste Permitting:* The Bureau of Solid Waste Permitting is responsible for the management of permit applications for solid waste landfills, resource recovery facilities (incinerators), and transfer stations/materials recovery facilities.
- *Bureau of Solid Waste Planning and Licensing:* The Bureau of Solid Waste Planning and Licensing oversees county solid waste planning and licensing of companies commercially engaged in the solid waste industry and administers county recycling and clean communities grants.

Office of Climate Resilience

The Office of Climate Resilience at NJDEP, led by the Chief Resilience Officer, provides technical support to New Jersey communities to help them make informed decisions in planning for climate change. The Office of Climate Resilience oversees the Blue Acres program, the Bureau of Climate Resilience Planning, and the State's Coastal Management Program.

Bureau of Climate Resilience Planning (BCRP): BCRP provides planning and technical support to New Jersey's communities to help them make informed decisions about climate resilience. BCRP is responsible for coordinating NJDEP policies, programs, and activities to plan for the impacts and the associated hazards of climate change and promote public awareness of climate change science. The State's Chief Climate Resilience Officer leads the Bureau (NJDEP 2022).

- *Blue Acres Program:* Blue Acres helps New Jersey residents whose homes have been damaged in flooding events. Blue Acres contributes to New Jersey's Climate Change Resilience Strategy through a proactive approach to guide State acquisition of lands that increases host community resilience through the strategic acquisition of lands that have been damaged or may be prone to future damage, due to sea-level rise, storms, or storm-related flooding, or that may buffer or protect other lands from such damage (NJDEP 2022). The recent re-alignment of the Blue Acres Program into the Office of Climate Resilience has allowed for the integration of greater climate and vulnerability-focused buyout planning and messaging. Under the current iteration of the program, Blue Acres will advance proactive, preparedness-focused buyout planning that has a climate resilience and social equity emphasis and which embraces community planning principles. At the same time, Blue Acres will also be poised to pivot and respond to buyouts needed as a result of a storm or flood event. This philosophical change was driven by the growing threat of flooding that comes with increasing precipitation and the more intense storms that are regularly impacting many NJ communities. Blue Acres has broadened its communication, outreach efforts, and transparency through both passive and active means.
- *Resilient NJ Program:* Resilient NJ is an assistance program to support local and regional climate resilience planning using the best available science on precipitation, temperature, and sea-level rise (NJDEP 2023).
- *Living Shoreline Program:* Staff from the Living Shoreline Program coordinate the efforts to promote and develop living shorelines in New Jersey. Working with an internal Living Shorelines Workgroup and external partners, staff will assist in project development, design, permitting, and monitoring (NJDEP 2022).
- *2020 New Jersey Scientific Report on Climate Change:* NJDEP's first scientific report on climate change summarizes the current state of knowledge regarding the effects of climate change on New Jersey's environment to inform State and local decision-makers as they seek to understand and respond to the impacts of climate change. This report identifies and presents the best available science and existing data regarding the current and anticipated environmental effects of climate change globally, nationally, and regionally. The report will be updated every two years (NJDEP 2020).
- *New Jersey Coastal Zone Management Program (NJCMP):* The NJCMP is composed of a network of offices within the NJDEP that serve distinct functions yet share responsibilities that influence the State's coastal areas. These offices include the BCRP, the Office of Policy Implementation, the Division of Land Use Regulation, and the Office of Dredging and

Sediment Technology. NJCMP is part of the National Coastal Zone Management Program that addresses coastal issues, including sustainable and resilient coastal community planning, climate change, ocean planning, and planning for energy facilities and development. It is a voluntary partnership between the federal government and U.S. coastal and Great Lakes states and territories authorized by the Coastal Zone Management Act (CZMA) of 1972 and administered by the NOAA. Under the CZMA Act, the federal government provides financial assistance to States that develop and maintain approved coastal zone management programs. CZM grants are received annually from the NOAA, Office of Ocean and Coastal Resource Management (OCRM). This funding is used for administration of the NJCMP and also provides funding for municipal grants (NJDEP 2022).

Interagency Council on Climate Resilience: Through Executive Order No. 89, the Interagency Council on Climate Resilience (Interagency Council) was established in 2019 to develop short- and long-term action plans that will promote the long-term mitigation, adaptation, and resilience of New Jersey's economy, communities, infrastructure, and natural resources. In addition to these coordinated efforts, the Interagency Council will support the development and implementation of the Climate Change Resilience Strategy that will guide and inform State actions to address the impacts of climate change. The inaugural Climate Change Resilience Strategy was released in 2021 (NJDEP 2023).

Contaminated Site Remediation and Redevelopment Program

When a hazard event is forecast, staff will communicate with site managers to discuss the need to strengthen remediation systems to withstand the event and are prepared to respond if there are any unintended discharges as a result of the event.

Site Remediation and Waste Management Program (SRWMP): SRWMP is responsible for site remediation, ranging from local homeowners to large corporate sites. SRWMP can fund remediation work if no responsible party is identified or capable of remediation. SRWMP can also fund treatment of wells.

Office of the Commissioner

The Office of the Commissioner is responsible for the administration of the NJDEP. In addition, the Office of the Commissioner houses several divisions and offices.

Division of Green Acres: The Green Acres Program was created to meet New Jersey's growing recreation and conservation needs. Together with public and private partners, Green Acres has protected well over 1.5 million acres of open space around the State (NJDEP 2023). Local/nonprofit funding for land acquisition and park development prioritizes ranking and provides higher grant percentages and total awards to projects in Adversely Stressed Overburdened Communities and Urban Aid municipalities. Over the last 60 years, the Green Acres Program has placed an emphasis on preserving and supporting the preservation of open space throughout the State. As a result of the State's environmental justice and climate change priorities, NJDEP is encouraging local governments and eligible non-profit organizations interested in acquiring open space, creating or rehabilitating parks, completing stewardship projects, and creating inclusive playgrounds to apply for Green Acres funding. Green Acres will prioritize projects that contribute to resilience or mitigate climate change impacts, such as by preserving forested and flood-prone areas, enhancing chronically inundated wetlands, revegetating riparian areas, connecting wildlife corridors, expanding upstream flood attenuation potential, promoting wildlife and including green infrastructure into park designs. Overall, this will allow equitable and meaningful public access and maximize social, environmental and health benefits to the public, particularly in underserved communities in New Jersey (NJDEP 2022).

Division of Science and Research (DSR): The role of this division is to provide the department with, and access to, expertise and information that supports its technical and policy needs. In addition, the division performs research to meet the information and problem-solving needs, identifies and understands emerging issues that require the department's attention, and advocates/integrates the multi-disciplinary perspective into the department's identification, analysis, and resolution of environmental issues (NJDEP 2023).

The division tracks temperature and precipitation patterns and provides guidance on future projections for rainfall and coastal flooding due to climate change into design criteria and evaluation criteria of NJDEP projects. The division supports multiple

programs in the development of drinking water, ground water, soil, surface water, and air standards. Additionally, the Office of Quality Assurance (OQA) ensures laboratory certification is granted in accordance with the state Environmental Laboratory Certification Program and/or the National Environmental Laboratory Accreditation Program. To this effort OQA reviews certification applications, audits and approves laboratory's quality system and technical methodologies, reviews data, and provides annual recertifications. OQA also administers the Department's Quality Assurance Program with the responsibility to ensure that environmental data is generated, compiled, and reviewed using specific quality assurance/quality control (QA/QC) procedures.

Office of Emergency Management: The role of the Emergency Management Program is to effectively plan, prepare, respond, recover, and mitigate all hazards that affect the public health of NJ Citizens and the environment through the implementation of NJDEP's responsibilities outlined in the Emergency Operations Plan of the State of New Jersey and the continued performance of ongoing duties of the Program. The Emergency Management Program operates 24 hours a day, 7 days a week supporting the network of NJDEP responders and coordinating with federal, state, county, and local stakeholders (NJDEP 2023).

- *Bureau of Emergency Response (BER):* BER supports two field offices strategically located for rapid response on a 24-hour, 7 days a week basis. BER is responsible for responding to emergencies involving a wide variety of hazards that threaten the public, environment, and infrastructure of the State, including natural disasters, pathogenic outbreaks, terrorism, and hazardous materials (NJDEP 2023).
- *Bureau of Communications and Response Services:* The NJDEP Communication Center serves the entire NJDEP as a vital link with the community through the Environmental Action Hotline: (877) WARN DEP. Operators at the Communication Center receive incident notifications and generate reports related to chemical releases, environmental emergencies, forest fires, industrial accidents, and terrorist threats. The Communication Center also maintains and uses a state-of-the-art radio system that allows prompt, reliable, interoperable, and secure communication with all first responders throughout New Jersey. The radio system and the computer-aided dispatch are used to coordinate NJDEP's statewide law enforcement officers, which are dispatched to all manner of emergencies (NJDEP 2023).

Office of Environmental and Public Health Analysis (EPHA): The Office of Environmental Public Health and Analysis (EPHA) supports the administration of environmental and public health programs and initiatives consistent with the NJDEP's authorities and legislative mandates. EPHA leverages various data sets to develop tools and resources that highlight the public health impacts from environmental degradation. These tools look at environmental public health from various perspectives (e.g., local government, environmental justice) and scales (e.g., parcel, block group, municipality) to inform meaningful solutions (NJDEP 2023). EPHA is working to identify urban heat islands in the State, with a focus on areas that impact overburdened populations.

- *Environmental Justice Mapping, Assessment, and Protection (EJMAP) Tool:* Designed to support the NJDEP's efforts to implement the EJ Law through its regulatory and permitting processes, EJMAP visualizes the information that determines what areas are subject to the law's protections and whether those areas are already adversely stressed. The tool has a companion Technical Guidance document that outlines the data sources and methodologies used in the tools and provides rationale for the stressors within the tool (NJDEP 2023). EJMAP shows overburdened communities, flooding, and lack of tree canopy. The tool can be used to review permits and impacts of projects. EJMAP is intended to provide the public with a visual representation of:
 - The location of overburdened communities (OBC) throughout the State
 - The presence of environmental and public health stressors in each OBC
 - How the stressors in each OBC compare on a State and county basis, both individually and cumulatively

Healthy Community Planning NJ (HCP-NJ): A State web resource designed to assist local community planning activities. The site provides individual, municipal-level snapshots of a community's health and environmental data to help facilitate active local public health planning and action. HCP-NJ was developed by the New Jersey Department of Health (NJDOH) and NJDEP, working in partnership as part of the New Jersey Environmental Public Health Tracking (EPHT) program with funding from the federal Centers for Disease Control and Prevention (CDC) (NJDEP 2023).

Office of Environmental Justice (OEJ): OEJ aims to improve the quality of life in New Jersey's most vulnerable communities by educating and empowering communities who are often outside of government decision-making processes and guiding NJDEP's programs and other State departments and agencies in implementing environmental justice (NJDEP 2023).

- *Environmental Justice Law (EJ Law):* The EJ Law, adopted in April 2023, implements first in the nation rules for reducing pollution in historically overburdened communities and communities of color that have been subjected to a disproportionately high number of environmental and public health stressors. The rules require enhanced upfront community engagement before such facilities are proposed in the State's overburdened communities. Using community-level environmental and public health data available through DEP's EJMAP tool, the EJ Law directs permit applicants to avoid and minimize environmental and public health stressors and enable the NJDEP to establish permit conditions that better protect vulnerable communities (State of New Jersey 2023).
- *Trees for Schools:* This Sustainable Jersey (SJ) program aims to use tree plantings to filter pollutants from air and water, reduce stormwater runoff, and lower carbon emissions (Sustainable Jersey 2023). Through Regional Greenhouse Gas Initiative (REGGI) funding, OEJ asked SJ to plant trees at school properties, with funding specifically set aside for schools in overburdened communities.

Historic Preservation Office (HPO): The HPO works to assist the residents of New Jersey in identifying, preserving, protecting, and sustaining historic and archaeological resources through the implementation of the State's historic preservation program.

- *Flood Mitigation Guide and the Elevation Design Guidelines for Historic Properties:* The HPO released the Flood Mitigation Guide and the Elevation Design Guidelines for Historic Properties in 2019 (NJDEP NJHPO 2019) to provide guidance to local governments and property owners to protect their properties from hazards while maintaining historic preservation efforts.
- *Historic Structure Reports and Preservation Plans:* Disaster planning is now incorporated as a funding category in historic structure reporting and preservation planning guidance.
- *NJ Comprehensive Statewide Historic Preservation Plan:* The plan was updated and adopted in 2023. One of the goals of this updated plan is to increase the integration of historic preservation into disaster planning and resilience.

Office of Natural Resource Restoration (ONRR): ONRR responds to substantial spills, assesses natural resource injury, and assists in providing information on how to prioritize protection of critical habitats and biota. ONRR prepares for spill response with internal and external spill drill exercises (NJDEP 2023).

Water Resource Management (WRM)

The WRM Program establishes water quality and drinking water standards, monitors the waters of the State to ensure surface and groundwater standards are met, helps ensure delivery of water that meets drinking water standards, regulates discharges of wastewater and stormwater to surface and ground water, regulates and manages the diversion of water from surface and groundwaters to ensure protection of the resource, and provides low cost financial assistance for finance capital improvements to water infrastructure (NJDEP 2021a). WRM has a variety of capabilities including:

Division of Water Monitoring, Standards and Pesticide Control (DWMSPC): The DWMSPC regulates pesticides and assesses New Jersey's waters in order to protect and manage public drinking water supplies, recreational uses, shellfish harvesting, and the health of aquatic organisms, in accordance with State and Federal regulations. (NJDEP 2023).

- *Bureau of Freshwater and Biological Monitoring:* The Bureau of Freshwater and Biological Monitoring is responsible for numerous multi-year monitoring programs mandated by the Clean Water Act, some of which have served as prototypes for the nation. Water quality monitoring projects emphasize watershed monitoring and frequently combine biological and chemical/physical monitoring to assess the success of state and federal clean water programs. The sampling stations include surface water as well as groundwater monitoring. Chemical and physical monitoring includes the Rivers and Stream Chemical/Physical Monitoring Program, NJDEP Lake Monitoring Network, and Groundwater Quality Monitoring. A wide range of parameters are collected, including chemical/physical (nutrients, metals, discharge, etc.), biological, and microbiological. The bureau is also responsible for harmful algal bloom (HAB) monitoring, including sampling and laboratory analysis for cyanobacterial HABs in lakes, rivers, and streams (NJDEP 2021b).

- 2021 Cyanobacterial HAB Freshwater Recreational Response Strategy: The Strategy provides a unified statewide approach to responding to HABs in recreational waters and sources of drinking water and to protect the public from risk associated with these toxins (NJDEP 2023).

Division of Water Quality (DWQ): DWQ has primary responsibility for protecting New Jersey's surface and ground waters from pollution caused by improperly treated wastewater and its residuals. To protect the State's waters, the DWQ implements the New Jersey Pollutant Discharge Elimination System (NJPDES Program), administers financial assistance programs for wastewater treatment facilities, and administers the Treatment Works Approval, Capacity Assurance, and Sewer Ban Programs (NJDEP 2023).

DWQ also administers the Water Bank program and has updated resilience guidance to ensure that new or significantly improved water infrastructure is built with the future in mind. DWQ is also responsible for administration of a number of state and federally funded programs for the planning, design, and/or construction of wastewater, drinking water, and stormwater/nonpoint source management programs. DWQ assists communities to construct and fund sustainable infrastructure that protects water quality and public health.

Division of Water Supply and Geoscience (DW&GS): DW&GS works to ensure that adequate, reliable, and safe water supply is available for the future. This goal is accomplished through the regulation of ground and surface water diversions, permitting of wells, permitting of drinking water infrastructure, monitoring of drinking water quality, and technical support for water systems to achieve compliance with all federal and state standards. DW&GS staff act in a support role during an emergency to provide technical assistance, as needed to re-establish safe and adequate public water supplies. DW&GS provides operator licensing and training support as well as financial assistance through the DW State Revolving Fund program. DW&GS is responsible for issuing drought watches, drought warnings, or a water emergency.

- *New Jersey Geological and Water Survey (NJGWS):* NJGWS evaluates geologic, hydrogeological, and water quality data to manage and protect water resources, identify natural hazards and contaminants, and provide mineral resources, including offshore sands for beach nourishment. The mission of the Survey has recently been expanded to include water resource planning and regulatory functions (NJDEP 2023). Information provided by the survey includes Geographic Information System (GIS) data and maps of geology, topography, groundwater, and aquifer recharge. In addition, the data track wellhead protection areas, aquifer thicknesses, properties and depths, groundwater quality, drought, geologic resources, and hazards (such as earthquakes, abandoned mines, karst-influenced sinkholes, and landslides). The NJGWS maintains an active data base and GIS coverage of earthquakes in New Jersey and maintains an information circular on "Predicting Earthquake Damage in New Jersey."

Watershed and Land Management (WLM)

NJDEP's WLM Program was created on June 1, 2020, to align elements of the Land Use Management and WRM programs. This alignment unifies and strengthens aspects of the NJDEP's land use regulatory programs by taking a watershed-by-watershed approach to our stewardship of land-based resources that have a critical nexus to water quality. Through a holistic approach to planning, permitting, mitigation, and restoration of impacts to New Jersey's watersheds, WLM works to preserve, protect, and improve the integrity of New Jersey's water and natural resources while protecting life and property from environmental threats (NJDEP 2023).

Divisions of Land Resource Protection and Watershed Protection and Restoration: Together these two divisions are responsible for permitting and enforcing the regulatory programs established under the Coastal Zone Management rules; the Flood Hazard Area Control Act rules; the Freshwater Wetlands Protection Act rules; the Highlands Water Protection and Planning Act and the Stormwater Management rules. The statutes that these rules implement provide authority for the NJDEP to regulate development (including clearing of vegetation and filling) within environmentally sensitive areas such as beaches, dunes, wetlands, and floodplains and the regulation of stormwater. Under the Division of Land Resource Protection, the Bureau of Coastal and Land Use Enforcement responds to violations, conducts inspections, and conducts education and outreach (NJDEP 2017).

Division of Resilience Engineering & Construction (DREC): DREC, which consists of four bureaus, oversees large-scale coastal and fluvial flood protection projects, beach nourishment, flood risk analysis, dam safety, and the NFIP. DREC aims to assist communities across New Jersey in becoming more resilient to storms, flooding, and other climate change impacts (NJDEP 2022).

- *Coastal Engineering Element:* The Coastal Engineering Element is statutorily authorized to carry out shore protection projects in areas impacted by tidally-flowed waterways. They are also responsible for beach nourishment and shore protection projects across the State, as well as coastal dredging, aids to navigation, and maintenance of completed projects. In addition, the Element also provides 24-hour operation of the Raritan Bayshore and Pews Creek Floodgates and is responsible for conducting storm surveys, damage assessments and emergency repairs for coastal storms impacting New Jersey. The Element maintains close relationships with federal, state, and local partners to create and build resilience throughout New Jersey. This includes the New York and Philadelphia Districts of the USACE. The Element works with these districts on all phases of coastal protection. The State has continued funding the non-lapsing Shore Protection Fund (\$25 million per year) for shore protection projects associated with the protection, stabilization, restoration, or maintenance of the shore, including monitoring studies and land acquisition. In the past four fiscal years, the Fund has included an additional \$20 million per year to account for additional project needs. The Fund is used to fund feasibility assessments, State-match in USACE projects, and State led coastal flood and shore protection projects (NJDEP 2022).

Dam Safety and Flood Engineering Element:

- *Bureau of Dam Safety:* The primary goal of the program is to ensure the safety and integrity of dams in New Jersey and, thereby, protect people and property from the consequences of dam failures. The bureau reviews plans and specifications for the construction of new dams or for the alternation, repair, or removal of existing dams and must grant approval before the owner can proceed with construction. Engineers from the bureau evaluate each project, investigate site conditions, and check recommended construction materials. Existing dams are periodically inspected to ensure that they are adequately maintained and owners are directed to correct any deficiencies found. The division also coordinates with the Division of State Police, local and county emergency management officials in the preparations and approval of Emergency Action Plans (NJDEP 2020).
- *Bureau of Flood Engineering and Climate Resilience Design:* The Bureau includes three units, the Flood Risk Mitigation Unit, the Flood Risk Analysis Unit, and the Community Assistance Program Unit and the Office of the New Jersey State NFIP Coordinator, which is responsible for coordinating NFIP program aspects of floodplain management throughout the State (NJDEP 2023).
 - *Flood Risk Mitigation Unit:* The Unit implements flood protection and control measures to protect life and property in New Jersey from the devastating effects of flooding. This includes both large federal and smaller State flood reduction projects. State funding for federal flood control projects is through annual State appropriations under the HR-6 Flood Control project budget. Annual State flood control funding is used to match federal funding to the USACE, for annual operation and maintenance of existing flood control projects and for project administration. The unit coordinates and assists the USACE in the planning, design, and construction of flood protection projects by obtaining all required State approvals and permits for the project designs. The unit schedules and attends meetings with the USACE, county and local government officials, and community groups; conducts field reconnaissance and surveys for and with the USACE, as necessary, in the planning and construction of flood protection projects; reviews economic analyses and engineering designs including hydrologic, hydraulic, structural reports and, construction plans and technical specification documents; prepares applications and obtains all necessary State approvals and permits required for USACE flood protection projects; and monitors and inspects USACE flood protection projects during and after construction to ensure that project facilities are constructed and maintained in accordance with plans, specifications and operation manuals (NJDEP 2023). The unit is responsible for the 24-hour operation of the Pompton Lakes Dam Flood Gates. The unit also implements HUD funded Rebuild by Design Hudson and Rebuild by Design Meadowlands projects.
 - *Flood Risk Analysis Unit:* As part of Risk MAP initiatives, NJDEP, and FEMA have a CTP agreement to perform map production together to build the next generation of FEMA and State flood mapping. New Jersey will continue to take the lead in prioritizing projects, coordinating available data sources and conducting outreach, and all

essential components in the data production and map adoption. Moving forward, NJDEP will be developing new floodplain data, producing digital FIRMs and post-preliminary processing, and integrating its mapping program with the FEMA program (NJDEP 2023).

- *Community Assistance Program Unit:* The unit provides floodplain management assistance to local communities throughout the State through the NFIP Community Assistance Program. The program goal is to reach out to each NFIP participating community at least once over a five-year cycle through CAVs, CACs, workshops, and technical assistance contacts on flood issues, the NFIP, and the CRS. To ensure that New Jersey municipalities maintain the legal ability to enforce NFIP development requirements, the unit works with local communities to help them maintain local laws that are compliant with NFIP regulations. In particular, the unit provides local municipalities with a model local ordinance, worksheets, implementation guidance, and map adoption language, and reviews local ordinance amendments and replacements (NJDEP 2023).

New Jersey Department of Health (NJDOH)

NJDOH works to protect the public's health, promote healthy communities, and continue to improve the quality of health care in New Jersey. The scope of work for the public health system is ever-expanding, and the Department is on the frontlines in leading the response to public health challenges (Department of Health 2023). NJDOH has a wide variety of health-related data sources available to assist in various hazard mitigation and emergency response planning efforts, including population traits that increase social vulnerability. NJDOH maintains and updates these data sources and has data analytic capabilities to better understand trends in public health and public health needs.

New Jersey Department of State, Office of Planning Advocacy

The Office for Planning Advocacy supports and coordinates planning throughout New Jersey to protect the environment; mitigate development hazards; and guide future growth into compact, mixed-use development and redevelopment projects while fostering a robust long-term economy. In addition to being staff to the State Planning Commission (SPC), OPA coordinates the activities of the Interagency Working Group (IAWG), Development Opportunities Interagency Team (DOIT), Greyfields Interagency Team (GRIT), and the Brownfields Redevelopment Interagency Team (BRIT). When any proposed changes to the State Development and Redevelopment Plan or other state or regional plans encourage development in hazard prone areas, cause potential threat to nearby areas, reduce open space that provides flood storage, or increase hazards anywhere in the state, recommendations and action can be taken to reduce those risks.

New Jersey Department of Transportation

The New Jersey Department of Transportation (NJDOT) is the agency responsible for maintenance, construction, and operation of state and interstate highways in New Jersey. NJDOT is also responsible for planning and developing transportation policy and assisting with rail, freight, and intermodal transportation issues.

511 Traffic Monitoring: The traffic monitoring system, 511NJ, is a free service for the public that supplies traffic information about the New Jersey Interstates, State Highways, New Jersey Turnpike, Garden State Parkway, Atlantic City Expressway, and all bridge and tunnel crossings to motorists. The system combines traffic data into up-to-date condition reports that are always available and accessible via text, voice, or internet service to commuters.

Capital Program: NJDOT uses GIS to create maps that are used in several areas, including planning and highway construction. The maps that are created using this information aid other agencies, including law enforcement, in finding solutions to reduce traffic incidents. The GIS data can also be used to identify geographical changes after a natural disaster so that any anomalies or problems can be addressed.

County Diversionary Route Plans: Diversion plans are a compilation of predetermined diversion routes developed to improve coordination between state and local agencies when incidents occur. These Diversion Plans offer the Incident Commanders viable alternate routes to utilize during incidents.

Division of Multimodal Grants and Programs: NJDOT, through the Division of Multimodal Services, is responsible for the oversight and/or support of several modes of transportation, including general aviation, maritime, light rail, and freight rail, making it a multimodal focused organization.

GIS: The department uses GIS to create maps that are used in several areas, including planning and highway construction. The maps that are created using this information aid other agencies, including law enforcement, in finding solutions to reduce traffic incidents. The GIS data can also be used to identify geographical changes after a natural disaster so that any anomalies or problems can be addressed.

Office of Maritime Resources - Dredged Material Management: NJDOT provides interagency support, program planning, and policy recommendations on maritime issues to the Governor. NJDOT serves as the primary advisory body for the support of New Jersey's \$50 billion maritime industry, which includes ports and terminals, cargo movement, boat manufacturing and sales, ferry operations, marine trades, recreational and commercial boating, and maritime environmental resources. Management of dredging activities in New Jersey is generally divided into three main geographic areas – New Jersey/New York Harbor, Delaware River/Delaware River Ports, and the State's Navigation Channels. This program also promotes coordination and cooperation among federal, State, regional, and nongovernmental agencies.

Reverse-Lane Strategies (or contraflow operations): NJDOT has three contraflow plans in place. The New Jersey Turnpike Authority and the South Jersey Transportation Authority also have one plan each (Garden State Parkway and Atlantic City Expressway). When activated, for a temporary period of time, NJDOT and its partners expand the lanes available for all travel in an outbound direction (away from the anticipated area of danger) and facilitate its usage for outbound vehicular travel.

Right of Way (ROW) and Property Acquisitions: The Division of Right of Way and Access Management is not specifically tasked with hazard mitigation activities. However, the eminent domain/property acquisition process and the sale of surplus government property should be of interest to post-disaster-impacted communities seeking redistribution of land assets for transportation infrastructure protection.

Winter Readiness: NJDOT works to make winter travel as safe as possible. NJDOT has 13,295 lane miles of interstate, U.S., and State routes under its jurisdiction that it strives to keep open and passable at all times during winter weather. The goal during a winter storm is to maintain the roads for safe travel, at safe speeds, by using anti-icing materials and, when appropriate, removal of snow with plows.

New Jersey Department of Treasury: Division of Administration and the Emergency Response Unit (ERU)

The ERU is the State Treasurer's representative and coordinating agency for all the Department of Treasury's roles and responsibilities in and to Emergency Management. The ERU acts as the lead for the Department of the Treasury and deployment coordinator for the Department of Planning, Mitigation, Response, and Recovery. The division coordinates and delegates mitigation and corrective action policies, programs, and projects within the Division of Administration and to other divisions of the department.

New Jersey Highlands Council

The New Jersey Highlands Region plays a crucial role as a source of drinking water, supplying clean and abundant water to 70-percent of the State's population. Established by the legislature in 2004 as part of the Highlands Water and Protection Planning Act, the Council is charged with the development and oversight of the Highlands Regional Master Plan (RMP). Highlands Council RMP programs support hazard mitigation as related to stream mitigation to avoid flood hazards and forest health hazards. RMP grant funding for forest resource and stream corridor protection and management planning includes identification of restoration, mitigation, and stewardship programming needs and mechanisms.

The Highlands Council operates two land preservation programs: the Highlands Open Space Partnership Funding Program (OSP) and Highlands Development Credit Purchase Program (HDCPP). These preservation programs fill a unique need in the state since parcels of any size may qualify, including forested, agricultural and/or mixed-use parcels.

New Jersey Institute of Technology (NJIT) Technical Assistance for Resiliency Program (TARP)

NJIT’s TARP program provides technical assistance to communities in the State that require support in the preparation of applications for FEMA mitigation funds as well as identifying projects that can help communities be more resilient. NJIT TARP can assist those communities with application development and capacity building to provide New Jersey’s under-resourced communities with those needed resources (NJIT n.d.). NJOEM is working with the NJIT to expand this program.

New Jersey League of Municipalities

New Jersey State League of Municipalities is a voluntary association created to help communities do a better job of self-government through pooling information resources and brain power. Authorized by state statute since 1915, it has been serving local officials throughout the Garden State. All 565 municipalities are members of the League. The League supports mitigation throughout New Jersey by hosting subject matter expert panel discussions and information sharing at the annual League conference.

New Jersey Office of Homeland Security and Preparedness (OHSP)

In March 2006, Executive Order No. 5 created OHSP as a cabinet-level agency within State government. The Executive Order defined the office’s mission as the agency responsible “to administer, New Jersey’s counterterrorism and preparedness efforts.” Further, the Executive Order charged OHSP with coordinating “the emergency response efforts across all levels of government, law enforcement, emergency management, nonprofit organizations, other jurisdictions, and the private sector, to protect the people of New Jersey”. OHSP is the lead agency in preparing the State’s Threat and Hazard Identification and Risk Assessment (THIRA).

New Jersey Office of Emergency Management

Emergency management functions at the State-level are coordinated by NJOEM of the New Jersey State Police. The Emergency Management Section Supervisor holds the rank of Major and serves as Assistant Deputy State Director, Office of Emergency Management (New Jersey State Police 2023).

The Emergency Management Section is under the command of the Deputy Superintendent of Homeland Security, who is the Deputy State Director, Office of Emergency Management. The section organizes, directs, staffs, coordinates, and reports the activities of the Incident Support Bureau and Communications Bureau. The section is also responsible for planning, directing, and coordinating emergency operations within the State, which are beyond local control (New Jersey State Police 2023).

The following bureaus make up Emergency Management Section:

- Communications Bureau
- Emergency Response Bureau
- Incident Support Bureau
- Recovery Bureau
- Preparedness Bureau (New Jersey State Police 2023).

Hazard mitigation efforts in the State are largely coordinated through the Recovery Bureau and Preparedness Bureau.

Recovery Bureau

The Recovery Bureau is composed of three units:

- Public Assistance Unit
- Mitigation Unit
- Finance Unit (New Jersey State Police 2023).

Public Assistance Unit

The Public Assistance Unit is responsible for managing the Public Assistance Grant Program before, during, and after Presidentially declared disasters or emergencies. During a declared disaster, the State of New Jersey, in conjunction with FEMA, provides

supplemental aid to communities to help them recover from the effects of a disaster as quickly as possible (New Jersey State Police 2023).

The Public Assistance Unit serves as the principal point of contact for the State and is responsible for conducting Preliminary Damage Assessments to determine the impact and magnitude of damage and the resulting unmet needs of individuals, businesses, the public sector, and the community as a whole. In the aftermath of a disaster, unit personnel are assigned to FEMA/State Preliminary Damage Assessment Teams and coordinate the county and municipal damage assessment efforts as well. The results of damage assessment surveys are assembled by the Public Assistance Unit and are presented in a written report for the Governor's consideration (New Jersey State Police 2023).

If federal intervention is requested and approved, the Public Assistance Unit provides information about various federal disaster reimbursement opportunities to officials of all eligible state, county, and municipal agencies as well as designated private, nonprofit organizations. The Public Assistance Unit is responsible for coordinating Applicants' Briefings and Kickoff Meetings to discuss the parameters of declarations, scope of work activities, eligible categories, and documentation required to receive state and federal assistance. The unit also provides technical expertise in the preparation and submission of federal grant/loan applications in accordance with the Robert T. Stafford Act. The Stafford Act requires that the delivery of eligible assistance be carried out as quickly and efficiently as possible, consistent with federal laws and regulations. The unit maintains appropriate files and develops related procedures that comply with all applicable laws, regulations, and Office of Management and Budget (OMB) circulars governing standard grant management practices. The Public Assistance staff is also responsible for assisting the Field Training Unit in the coordination and delivery of training programs and seminars related to the disaster reimbursement process (New Jersey State Police 2023).

New Jersey Emergency Management (NJEM) Grants

In an effort to provide better efficiency, transparency, and accountability, New Jersey joined a community of disaster-prone states by implementing the standard, national web-based disaster grant management tool, which has come to be known in New Jersey as NJEM Grants and can be accessed by going to [NJEMGrants.org](https://njemgrants.org). The system tracks Emergency Management grants in New Jersey and manages the process from application through closeout. This site is for the online application and management of the Public Assistance (PA) and Hazard Mitigation Assistance (HMA) grants.

Mitigation Unit

The Mitigation Unit has the mission of enhancing state, county, and municipal risk reduction through the development and implementation of mitigation strategies. The Mitigation Unit accomplishes this task by implementing and administering several grant-based programs in conjunction with FEMA. The primary programs administered are Flood Mitigation Assistance (FMA), Legislative Pre-Disaster Mitigation (LPDM), and BRIC, the HMGP, and the Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Revolving Loan Fund (New Jersey State Police 2023). Through integration of all available funding sources, NJOEM has been able to continue to fund the development and funding of all 21 county HMPs.

Since the 2019 SHMP, the Mitigation Unit has expanded staff capacity by hiring three additional staff, a State employee planner, and GIS support. The Unit distributes relevant insurance data such as RL and SRL lists upon request to establish improved awareness, understanding, and application of all relevant insurance data sources, status, and values as it may apply throughout the State (public and private) for greater resilience and mitigation opportunities in the future.

NJOEM has offered robust technical support in the last two planning cycles, with a focus on repetitive loss structures in socially vulnerable areas. NJOEM anticipates developing or advancing relations with academic institutions to further NJOEM's ability to provide necessary technical assistance. NJOEM is utilizing support from contractors and State higher educational communities strategically to develop strategies, actions, and applications.

The Mitigation Unit regularly participates in conferences and provides trainings. NJOEM will continue to utilize the ESRI database for storyboards on the NJOEM Mitigation Unit webpage for public outreach and education.

NJOEM has developed a severe repetitive loss mitigation strategy and has incorporated the strategy into the State's hazard mitigation standard operating procedures. Implementation of the strategy is an ongoing process supported by the Mitigation Unit. The Unit continues to stress the importance of insurance in furthering mitigation opportunities and lessening the reliance on recovery dollars. It is understood that the lack of insurance is a separate form of risk, therefore, the Mitigation Unit is trying to educate the public. NJOEM offers floodplain manager training to increase the distribution of information to the public.

NJOEM takes an all-hazards, universal approach using the Land and Building Asset Management System (LBAM) risk assessment process to identify timely, cost-effective opportunities to mitigate future risk. The Mitigation Unit encourages local entities identify their own critical facilities and advise NJOEM of their locations. Utilizing remote sensing resources, NJOEM is continuing to develop better quantitative data on risk and risk to structures to formulate proper mitigation actions, considering a wide variety of stakeholders and a whole-systems approach to protecting the structures. This has included establishment of first flood elevations with Rutgers for development of applications.

Finance Unit

The Finance Unit is responsible for maintaining the Recovery Bureau's budget. This includes maintaining accurate balance reports on accounts, reimbursing State agencies, municipalities, and other entities. The unit maintains files for audit and budgetary purposes while serving as a liaison between the Division of State Police, Office of the Attorney, and FEMA regarding the reimbursement process. The unit provides training to ensure the continued education and improvement functionality for the Disaster Recovery Specialist with the New Jersey Emergency Management Grants application. This ensures that the Recovery Bureau personnel comprehend the guidelines set forth in the Robert T. Stafford Act (New Jersey State Police 2023).

Preparedness Unit

The traditional role of the Preparedness Unit has been in devising hazard-specific and multi-hazard plans, and in public outreach and education. The Preparedness Unit also coordinates a multitude of other planning efforts, including maintenance of the State Emergency Operations Plan and the State Emergency Procedures Directory. It also maintains checklists and standardized texts as technical guidance to local government on development of emergency plans and procedures. Hazard-specific plans include Winter Storm, Hurricane, Contraflow (reverse-lane) Evacuation Plans, and the State Drought Emergency Plan. Important strides have been made in improving Mental Health and Special Needs initiatives. The Preparedness Unit's growing public outreach program for natural hazards and evacuation includes social media updates about preparedness for natural hazard, participating in NWS social media campaigns such as Hurricane Awareness Week and Severe Weather Awareness Week, annual updates to the New Jersey Hurricane Survival Guide, and participation, in coordination with the NJDOT and other emergency support functions, in the update of the New Jersey Hurricane Decision Support Tool.

The Preparedness Unit also maintains liaison and coordination of emergency activities with State departments and various allied support agencies and is responsible for the readiness of the State Emergency Operations Center. The unit is an integral player in the implementation of "ETeam" technology for use in the State EOC. Another critical role is the timely notification of the emergency management community of potentially dangerous weather conditions. The unit administers the NWS "StormReady" Communities program. The Preparedness Unit also coordinates the State's tidal and inland flood warning programs and systems, and participates in the New York City Evacuation, Trans-Hudson, and Port Authority emergency planning groups (New Jersey State Police 2023).

Radiological Emergency Response Planning & Technical Unit (RERP&T)

The RERP&T is responsible for developing radiological emergency response plans and procedures for protecting the population in the areas located within the 10-mile Emergency Planning Zone (EPZ) of the nuclear power plants located in New Jersey (New Jersey State Police 2023).

State Emergency Operations Center (SEOC) Unit

The SEOC Unit provides coordination of the emergency response efforts of State agencies, allied agencies, county OEMs, and the private sector. They serve as the conduit through which the unmet emergency resource needs of the counties affected by a disaster are acquired from other counties, State of New Jersey governmental agencies, other states, the federal government,

nongovernmental allied agencies, and private sector organizations. The unit monitors tidal and inland flood warning and weather systems and prepares appropriate messages for distribution by the NJ ROIC Intelligence Watch & Warning Unit to State, allied, and county emergency management organizations (New Jersey State Police 2023). Public Information Officers are located within the SEOC and amplify messaging through NJOEM social media platforms and ReadyNJ. The unit serves as a liaison to the State Director and/or his designee to provide situational awareness as warranted to an ongoing event. They oversee the overall operation of the SEOC and continually evaluate its effectiveness and process for successful efficiency when fully staffed during an incident (New Jersey State Police 2023).

Support Services Unit

The Support Services Unit coordinates the development of all Citizen Corps Programs (Community Emergency Response Teams, Neighborhood Watch, Volunteers in Police Service, Fire Corps, and Medical Reserve Corps) throughout the State of New Jersey with a special emphasis on the urban areas of the State (New Jersey State Police 2023).

Coordinating interactions with the New Jersey Volunteer Organizations Active in Disasters (VOAD), the Support Services Unit strengthens ties with the New Jersey business community and maintains a liaison with both the National and State emergency management communities (New Jersey State Police 2023).

The unit's training functions include Emergency Management Assistance Compact (EMAC) system training and A-Team certification to all branches of state, county, and municipal emergency management coordinators (New Jersey State Police 2023). In terms of preparedness, the Support Services Unit has built and maintains a comprehensive Resource Directory Database of all available emergency response assets in New Jersey (New Jersey State Police 2023).

Training and Exercise Unit

The Training and Exercise Unit (TEU) is responsible for conducting emergency management training courses for state, county, municipal, and private sector individuals who have emergency management responsibilities or work in related fields. These training programs are designed to assist the public and private sectors in their ability to mitigate, plan for, respond to, and recover from the effects of natural and technological events. All training provided is consistent with training initiatives on the federal level (New Jersey State Police 2023).

The unit offers a variety of interrelated courses designed specifically to improve the professional, managerial, and technical skills of people involved in the field of emergency management. These state-of-the-art training programs are designed to achieve a comprehensive and integrated emergency management system which addresses all hazards at the local, county, and state levels (New Jersey State Police 2023).

The NJOEM TEU remains committed to holding classes throughout various regions in the State. Trainings provided by the TEU include:

- Basic workshops in emergency management
- Evacuation and re-entry planning
- Mitigation for emergency managers
- Public information basics
- The National Incident Management System (NJOEM 2023)

The TEU is also responsible for development of the State Community Relations (CR) Plan. The CR Plan is implemented following a large-scale emergency or disaster. Working in conjunction with FEMA, NJOEM CR officers work door-to-door in areas impacted by a disaster to collect and disseminate information to and from affected communities; locate individuals who may need special assistance or encouragement to initiate the disaster assistance application process; and identify political, social, religious, ethnic, business, and other interest group leadership for the purpose of developing a team effort in the recovery process (New Jersey State Police 2023).

New Jersey Department of Corrections (NJDOC)

The mission of the NJDOC is advancing public safety and promoting successful reintegration in a dignified, safe, secure, rehabilitative, and gender-informed environment, supported by a professional, trained, and diverse workforce, enhanced by community engagement. NJDOC's Office of Emergency Management (NJDOC OEM) continues to perform hazard assessments on its facilities and assist with mitigation strategies to strengthen the Department's resolve. Most recently NJDOC OEM drafted a water emergency plan that protects against adverse outcomes when a facility is disconnected from its main water source. NJDOC OEM continue to push out training on active shooter, drone intrusion, inclement weather considerations, and more.

Each of the 13 correctional facilities located in the State have an updated Continuity of Operations (COOP) Plan. A COOP Plan details all the activities, plans, and procedures an agency must have to ensure that essential services are provided to the State's citizens and businesses during emergencies. ESF-13 Public Safety and Security integrates federal public safety and security capabilities and resources to support the full range of incident management activities associated with potential or actual incidents requiring a coordinated federal response. Capabilities include:

- Special Operations Response Team
- Correctional Emergency Response Team
- Enhanced Security Transportation Unit
- Critical Incident Negotiation Unit
- Office of Emergency Management
- Hazmat Team (Chemical Ordnance -Biological Radiological Aid-Forward Area Strike Teams)

New Jersey Sports and Exposition Authority

The New Jersey Sports and Exposition Authority (NJSEA) is an Authority operating under the Department of State and receives its appropriation through the State Budget. The NJSEA also produces revenue from sources including lease payments, solid waste operations, fees, and property transactions. The NJSEA holds the land lease for the MetLife Sports Complex, the Monmouth Park Racetrack, the Atlantic Health Jets Training Center, and owns the Wildwood Convention Center. The NJSEA is also the regional planning and zoning agency for the 30.3-square-mile Hackensack Meadowlands District through its absorption of the former New Jersey Meadowlands Commission (NJMC) in 2015.

The NJSEA conducts ongoing outreach to Meadowlands District municipalities to discuss flooding and potential mitigation actions. NJSEA has established an existing GIS database for emergency response including data on hazardous materials stored in warehouse facilities, fire hydrant locations, incident reports, floor plans, turn-around space for firefighting equipment, and current & historical aerial imagery. The GIS capabilities of the Meadowlands Research and Restoration Institute (MRRRI) division at NJSEA expand on a regular basis.

New York Consortium on Earthquake Mitigation

The NJOEM has joined the New York Consortium on Earthquake Mitigation, along with New York City, New York State, New Jersey Geological Survey, Columbia and Princeton Universities, and several counties in the metro New York area. This Consortium is concentrating efforts on assessing the vulnerabilities of the metro New York area and identifying ways to better protect life and property from earthquakes by running model simulations. These computer exercises reveal which areas fail first, how damages result, and what economic and socioeconomic effects result, giving a comprehensive picture of total impact.

NJTRANSIT

NJTransit is a State-owned public transportation system. NJTransit's comprehensive Resilience Program aims to make transit systems and infrastructure stronger and more reliable. In addition to the Resilience Program, Capital Programs uses its five-year Capital Plan prioritizes "resiliency" and "equity" in project criteria. NJTransit continues to implement and refine innovative tools such as the Storm Surge Warning Dashboard and operational protocols. To help inform mitigation solutions, NJTransit continues to work with the Rutgers Center for Advanced Infrastructure and Transportation (CAIT) to identify areas vulnerable to storm surge and sea-level rise. Additionally, NJTransit continues to look for ways to eliminate or reduce impacts from extreme heat events by incorporating mitigation measures into planning and operations.

New Jersey Turnpike Authority

The New Jersey Turnpike Authority operates the New Jersey Turnpike and the Garden State Parkway. In the Fall of 2020, the Turnpike Authority established a new \$24.8 billion capital program with a toll increase that included an annual indexing. The capital program includes flood zone remediation projects, drainage improvement projects, and numerous other projects that will incorporate resilient measures. The Authority reviews hardening of critical assets on an ongoing basis. The Authority conducts trainings and exercises in conjunction with the State Police and Department of Corrections for hurricane evacuations. The main element of the evacuation exercise is preparation to set up a contraflow on the Garden State Parkway and maximize the capacity of the roadway.

Pinelands Commission

The Pinelands Commission is an independent State agency whose mission is to "preserve, protect, and enhance the natural and cultural resources of the Pinelands National Reserve, and to encourage compatible economic and other human activities consistent with that purpose." Through its implementation of the Pinelands Comprehensive Management Plan (CMP), the New Jersey Pinelands Commission protects the Pinelands in a manner that maintains the region's unique ecology while permitting compatible development. The CMP contains provisions for Fire Hazard Mitigation, Wetlands protection, and Permanent Land Preservation Programs that reduce risk and vulnerability to wildfires and flooding (Pinelands Commission 2023). The CMP also has stricter stormwater management regulations. The Commission also has a Climate Committee.

Metropolitan Planning Organizations (MPOs)

There are three MPOs in New Jersey composed of locally elected officials and representatives from each geographic urban area. Each MPO is a forum for continuing, coordinated transportation planning with its portion of federal funds in their Transportation Improvement Programs (TIPs). NJDOT is a voting member of each of the three regional MPOs. The maps that are created using this information aid other agencies, including law enforcement, in finding solutions to reduce traffic incidents. The GIS data can also be used to identify geographical changes after a natural disaster so that any anomalies or problems can be addressed.

North Jersey Transportation Planning Authority (NJTPA): The NJTPA is the federally authorized Metropolitan Planning Organization for the 13-county northern New Jersey region. The agency conducts studies and serves on various interagency committees and working groups to support resiliency planning in northern New Jersey. The NJTPA (MPO ID# 34198200) includes Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren County. Each year, NJTPA oversees over \$2 billion in transportation improvement projects and provide a forum for interagency cooperation and public input (NJTPA 2023).

- *Plan 2050 and Transportation Improvement Program (TIP): Plan 2050:* Transportation. People. Opportunity and the TIP were approved by the NJTPA Board of Trustees on September 13, 2021. Among the priorities of Plan 2050:
- Safety - Reducing crashes and ensuring the safety of all travelers must continue to be a primary focus across all policies, programs, and investment.
- Equity - The transportation system must more fully address the needs of low-income and minority communities, which have been traditionally underserved.
- Roads and Bridges – “Fix it first” is the priority to reduce the backlog of needed road and bridge improvements and upgrade facilities while also preparing infrastructure for climate change impacts.
- Transit - Improving transit is a key to solving some of the most difficult challenges, but increased funding and more stable funding mechanisms are needed. The Hudson River tunnel project and the larger Gateway project are NJTPA’s top transit investment priorities.
- Climate Change – Support climate change policies and initiatives of the State of New Jersey – captured in the NJDEP’s October 2020 Global Warming Response Act 80x50 Report.
- Environment – A separate Environment chapter highlights the importance of efforts in the areas of air quality, climate change, and environmental mitigation.
- Financial Element – The plan offers a fiscally constrained financial plan based on realistic projects along with scenarios addressing more limited or additional funding (NJTPA 2023).

Post-Hurricane Sandy Transportation Resilience Study of New York, New Jersey, and Connecticut: This Post-Sandy Study was part of a series of research projects funded by the Federal Highway Administration (FHWA) with a goal of mainstreaming the

consideration of climate vulnerability and risk in transportation decision-making. The Post-Sandy Study was intended to inform the collective understanding of how to integrate climate resilience at multiple levels: in planning, during the project development process, and as part of operations and maintenance strategies, including asset management and emergency management (Federal Highway Administration 2017).

Delaware Valley Regional Planning Commission (DVRPC): The DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia region, established by an Interstate Compact between the Commonwealth of Pennsylvania and the State of New Jersey. The DVRPC (MPO ID# 42196501) includes Burlington, Camden, Gloucester, and Mercer County in New Jersey as well Bucks, Chester, Delaware, Montgomery, and Philadelphia County in Pennsylvania. DVRPC provides municipalities with tools and resources that help assist communities with land use planning. DVRPC also provides resources for funding opportunities, technical assistance programs, consultant opportunities, economic development, smart growth, and workshops on integrating comprehensive planning and hazard mitigation. DVRPC was contracted to update and reformat emergency detour route maps for all limited access highways within the region, replacing outdated paper maps with digital PDF maps.

- *Long-Range Plan:* The Long-Range Plan outlines a vision for the region's growth and preservation, and a fiscally constrained financial plan for funding transportation infrastructure. DVRPC updates the plan every four years to maintain the required 20-year horizon, while using performance-based planning to ensure efficient use of the region's natural resources, public funding, and other assets. Each plan update identifies trends and forces shaping the region, works with the public and stakeholders to develop a broadly shared vision for the future, and recommends strategies to achieve the vision (DVRPC n.d.).
- *Transportation Improvement Program (TIP):* The TIP is the regionally agreed upon list of priority transportation projects over a four-year period, as required by federal law. The TIP document contains a multimodal list of all projects that intend to use federal funds, along with all non-federally funded projects that are regionally significant, with estimated costs and schedules (DVRPC n.d.).
- *Planning Assistance Center:* DVRPC works with many different types of stakeholders, from State government to local government, from professional planners to citizen planners, and from private sector to public sector. The Planning Assistance Center houses information on funding and consultant opportunities as well as educational programs, and other resources that are important to the region (DVRPC n.d.).
- *Coastal Vulnerability Assessments:* DVRPC has conducted coastal vulnerability assessments for select New Jersey communities and continues to be able to offer this service for coastal communities.
- *Climate Change Forum:* The Climate Change Forum (formerly the Climate Adaptation Forum) is an ongoing series of DVRPC-hosted workshops and webinars focusing on the intersection of climate change and city and regional planning. The series brings together professionals, advocates, and community members who are working to reduce greenhouse gas emissions and prepare the region for the impacts of climate change (DVRPC n.d.)

South Jersey Transportation Planning Organization (SJTPO): SJTPO serves as a technical resource, provides access to funding, and works to provide a regional approach to address transportation planning and engineering issues. The SJTPO (MPO ID# 34199300) includes Atlantic, Cape May, Cumberland, and Salem County. Formed in 1993, SJTPO serves as a technical resource, provides access to funding, and works to provide a regional approach to address transportation planning and engineering issues (SJTPO 2023).

- *RTP 2050:* RTP 2050 serves as the current regional transportation plan (RTP) for the SJTPO region. Adopted in January 2021, its main purpose is to lay out the long-term vision for the region's transportation network, looking out over a horizon of a little less than 30 years out to 2050. It includes goals, both long and short-range strategies as well as projects and programs that will enable the region to achieve this long-term vision (SJTPO 2023).
- *Resiliency Program:* One goal in Transportation Matters-A Plan for South Jersey, the current RTP, is to improve the resiliency and reliability of the transportation infrastructure, particularly along the Atlantic and Delaware Bay shorelines through funding of resiliency-type projects. SJTPO also increases general awareness of resiliency issues through the long-range plan, technical studies (greenhouse gas [GHG] emissions inventory), and overall public outreach.

Port Authority of New York and New Jersey (PANYNJ)

PANYNJ oversees much of the regional transportation infrastructure, including bridges, tunnels, airports, and seaports, within the Port of New York and New Jersey.

- *Climate Resilience Guidelines (CRG)*: CRG establishes climate risk-based design criteria for all applicable PANYNJ capital projects. The Guidelines ensure that consistent resilience standards are implemented for each capital project, resulting in tangible risk reduction.
- *Surge Inundation Risk Assessment (SIRA)*: Through OEM's cutting-edge effort, the SIRA leverages thousands of synthetic storm tracks to probabilistically assess risk of surge inundation under current climate conditions and for two future climate scenarios and sea-level rise cases out to 2050. The results of this effort provided significant insight into the risk of inundation through mid-century. Expanding upon the success of prior efforts, OEM has initiated a follow-on assessment to extend the analysis through the end of the century and to incorporate significant methodological improvements, revised climate trajectories and sea-level rise projections, and new Global Climate Models used to generate synthetic storm tracks. Importantly, this effort also includes an analysis of inundation from extra-tropical cyclones to capture the (more) frequent "nuisance" flooding often associated with these events.
- *Climate Risk Assessment (CRA)*: CRA is an asset-scale, multi-stressor exercise to identify key risks, develop corresponding risk mitigation measures, and prioritize cost-beneficial mitigations for investment. Currently, the PA is in the process of acting on this third-party feedback and is developing a Resilience Action Plan (RAP) as a roadmap to enhancing its organizational resilience capabilities.
- *Resilience and Sustainable Design (RSD)*: The RSD unit comprises over a dozen staff who carry out the CRA and RAP and administer the agency's Climate Risk Guidelines.
- *Resilience Education and Training*: The agency offers customized live (virtual) and on-demand professional training focused on climate resilience. Training is targeted primarily at PANYNJ engineers who are responsible for the design development and delivery of the agency's capital projects.
- *Climate Resilience Working Group (CRWG)*: The CRWG is an informal working group that conducts cross-departmental coordination on matters pertaining to climate resilience
- *Enterprise Risk Management (ERM)*: The PANYNJ ERM group includes climate resilience as an enterprise risk, integrated into agency-level and departmental ERM activities.
- *Public Assistance/Disaster Recovery Program*: The PANYNJ Office of Emergency Management ensures awareness of repeated damages and ties funding for mitigation projects to Public Assistance funding and HMGP opportunities.

Rutgers University

Rutgers, The State University of New Jersey, is an academic, health, and research statewide leader. The university has three main campuses in New Brunswick, Newark, and Camden cities. Rutgers University has additional facilities throughout the State, including oceanographic research facilities along the New Jersey coastline.

- *Center for Advanced Infrastructure and Transportation (CAIT)*: CAIT research focuses on preserving, rehabilitating, and improving infrastructure; boosting network resilience; reducing lifecycle costs; and increasing mobility and safety (Rutgers University 2022). CAIT works with NJ Transit to identify transportation infrastructure that is vulnerable to storm surge and sea-level rise.
- *Edward J. Bloustein School of Planning and Public Policy*: The Bloustein School conducts mitigation planning, data gathering, and technical studies in support of statewide hazard mitigation. The school develops geospatial and analytical tools to support community engagement, policy reform, and State and regional planning efforts.
- *Jacques Cousteau National Estuarine Research Reserve (JCNERR)*: The JCNERR encompasses approximately 116,000 acres in southeastern New Jersey, including a great variety of terrestrial, wetland, and aquatic habitats within the Mullica River-Great Bay ecosystem. The Reserve is a concentrated patchwork of federal and state lands managed in partnership through a variety of agencies. The JCNERR Coastal Training Program provides up-to-date scientific information, access to technologies, and skill-building opportunities to professionals responsible for making decisions about coastal resources and floodplain management (JCNERR 2022).
- *NJADAPT*: NJADAPT is a suite of data visualization and mapping tools developed by Rutgers University. The NJADAPT tools are designed to assist planners, community leaders, businesses, and residents to understand and adapt to the impacts of climate change on people, assets, and communities in New Jersey (Rutgers n.d.).

- *NJ HazAdapt*: NJ HazAdapt is a hazard mitigation planning tool developed in collaboration with the NJOEM. It is intended to provide municipal and county hazard planners with easy access to data and other resources that can assist with development of HMPs consistent with guidance issued by FEMA. Additionally, this tool is designed to help State and local end users assess impacts of flooding on key lifeline sectors, socially vulnerable populations, and individual land parcels. It also includes data on heat hazards to assist end users with understanding impacts of heatwaves and urban heat island. Currently, this tool includes datasets on the following topics:
 - Flooding and heat hazards
 - Social vulnerability to hazards to assist hazard planners in preparing communities for natural hazards
 - Potential flood analysis for each tax parcel in New Jersey using the Parcels and MOD-IV Composite of New Jersey (Rutgers n.d.)
- *Office of the New Jersey State Climatologist (ONJSC)*: The ONJSC is situated within the New Jersey Agricultural Experiment Station at Rutgers, the State University of New Jersey. The ONJSC mission is threefold: (1) gather and archive New Jersey weather and climate observations, (2) conduct and foster research associated with New Jersey’s weather and climate, and (3) provide critical climate services to all seeking assistance (ONJSC n.d.). The ONJSC continues to operate the 66-station Rutgers NJ Weather Network. Observations of multiple weather variables are available in real-time every five minutes via njweather.org.
- *Rutgers Climate Institute*: The Rutgers Climate Institute is a University-wide effort to climate change through research, education, and outreach. The Institute draws upon strengths in many departments at Rutgers facilitating collaboration across a broad range of disciplines in the natural and social sciences, the humanities, engineering, law, and medicine (Rutgers University 2023).
- *New Jersey’s Rising Seas and Changing Coastal Storms: Report of the 2019 Science and Technical Advisory Panel (STAP)*: A 2016 New Jersey STAP was convened by Rutgers University, culminating in a report that identified planning options for practitioners to enhance the resilience of New Jersey’s people, places, and assets to sea-level rise, coastal storms, and the resulting flood risk. The same team at Rutgers University was engaged by the NJDEP to update the 2016 report based on the most current scientific information. Similar to the inaugural work, the 2019 STAP was charged with identifying and evaluating the most current science on sea-level rise projections and changing coastal storms, considering the implications for the practices and policies of local and regional stakeholders, and providing practical options for stakeholders to incorporate science into risk-based decision processes (Kopp, et al. 2019). The 2019 STAP is used by multiple State agencies including NJDEP and NJOEM for sea level rise and coastal flooding planning and project design purposes.

South Jersey Transportation Authority (SJTA)

The South Jersey Transportation Authority (SJTA) was established by the Legislature in June 1991 to assume operational responsibilities for the Atlantic City Expressway, Atlantic City International Airport terminal, and parking facilities in Atlantic City. As a successor to the New Jersey Expressway Authority and Atlantic County Transportation Authority (ACTA), the SJTA serves six counties: Atlantic, Camden, Cape May, Cumberland, Gloucester, and Salem (SJTA 2012). The SJTA hosts the SJTPO.

- *Engineering Department and Operations and Facilities Management*: SJTA coordinates with emergency evacuation exercises on the Atlantic City Expressway. SJTA has a dedicated staff of professionals that are responsible for the design and construction of capital projects and environmental mitigation on the Atlantic City Expressway and the Atlantic City International Airport.

Stevens Institute of Technology: Coastal Engineering Research Laboratory (CERL)

The CERL is both a physical center for conducting innovative coastal research as well as an intellectual center for combining capabilities in observational, experimental, and analytical studies of the coast. The CERL conducts fundamental and applied research on the design, implementation, and monitoring of shore protection structures, systems, and beach fill projects (Stevens Institute of Technology 2023).

- *Coastal Engineering Research Group*: The university conducts fundamental and applied research on the design, implementation, and monitoring of shore protection structures, systems, and beach fill projects.

- *Davidson Laboratory*: The Davidson Laboratory at Stevens Institute of Technology is a global leader in delivering new knowledge, advanced technologies, and higher education in support of forecasting for extreme weather events, coastal resilience, and marine hydrodynamics.
 - *Flood Advisory System*: The Davidson Laboratory provides accurate flood forecasts for the New York-New Jersey region 108 hours in advance of approaching storms through the Stevens Flood Advisory System. Flood forecasts are used to inform emergency management actions (Stevens Institute of Technology 2023).
 - *New York Harbor Observing and Prediction System (NYHOPS)*: The NYHOPS was established to permit an assessment of ocean, weather, environmental, and vessel traffic conditions throughout the New York Harbor and New Jersey Coast regions. The system is designed to provide a knowledge of meteorological and oceanographic conditions both in real-time and forecasted out to 72 hours in the Hudson River, the East River, NY/NJ Estuary, Raritan Bay, Long Island Sound, and the coastal waters of New Jersey (Stevens Institute of Technology 2022).

Stockton University Coastal Research Center (CRC)

The Stockton University Coastal Research Center (CRC) originated in 1981 to assist local municipalities with coastal environmental issues related to recurring storm damage and shoreline retreat. Since then, the CRC has been working on shoreline monitoring and assessment programs with the State of New Jersey and several municipalities in New Jersey. The CRC is also a resource for geotechnical data working on numerous projects with federal, state, and municipal governments (Stockton University 2023). NJOEM is working with the CRC to establish a technical assistance hub to support mitigation efforts in southern New Jersey.

5.0-9 FUNDING CAPABILITIES

Element S11 and 44 CFR § 201.4(c)(3)(iv): The state plan must identify current and potential sources of funding to implement mitigation actions and activities, including the identification of current and/or potential sources of federal, state, local, or private funding for implementation. At a minimum the plan must identify FEMA mitigation funding sources.

This section discusses and evaluates the State’s funding capabilities including a summary of funding resources that the State has access to or is eligible to use, a description of how the State has used its own funding for hazard mitigation, and how FEMA funds have been used.

The administration of hazard mitigation grant funding programs in the State of New Jersey is a collaborative effort between numerous agencies. The roles and responsibilities often evolve to meet changing needs, emerging threats, and new opportunities. As an example, the Covid-19 pandemic created an immediate need for rapid response but also resulted in the availability of vast federal resources. The State did its best to blend and weave funding sources to ensure equitable and rapid distribution of funding to meet State and local needs. This was coordinated through the Governor’s Office. The State strives to be efficient and balance any competing goals of State and federal agencies, leveraging complimentary efforts where possible. The State’s interagency coordination allows projects to receive funding in a shorter timeframe and minimize local cost-share.

Federal Funding Capabilities

The State of New Jersey has access to funding from a variety of federal sources. Many federal grant programs require cost-shares between federal and non-federal partners. While some programs are annual grant opportunities, numerous programs are tied to federal disaster declarations. Appendix B - Risk Assessment Supplement provides detailed information on federal funding programs. A summary of the major federal funding programs to support mitigation is provided below.

FEMA

FEMA has a suite of Hazard Mitigation Assistance (HMA) grants available for eligible mitigation projects that reduce disaster losses (FEMA 2023). There are six main FEMA grant funding opportunities that support State mitigation activities. Two of these are available pre-disaster (BRIC and FMA), and two are available post-disaster (HMGP and PA Section 406 funds). The State of New Jersey has a strong track record of securing HMA funding support for mitigation projects. Since Superstorm Sandy in 2012, 870

projects were submitted for HMA funding support, resulting in 713 projects funded (81.9 percent success rate). Over \$860 million dollars of federal funding support has been awarded in this time period (NJOEM 2023). For a listing of HMA-funded projects in New Jersey since the 2019 plan, refer to Appendix B - Risk Assessment Supplement. The establishment of FEMA identified Community Disaster Resilience Zones provides geographic focus for financial assistance for underserved communities for technical assistance and increased mitigation activities (FEMA 2023).

Building Resilient Infrastructure and Communities (BRIC): The BRIC program is a competitive annual grant program. The BRIC program aims to categorically shift the federal focus away from reactive disaster spending and toward proactive investment in community resilience. The BRIC program also offers non-financial Direct Technical Assistance (DTA) and encourages communities to participate. BRIC DTA gives full support to communities that may not have the resources to begin climate resilience planning and project solution design on their own. FEMA will give wide-ranging support to BRIC DTA communities, including climate risk assessments, community engagement, partnership building, mitigation and climate adaptation planning, and BRIC program requests throughout the grant lifecycle (FEMA 2023).

Flood Mitigation Assistance (FMA): FMA grants provide funding to states, local communities, tribes, and territories to reduce or eliminate the risk of repetitive flood damage to buildings insured under the NFIP. FEMA distributes funds annually to develop community or individual flood mitigation projects. In addition, funding is also used for technical assistance and management costs. All sub-applicants need to be in good standing with the NFIP (FEMA 2023).

Hazard Mitigation Grant Program (HMGP): The HMGP provides funding to states, local communities, tribes, and territory (SLTT) governments so they can rebuild in a way that reduces or mitigates future natural disaster losses in their communities. HMGP funding is authorized with a Presidential Major Disaster Declaration. A governor or tribal chief executive may request HMGP funding throughout the state, tribe, or territory when submitting a disaster declaration. Through HMGP, states can access up to 10 percent and local governments up to 5 percent of their HMGP award for management and administration costs (FEMA 2023).

Public Assistance (PA) Section 406 Funds: FEMA funds cost-effective mitigation measures under the PA program for repairs, restoration, and replacement of eligible damaged facilities. This grant funding is commonly referred as "406 Mitigation" or PA Mitigation (FEMA 2023).

Legislative Pre-Disaster Mitigation Pre-Disaster Mitigation (LPDM): The Pre-Disaster Mitigation Program (PDM) was active during the performance of the 2019 SHMP but was replaced with BRIC under the Disaster Recovery Reform Act of 2018. However, LPDM awards are still funded through direct congressional appropriations (FEMA 2023).

Safeguarding Tomorrow through Ongoing Risk Mitigation Revolving Loan Fund (STORM RLF): The STORM RLF program complements and supplements FEMA's Hazard Mitigation Assistance grant portfolio to support mitigation projects at the local government level and increase the nation's resilience to natural hazards and climate change. These low interest loans will allow jurisdictions to reduce vulnerability to natural disasters, foster greater community resilience and reduce disaster suffering (FEMA 2023).

United States Department of Housing and Urban Development (HUD)

HUD provides a variety of grant opportunities, including the Community Development Block Grant Program (CDBG). Funds are intended to provide low and moderate-income households with viable communities, including decent housing, a suitable living environment, and expanded economic opportunities. Eligible activities include community facilities and improvements, roads and infrastructure, housing rehabilitation and preservation, development activities, public services, economic development, and planning and administration. Public improvements could include flood and drainage improvements (USHUD 2021).

- Community Development Block Grant Mitigation (CDBG-MIT) funds: Funding assistance is provided in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses. These mitigation projects will aim to reduce the risk to community services that benefit human health and safety or economic security from being severely affected by natural disasters (USHUD 2021).

- Community Development Block Grant Disaster Recovery (CDBG-DR) funds: Grant funds are appropriated by Congress and allocated by HUD to rebuild disaster-impacted areas and provide crucial seed money to start the long-term recovery process. These flexible grants help cities, counties, Indian tribes, and states recover from Presidentially declared disasters, especially in low-income areas subject to availability of supplemental appropriations. Since CDBG-DR assistance may fund a broad range of recovery activities, HUD can help communities and neighborhoods that otherwise might not recover due to limited resources (USHUD 2023).

United States Army Corps of Engineers (USACE)

Congress has provided USACE with a number of standing authorities to fund Corps efforts to provide planning assistance or to study and build projects relating to protecting water resources, flood control, and erosion. Projects often involve a cost-share between the federal government and non-federal partners. Assistance is provided to the states, local governments, Native American Tribes, and other non-federal entities. The State Hazard Mitigation Team coordinates with USACE on upcoming projects and potential funding sources to support mitigation efforts in waterways and shorelines.

Justice40

Executive Order 14008 established the Justice40 Initiative, making it a goal that 40 percent of the overall benefits of certain federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. The categories of investment are: climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, remediation and reduction of legacy pollution, and the development of critical clean water and wastewater infrastructure (The White House n.d.).

Infrastructure Investment and Jobs Act (IIJA)

The IIJA, most commonly known as the Bipartisan Infrastructure Bill and originally in the House as the Investing in New Vision for the Environment and Surface Transportation (INVEST) in America Act (H.R. 3684) was signed into law by President Biden in November 2021. Various funds are expected to be made available through this Act to support hazard mitigation, including funding and programs related to carbon reduction. The bill provides around \$7 billion to FEMA for assisting communities in preparing for and adapting to climate related disasters. The bill also funds the Bridge Investment Program to provide grant funding to replace, rehabilitate, preserve, or make resiliency improvements to bridges.

State Funding Capabilities

The State uses its own funding for a variety of mitigation activities. This use of funds includes earmarking resources for mitigation projects, providing grant monies to the counties and nongovernmental organizations, supporting ongoing programs that further mitigation goals, and using State monies or in-kind contributions as matching funds for federal grants. The State's programmatic and regulatory programs are supported, at least in part, by State general funds and the operating budgets of the various State departments and agencies.

While many State funding sources are available and used to support hazard mitigation, the State of New Jersey has had great success with preserving open space. Programs like Blue Acres, Green Acres, and the New Jersey Farmland Preservation Program have resulted in acquisition of flood-prone properties, restoration of floodplains, and preservation of open space.

For more detailed information on the State-level funding sources available for pre- and post-disaster mitigation in the State of New Jersey, refer to Appendix C – Capability Assessment Supplement.

5.0-10 SUMMARY OF CHANGES IN STATE CAPABILITIES

The State of New Jersey has strengthened and enhanced its capabilities over the performance period of the 2019 SHMP. The following is a summary of the detailed information available in Appendix C – Capability Assessment Supplement.

Outreach

- Improvements and expansion of different types of public information methods continue to take place within the State, from federal to local levels.
- In 2020, NJOEM’s Mitigation Unit released “An Elevation Guidebook for Homeowners” to help homeowners determine whether elevation is the best mitigation option to reduce flood risk. The guidebook serves as a resource to effectively apply for, manage, and implement an elevation grant (NJOEM 2020).

Technical Assistance

- The development of the NJ HazAdapt hazard mitigation planning tool provides municipal and county hazard planners with easy access to data and other resources that can assist with development of HMPs consistent with guidance issued by FEMA (Rutgers n.d.).
- Following Superstorm Sandy, the Richard Stockton College of New Jersey Coastal Research Center (CRC), Stevens Institute of Technology, Sea Grant, Monmouth University, and Jacques Cousteau National Estuarine Research Reserve of Rutgers University were established as Academic Cooperating Technical Partners with FEMA and the NJDEP Bureau of Dam Safety and Flood Control. These organizations, while still important resources to the State, no longer serve as Academic Cooperating Technical Partners.
- The NJ Resilience Accelerator was a recent program that engaged with federal and state agencies, academic institutions, and nongovernmental organizations to provide technical assistance and subject matter expertise to jump-start financially sustainable community projects and initiatives that support equitable long-term resilience. Cohorts of municipalities collaborated with each other and the NJ Resilience Accelerator steering committee. The steering committee was composed of FEMA, NJDCA, the NJDEP Climate and Flood Resilience Program, NJOEM’s Hazard Mitigation Unit, and the Department of State’s NJ Business Action Center Office of Planning Advocacy (NJDEP 2023). While this program was a new capability established in the interim between the 2019 plan and the 2024 plan, the program was disbanded in 2023.

Regulations and Planning

- Following Superstorm Sandy, FEMA reviewed the flood damage prevention ordinances in use in New Jersey. Based upon FEMA’s review, specific language related to NFIP regulations was not consistent. Additionally, during CACs with local floodplain administrators, it was determined that better coordination was needed between the three sets of regulations that regulate development and construction in the floodplain. These regulations are: the NFIP implemented by local floodplain administrators, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the UCC implemented by the local Construction Official (NJDEP 2023). As a result of this process, the New Jersey Model Flood Damage Prevention Ordinances supplied by NJDEP were upgraded to create Model Code Coordinated Ordinances in 2021. NJDEP is working with communities to update their ordinances, with the expectation that it will take roughly five years. Atlantic and Cape May County were updated first, with rollout continuing. These updated regulations represent a strengthening and alignment of codes that dictate floodplain management.
- Updated Radon Rules were adopted by NJDEP and became operable in 2022. The rules increase the effectiveness of the Radon program to reduce overall risk to the public.
- The New Jersey State Debris Management Plan has received NJDEP and FEMA approval.
- The Department of State, the State Planning Commission, and the Office of Planning Advocacy now require vulnerability assessments, resilience plans, and other climate change considerations as part of Plan Endorsement (PE) requirements.
- Legislation currently requires all counties in the State to have a plan in place to shelter homeless individuals whenever the temperature drops below 25 degrees Fahrenheit without precipitation or below 32 degrees Fahrenheit with precipitation and/or when the National Weather Service wind chill temperature will be zero degrees Fahrenheit or less for a period of two hours or more (Code Blue Alert). This legislation is currently being updated to include a Code Red alert which would require similar plans to be enacted when the heat index is forecast to reach 95 degrees Fahrenheit to 99 degrees Fahrenheit for at least two consecutive days or the temperatures will reach 100 degrees Fahrenheit to 104 degrees Fahrenheit for any length of time (Senate, No. 2429).

Program Improvements

- In 2020, NJDEP began a regulatory reform effort to help reduce greenhouse gas (GHG) and other climate pollutant emissions while making our natural and built environments more resilient to the impacts of climate change that are now unavoidable. These reforms represent New Jersey protecting against climate threats (NJ PACT), a partnership with New Jerseyans to help both stave off the worst impacts of climate change and adapt to unavoidable impacts already occurring across the State. NJ PACT's Climate Pollution Reductions (CPR) effort encompasses various sectoral approaches to drive down emissions (NJDEP 2023).
- NJDEP has undergone reorganization of many of its program areas. Most of the climate-related work is now under the Office of Climate and Environment.
- The capability of the New Jersey Transportation Infrastructure Bank (NJTIB) has expanded to include marine and aviation projects in addition to surface transportation projects.

Funding

- The Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act became law on Jan. 1, 2021 and authorizes FEMA to provide capitalization grants to states, federally recognized tribes, Puerto Rico and the District of Columbia to establish revolving loan funds that provide hazard mitigation assistance for local governments to reduce risks from natural hazards and disasters (FEMA 2023). STORM loan funds are administered by NJOEM and the New Jersey Infrastructure Bank.
- The Community Disaster Resilience Zones Act requires FEMA to utilize a natural hazard risk assessment index to identify census tracts which are most at risk from the effects of natural hazards and climate change to create resilience zones. These designated zones will provide geographic focus for financial assistance for the planning and implementation of resilience projects (FEMA 2023).
- NJDEP buyout programs no longer require municipal officials to agree to the buyout, removing potential barriers to successful mitigation.
- The capability of the New Jersey Environmental Infrastructure Trust (NJEIT) has expanded to include additional funding sources such as the Water Infrastructure Finance and Innovation Act (WIFIA).
- The rollout of the Justice40 Initiative has resulted in a decrease in matching requirements in some grant opportunities for disadvantaged communities that sometimes struggle to establish the necessary matching funds.
- The Green Acres Program has increased the funding percentage for projects in overburdened communities by 25 percent.
- Previously defunded USACE flood reduction projects have had funding restored and are now moving forward.

5.0-11 PROGRESS ON INTEGRATION INTO STATE PROGRAMS

The State of New Jersey has continued to make progress on integration. The following is a summary of the detailed information available in Appendix C - Capability Assessment Supplement.

- Implementation of Flood Hazard Area rules and the Stormwater rule sets require the use of green infrastructure.
- The Inland Flood Protection Rule became effective July 2023 and aims ensure that areas at most significant risk to inland flooding are better defined and that new and reconstructed assets in these areas are designed and constructed using the best available climate-informed precipitation data (NJDEP 2023).
- Transportation agencies in the State of New Jersey continue coordination efforts to plan for and mitigate the impacts of natural hazards.
- The Transportation Authority's Design and Procedures Manuals are being updated to incorporate resilient measures into all future designs.
- The Transportation Authority's 20-year capital program, which was established in 2020, specifically includes climate change projects.
- The Transportation Authority's 2020–2029 Strategic Plan includes resilient goals and metrics.

- In 2020, NJT released NJT2030, its first-ever long-term, 10-year Strategic Plan, outlining its resiliency and sustainability goals. The agency also released its first 5-Year Capital Plan, which details the agency’s comprehensive capital investment strategy. Since 2020, the agency releases an annual Capital Plan update to achieve the vision and goals outlined in NJT2030.
- The NJ State Development and Redevelopment Plan is undergoing revision. NJOEM has provided feedback to the process as it relates to natural hazard data.
- The Municipal Land Use Law (MLUL) was amended in February 2021 to require municipalities to incorporate a climate change-related hazard vulnerability assessment into any Master Plan Land Use Element. The vulnerability assessments must rely on the most recent natural hazard projections and best available science provided by the NJ Department of Environmental Protection.
- FEMA updated the local planning policy guide for local HMPs in April 2023. County HMPs that are currently undergoing updates or will be updated in the future will be developed using improved standards.

Additional components of program integration are discussed in Section 2.0: Planning Process. Opportunities for additional integration have been identified and are included in Appendix H – Mitigation Strategy Supplement.

5.0-12 SUMMARY OF EFFECTIVENESS OF LOCAL MITIGATION CAPABILITIES

Element S13, HHPD6, and 44 CFR § 201.4(c)(3)(ii): The State plan must include a general description and analysis of the effectiveness of local government mitigation policies, programs, and capabilities. The plan must include a summary of current local government policies, programs, and capabilities. The plan must identify challenges to implementing these mitigation policies, programs, and capabilities; these should include gaps and disparities in serving underserved communities and challenges resulting from the impacts of climate change. If the state is interested in HHPD funding, the plan must generally describe and analyze the effectiveness of local mitigation policies, programs, and capabilities that address high hazard potential dams.

Disasters are inherently local events; therefore, the assessment of State capabilities would not be complete without an examination of local (County) capabilities. This review and examination was used to inform and influence the State’s mitigation priorities, as discussed in Section 6.0: Mitigation Strategy. The review was conducted by examining the local HMPs of the 21 counties in the State of New Jersey. This review focused on the following aspects of the local HMPs:

Foundational Capabilities: A list of foundational capabilities relevant for hazard mitigation in the State was developed, and local HMPs were reviewed to determine if these capabilities were identified and discussed. It should be noted that this list is not intended to be a comprehensive assessment of all capabilities identified in local HMPs.

- Regulatory
- Planning
- Disaster Response, Recovery, and Resilience
- Local Floodplain Management
- Staffing
- Fiscal Capabilities

Evaluation and Effectiveness: Local HMPs were reviewed to determine challenges and opportunities, unique sources of funding, mitigation successes, and determinations on effectiveness of mitigation actions. Local HMP coordinators and county OEM and planning staff contributed additional information on new challenges and opportunities that have developed since their local plan adoptions through workshop participation described in Section 2.0: Planning Process.

Emerging Local Capabilities: Local HMPs, like state HMPs, are required by FEMA to be updated every five years. Many local HMPs are midway through their performance periods; therefore, a summary of emerging capabilities over the performance period of the SHMP are highlighted.

The evaluation of local mitigation capabilities using the local HMPs proved challenging due to inconsistent planning methods, information tracking, and reporting processes. In general, the local plan review indicated that many approved plans in the State have noted only high-level summary information on local legal and regulatory capabilities. It is anticipated that future updates of local HMPs will include more detailed information on local capabilities as plans are developed using FEMA's latest local plan guidance (FEMA 2022).

5.0-13 LOCAL FOUNDATIONAL CAPABILITIES FOR HAZARD MITIGATION

New Jersey is composed of 21 counties covering 565 municipalities and follows a "home rule" philosophy that each municipality is responsible for local enforcement of building codes, floodplain management, emergency management, and zoning of local ordinances. Counties and municipalities in the State of New Jersey have various tools, mechanisms, and resources available to support hazard mitigation and hazard risk reduction. In addition to access to federal and state capabilities, counties and municipalities have numerous variations in their planning and regulatory; disaster response, recovery, and resilience planning; floodplain management; staffing; and fiscal capabilities, respectively.

Planning and Regulatory

Local HMPs

Local HMPs form the foundation of a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repetitive damage. FEMA supports local mitigation planning to achieve the following:

- Foster partnerships among all levels of government.
- Develop and strengthen nongovernmental and private partnerships.
- Promote more disaster-resilient and sustainable communities.
- Reduce the costs associated with disaster response and recovery by promoting mitigation activities (FEMA 2022).

In New Jersey, local HMPs are traditionally multi-jurisdictional county-level plans. All counties in the State have HMPs with limited municipalities electing not to participate. Local HMPs are discussed in greater detail in Section 5.0-14: Evaluation of Local Hazard Mitigation Plans. New State guidance for Local HMPs is currently in development.

Comprehensive/Land Use Plans

Like municipalities, counties in New Jersey are also required to have master plans which serve as comprehensive land use plans. The master plan of a county is required to show the county planning board's recommendations for the development of the territory covered by the plan and features that are important to the development of the county. The county planning board is required to encourage the cooperation of the local municipalities in matters regarding the county master plan and to advise the board of chosen commissioners with respect to the formulation of development programs and budgets for capital expenditures.

Stormwater Management Plans

In response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999, the 2004 and subsequent versions of the NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.) were developed. These rules set forth the required components of regional and municipal stormwater management plans. Additionally, subchapter 25 of the NJPDES rules (N.J.A.C. 7:14A) established the Municipal Stormwater Regulation Program and four NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities as well as public complexes and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s).

A MSWMP documents the strategy of a specific municipality to address stormwater-related impacts. A MSWMP is required to address the stormwater related water quality, quantity, and ground water recharge related impacts of development. MSWMPs provide the structure and process for addressing stormwater management in the municipality. They are required by the NJDEP's Stormwater Management rules at N.J.A.C. 7:8-4 and the NJPDES MSRP requirements at N.J.A.C. 7:14A-25; the mandatory elements of the plan are described in the Stormwater Management rule. Counties can also develop stormwater management plans to identify and develop solutions to problems that can be managed most effectively on a regional basis (NJDEP 2004). While

not required by rule, the plan can include discussions of existing water quality issues, localized flooding, or other stormwater related problems in the municipality.

Watershed/Floodplain Management Plans

A watershed/floodplain management plan is a road map for reducing flood risk, improving water quality, assessing resource concerns, and outlining actionable steps that can be taken within a watershed to address these challenges. A robust watershed/floodplain management plan provides detailed watershed information, sets goals and priorities, and helps guide the implementation of future projects. The main goal of a plan is to provide a road map for improving water quality and reducing flood risk in a watershed and/or floodplain. While this planning document is not a requirement for every locality within the State of New Jersey, municipalities with separate stormwater systems (which is nearly every municipality) have a Municipal Separate Storm Sewer System (MS4) permit. This permit obligates municipalities that own and/or operate MS4s to have a written watershed improvement plan (WIP) completed by the end of 2027. This process includes three phases for communities to map out actions to improve water quality by reducing pollutants and reducing or eliminating flooding in municipalities. The plan additionally requires municipalities to reduce and/or eliminate stormwater flooding in the municipality, which should be prioritized based on threat to human health and safety, environmental impacts, and frequency of occurrence. The three steps to the WIP process over the five-year permit cycle include:

- **Watershed Inventory:** Municipalities are required to map all municipal and privately owned stormwater infrastructure, impervious cover, water quality impairments, and other relevant data by the end of 2025. Much of the required information is available for download in GIS format from the NJDEP.
- **Watershed Assessment:** Communities will outline potential water quality improvement projects, provide an estimate of funding necessary for these improvements, and provide other relevant water quality data by the end of 2026.
- **Final Watershed Improvement Plan:** Municipalities will submit a final Watershed Improvement Plan, including project locations for water quality improvement projects by the end 2027.

Many communities are electing to develop watershed management and floodplain management plans as a method of increasing floodplain management capabilities and earning credits in the CRS program. Some of these plans are developed through multi-jurisdictional efforts.

Transportation Plan

Transportation planning is a cooperative process designed to foster involvement by all users of the system, such as businesses, community groups, environmental organizations, the traveling public, freight operators, and the general public, through a proactive public participation process (Federal Transit Administration 2022). NJSA 40:55D-28b (4) notes elements of a circulation plan, or transportation plan, may be included in a county or municipal master/comprehensive plan. This element includes showing the location and types of facilities for all modes of transportation required for the efficient movement of people and goods into, about, and through the municipality, taking into account the functional highway classification system of the FHWA and the types, locations, conditions, and availability of existing and proposed transportation facilities, including air, water, road, and rail.

Capital Improvement Plan

Local governments can develop capital improvement plans to consider all capital needs, assess fiscal capacity, plan for debt issuance, and understand the impact on reserves and operating budgets within a given planning timeframe and in alignment with the overall goals of the local government. Counties and municipalities often include mitigation projects, particularly those involving infrastructure, in their capital improvement plans (GFOA 2023).

Economic Development Plan

An economic development plan provides a comprehensive overview of the economy, sets policy direction for economic growth, and identifies strategies, programs, and projects to improve the economy. Local government economic development planning is part of a region's overall economic development strategy and involves intergovernmental coordination. The goal of an economic development plan is to create and maintain a strong, vibrant local economy.

NJSA 40:55D-29 notes elements of an economic development plan may be included in a county or municipal master/comprehensive plan. This element includes the consideration of all aspects of economic development and sustained

economic vitality, including (a) a comparison of the types of employment expected to be provided by the economic development to be promoted with the characteristics of the labor pool resident in the municipality and nearby areas and (b) an analysis of the stability and diversity of the economic development to be promoted. Municipalities can also establish an economic development commission that can facilitate incentive programs (façade programs, low-interest loans, etc.).

Climate Action Plan

A climate action plan is a detailed and strategic framework for measuring, planning, and reducing greenhouse gas (GHG) emissions and related climatic impacts. Counties and municipalities design and utilize climate action plans as customized roadmaps for making informed decisions and understanding where and how to achieve the largest and most cost-effective emissions reductions that align with other municipal goals. Climate action plans, at a minimum, include an inventory of existing emissions, reduction goals or targets, and analyzed and prioritized reduction actions. Ideally, a climate action plan also includes an implementation strategy that identifies required resources and funding mechanisms.

NJSA 40:55D-28b (16) notes elements of a climate plan may be included in a county or municipal master/comprehensive plan. This element includes green buildings and environmental sustainability, which provide for, encourage, and promote the efficient use of natural resources and the installation and usage of renewable energy systems.

County-Level Planning

Local HMPs and county websites were reviewed to understand planning capabilities at the county level in New Jersey. Table 5.0-4 displays the New Jersey counties that currently have various general and community plans.

Table 5.0-4 County Planning Capabilities

County	Local Hazard Mitigation Plan	Comprehensive/ Land Use Plan inclusive of Hazards/Hazard Mitigation	Stormwater Management Plan	Watershed/ Floodplain Management Plans	Transportation Plan	Capital Improvement Plan	Economic Development Plan	Climate Action Plan
Atlantic	X	X	X	-	-	X	X	-
Bergen	X	X	-	X	-	-	-	-
Burlington	X	-	X	-	X	X	-	-
Camden	X	X	-	-	X	-	-	-
Cape May	X	X	-	-	X	X	-	-
Cumberland	X	-	X	-	X	-	-	-
Essex	X	-	-	-	X	X	-	X
Gloucester	X	X	X	-	-	-	-	-
Hudson	X	X	-	X	X	X	X	-
Hunterdon	X	X	-	X	X	X	X	-
Mercer	X	X	X	X	X	X	X	-
Middlesex	X	X	X	-	X	X	X	-
Monmouth	X	X	X	-	X	X	X	-
Morris	X	X	-	X	X	X	-	-
Ocean	X	X	-	-	-	-	-	-
Passaic	X	X	-	X	X	X	X	-
Salem*	X	X	-	-	X	-	X	-
Somerset	X	X	X	X	X	X	X	-
Sussex	X	X	-	X	X	X	X	-
Union	X	X	X	-	X	X	-	-
Warren	X	X	-	-	X	X	X	-

Notes:

X Jurisdiction currently has this capability in place

- No capability in place

* Salem County HMP review based on 2017 HMP. The plan is currently expired.

Disaster Response, Recovery, and Resilience Planning

In the State of New Jersey, each county maintains its own emergency management department and/or office. Many municipalities in the State also have dedicated emergency management staff that participate in local hazard mitigation planning.

New Jersey counties and municipalities have various approaches to hazard response, recovery, and resilience planning. The following plans have been identified as important planning efforts that counties and municipalities in the State have in place as part of their pre- and post-disaster capabilities.

Emergency Operations Plan

According to State Police Directive 101, each county and municipality is required to prepare, adopt, and maintain an emergency operations plan that meets the requirements of the State Emergency Operations Plan guidelines and checklist. These plans describe the hazards faced by the jurisdiction as well as the jurisdiction's capabilities, needs, demands, and emergency management structure. Per the NJ Civilian Defense and Disaster Control Act (App.A:9_43.2), counties and municipalities must have written emergency operations plans reviewed every two years.

Evacuation Plan

State, local, tribal, and territorial governments have primary authority and responsibility for evacuation planning, in conjunction with the whole community. For evacuations, the jurisdictional government issues evacuation orders, manages traffic flow, identifies evacuation routes, identifies shelters for residents, and considers processes to reunify caregivers and family members separated from one another. While a formal evacuation plan is not a required planning document for the State or counties to write and maintain, these plans can provide exceptional direction if a mass evacuation is given in response to a hazardous event. Evacuation plans have the potential to reduce the loss of life by minimizing the impacts of a hazard. Removing individuals from a location before disaster strikes can reduce resource burdens, quicken the facilitation of re-entry, and accelerate the transition to recovery.

New Jersey now has four fully functional plans, one each for the coastal counties of Cape May, Atlantic, Ocean, and Monmouth, involving five state and interstate highways. NJOEM Preparedness Unit has used flood inundation mapping to develop reverse-lane plans and strategies for hurricane evacuation. These plans are periodically exercised to confirm their operational readiness.

Continuity of Operations/Continuity of Government (COOP/COG) Plan

The State of New Jersey does not mandate maintaining a continuity of operations/continuity of government (COOP/COG) Plan. COOP/COG planning and operational activities at the State and local level are generally the same. COOP/COG planning involves agency personnel reviewing the functions that are truly critical to the agency. COOP/COG planning also includes agencies:

Considering the threats that could impact the office and plan for them

Determining the vital information, personnel, and other resources required to continue the agency's essential functions

Planning for the safety of all personnel

To have a successful COOP/COG Plan, an agency must determine what its essential functions are by considering its customers and their needs. Assigning a priority to customer needs helps to distinguish between essential and nonessential needs and, thus, the agency's essential and nonessential functions (FEMA 2005).

COOP/COG Plan can assist in the mitigation of hazards to an agency by identifying the steps needed to be taken to maintain the agency's normal operations. Testing and revising the plan as gaps are identified is key to having a thorough and effective COOP/COG Plan.

Substantial Damage Response Plan

A substantial damage response plan evaluates potential damage to buildings, examines what can be done to mitigate the potential for damage to those buildings, and lays out the strategy to address substantial damage after any hazardous event (flood, fire, earthquake, tornado, etc.).

This plan is not required by the State of New Jersey, but having a well-written substantial damage management plan is a creditable action through the CRS for element SDP1 in Section 512.d. A substantial damage management plan for CRS credit must identify available data about flood-prone buildings, help educate community leaders and the public, guide the community in building its capacity to conduct post-flood substantial damage determinations and outline its procedures for doing so, and specify the steps the community will take if buildings are determined to be substantially damaged. The plan should also consider mitigation options to reduce long-term impacts from flooding (NFIP 2021).

Post-Disaster Recovery or Redevelopment Plan

The purpose of a post-disaster recovery or redevelopment plan is to facilitate pre-disaster planning in a way that guides long-term recovery efforts (five years or more) following a disaster. A community's post-disaster redevelopment plan can identify roles and responsibilities of key individuals, departments, and agencies; address the need for temporary regulations; address potential impacts to historic resources; address potential impacts to non-conforming uses; and address location and other provisions for temporary housing. In addition, a recovery plan can seek to integrate long-term hazard mitigation, public safety, and resilience goals, including:

- Profiling and mapping hazard risks
- Establishing a safety or hazards elements in the comprehensive or general plan
- Using land use, zoning, subdivision, and other development regulations
- Protecting or restoring natural areas
- Using capital improvement programs to fund safety measures

While post-disaster recovery or redevelopment plans are not mandated in the State of New Jersey, maintaining one is beneficial to a community on its path to being more resilient (FEMA 2020).

Resilience/Climate Adaptation Plan

Resilience/climate adaptation plans are optional for counties to write and adopt. These plans reflect a whole-community approach to confronting the climate crisis and integrate climate-readiness across county programs to strengthen the resilience of assets from the accelerating impacts of climate change. To accomplish this, a county must identify its assets and assess its vulnerability to various climate risks.

The State of New Jersey's 21 counties face a multitude of risks caused by climate change, including rising costs to maintain and repair damaged infrastructure from more frequent and extreme weather events, challenges to program effectiveness and readiness, and health and safety risks to employees who work outside. Implementing a resilience/climate action plan is useful to manage and mitigate climate risks by minimizing disruptions to operations, assets, and programs while creating safer working conditions for employees.

County-Level Planning

Local HMPs and county websites were reviewed to understand planning capabilities at the county level in New Jersey. County representatives were asked about resilience-related activities during stakeholder workshops. Based on available responses, every county has an emergency operations plan, while stand-alone evacuation plans and COOP/COG plans are less widespread. No counties in the State have official substantial damage response plans for completing substantial damage determinations following major hazard events, but post-disaster recovery or redevelopment plans, and resilience/climate adaptation plans are becoming increasingly common at the county level. Table 5.0-5 displays the New Jersey counties that currently have various disaster response, recovery, and resilience plans.

Table 5.0-5 County Emergency Planning Capabilities

County	Emergency Operations Plan	Evacuation Plan	Continuity of Operations/ Continuity of Government (COOP/COG) plan	Substantial Damage Response Plan	Post-Disaster Recovery or Redevelopment Plan	Resilience/ Climate Adaptation Plan
Atlantic	X	X	-	-	-	-
Bergen	X	-	-	-	-	X
Burlington	X	-	-	-	-	-
Camden	X	-	X	-	-	X
Cape May	X	X	X	-	-	-
Cumberland	X	-	-	-	-	-
Essex	X	-	X	-	-	X
Gloucester	X	-	X	-	-	-
Hudson	X	-	X	-	X	X
Hunterdon	X	-	X	-	-	-
Mercer	X	-	X	-	-	-
Middlesex	X	-	X	-	-	-
Monmouth	X	X	X	-	X	-
Morris	X	X	X	-	X	X
Ocean	X	X	-	-	X	-
Passaic	X	-	-	-	-	X
Salem*	X	-	-	-	-	-
Somerset	X	-	-	-	X	X
Sussex	X	-	X	-	-	X
Union	X	-	X	-	X	X
Warren	X	-	-	-	-	-

Notes:

X Jurisdiction currently has this capability in place

- No capability in place

* Salem County HMP review based on 2017 HMP. The plan is currently expired.

Local Floodplain Management

Flooding is one of the most impactful hazards of concern in New Jersey, and special emphasis has been placed on the management of floodplain areas. Floodplain management occurs at both the county and municipal levels.

NFIP Participation

The NFIP enables property owners in participating communities to purchase insurance as protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Municipality participation is voluntary; however, members of the NFIP must have the required aspects of the NFIP codified within their zoning, floodplain, and land development ordinances. While the New Jersey State FHACA (NJSA 58:16A-52) does not require local adoption, as it is enforced by the NJDEP, the floodplain ordinances of each municipality need to be reviewed to be compliant with the Act. As of November 2023, there are only six municipalities that do not participate in the NFIP in the State of New Jersey (FEMA 2023).

The NJ State Law Flood Area Control Act (N.J.S.A. 58:16A-52) and the National Flood Control Act of 1968 (NFIP) are State and federal acts to support minimization of flood losses. While these acts do not require local adoption, the floodplain ordinances of each municipality must be reviewed for compliance with these regulations. This requirement is enforced by NJDEP. In addition, participation in the NFIP requires a floodplain ordinance and proof of enforcement and compliance with that ordinance. Most municipalities in the State use a version of model flood damage prevention ordinances developed by NJDEP. NJDEP is currently

overseeing efforts to update language in municipal flood damage prevention ordinances to allow for code coordination between the UCC and the flood damage prevention ordinance (NJDEP 2023).

The State's minimum design base flood elevation has been 1 foot above the designated base flood elevation. The Inland Flood Protection Rule became effective July 17, 2023 and added an additional 2 feet (3 feet above the designated base flood elevation). Additional revisions to the Flood Hazard Area Control Act Rules are still in development and likely to define the regulatory tidal elevation as 5 feet above the base flood elevation. The Flood Control Hazards Act (N.J.S.A. 58:16A-62) states that any municipal or other entity vested with authority to adopt rules and regulations concerning the development and use of land may adopt requirements more restrictive than those contained in the rules and regulations adopted by the department for the floodway and then those contained in the minimum standards promulgated by the department. Communities are encouraged to adopt standards that exceed NFIP requirements.

Floodplain Administrator

The Floodplain Administrator is responsible for implementing the community's local floodplain ordinance and ensuring that the community is complying with minimum NFIP standards and enforcing any locally imposed higher standards. The ordinance will define the title and title description of those responsible for administering the floodplain management regulations. In New Jersey, many communities' floodplain management responsibilities have traditionally been assigned to the building department. However, the New Jersey Model Ordinance for Flood Damage Prevention allows departments other than the building department to retain the floodplain management responsibilities that the building codes do not assign to the Construction Official.

CRS Participation

The NFIP's CRS is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the NFIP. In CRS communities, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community's efforts that address the three goals of the program:

- Reduce and avoid flood damage to insurable property
- Strengthen and support the insurance aspects of the NFIP
- Foster comprehensive floodplain management

At the time of this plan update, 92 of the 566 municipalities in the State participate in the CRS program. Local municipalities continue to show an increasing interest in CRS. Several municipalities are in the process of joining CRS, and many are actively working on improving their CRS class, prompted in part by rising flood insurance premiums.

County Floodplain Management Support

Although floodplain management in the State of New Jersey is largely completed at the municipal level, county governments sometimes provide support for municipal floodplain management programs. Numerous counties in the State have CFMs on their staff. Local HMPs were reviewed for discussion of county floodplain management capabilities, including adoption of higher standards, general information on effectiveness and process, and efforts to address repetitive loss and severe repetitive loss properties. County HMP coordinators were asked to provide additional information. A handful of counties have staff that serve as floodplain administrators or conduct floodplain permit reviews. Almost all counties indicated they have GIS support or GIS layers available to assist municipal floodplain management. Five counties actively support municipal participation efforts to join or maintain the CRS program. Cape May County actively supports municipalities with repetitive loss and severe repetitive loss property mitigation. Based on available responses, no counties in the State have official mechanisms in place to support municipal substantial damage determinations following major hazard events. Table 5.0-6 displays the New Jersey counties that currently have various floodplain management capabilities to assist municipalities with their floodplain management programs.

Table 5.0-6 County Floodplain Management Support Capabilities

County	County staff serve as Floodplain Administrator for municipalities?	Conduct floodplain permit reviews?	Support Substantial Damage Determinations?	Provide GIS support or available GIS layers?	CRS support available?	Support for RL/SRL mitigation?
Atlantic	-	-	-	X	X	-
Bergen	-	-	-	X	X	-
Burlington	-	-	-	X	-	-
Camden	-	-	-	X	-	-
Cape May	-	-	-	X	X	X
Cumberland	-	-	-	X	-	-
Essex	-	-	-	X	-	-
Gloucester	-	-	-	X	-	-
Hudson	-	X	-	X	-	-
Hunterdon	-	-	-	X	-	-
Mercer	-	-	-	X	-	-
Middlesex	-	-	-	X	-	-
Monmouth	X	-	-	X	X	-
Morris	-	-	-	X	X	-
Ocean	-	-	-	X	-	-
Passaic	-	-	-	X	-	-
Salem	-	-	-	-	-	-
Somerset	-	-	-	X	-	-
Sussex	-	-	-	X	-	-
Union	X	-	-	X	-	-
Warren	-	-	-	X	-	-

Notes:

X Jurisdiction currently has this capability in place

- No capability in place

* Salem County HMP review based on 2017 HMP. The plan is currently expired.

County High Hazard Potential Dam (HHPD) Management

Recently, there has been a push at the federal and state level to improve management of HHPDs. The HHPD Grant Awards from FEMA provide technical, planning, design, and construction assistance in the form of grants for rehabilitation of eligible HHPDs. A state or territory with an enacted dam safety program, the State Administrative Agency or an equivalent state agency is eligible for the grant (FEMA n.d.). Of the roughly 1,700 dams in the State of New Jersey, about 140 are owned by NJDEP, with another 30 owned by NJDOT. This leaves the vast majority owned by local governments or private entities. 10 out of the 22 counties in New Jersey have county ownership of at least 1 HHPD. Many New Jersey counties are increasing their capabilities to support both the management of HHPDs and potential applications to the HHPD program. 9 out of 22 counties currently include mapping of dam locations within their local HMPs. It is anticipated that local HMPs will expand available HHPD information in future updates to meet new guidance established in FEMA’s 2023 Local Mitigation Planning Policy Guide (FEMA 2022). NJDEP provides information on HHPDs and their conditions to counties.

County Staffing Capabilities

County governments maintain a wide variety of departments and officials that can support pre- and post-disaster response and hazard mitigation.

Emergency Management Department

County emergency management departments or offices act as a liaison between municipalities and the State. County emergency management departments often lead county hazard mitigation planning processes. Emergency management departments are

responsible for organizing, coordinating, and carrying out emergency preparedness activities. They develop strategies and procedures for managing disasters and other emergencies and assist in directing the response during and after the event. The departments also coordinate resources and shelters, ensure community needs are met, and train responders on disaster response protocols.

In New Jersey, county emergency management departments must reach and maintain training criteria, as described in Directives NJOEM-1 and NJOEM-6; County Emergency Management Coordinators should ensure their municipal counterparts maintain qualifications as described in Directive NJOEM-7. The departments must also maintain updated and approved emergency operation plans and review and approve municipal emergency operation plans every two years.

Planning Departments

County planning departments are responsible for a variety of planning-related tasks. This can include support for county planning boards and other departments, development review, strategic and long-range planning, and maintaining GIS. County planning departments often lead county hazard mitigation planning processes.

Engineering Departments

County engineering departments have various roles, including planning, analysis, design, construction, and maintenance of county transportation networks and public building inventory. Engineering departments often plan, coordinate, and participate in the design and construction of structural hazard mitigation projects.

GIS Departments

County GIS departments are usually connected to county planning or engineering departments. GIS departments perform digital data maintenance and mapping. This data and mapping can support risk analysis, identification of problem areas, and coordination of mitigation project implementation. County GIS departments often provide technical support to municipal governments.

Grant Writer

A grant writer is responsible for finding funding opportunities for an organization and writing polished proposals to earn grant money. Grant writer duties include researching deadlines, drafting grant requests, and submitting reports for approval. These county staff often provide grant writing support to municipalities as well.

Open Space Department

An open space department works to preserve and maintain county-owned open space. These departments may be combined with county parks departments. Tasks for an open spaces department may include comprehensive park and recreation facility planning; management, maintenance, and protection of natural and cultural resources; and securing and preserving new open space through county, state, and federal funding opportunities.

Public Information Officer

County public information officers facilitate communication between a county and the general public, including press releases, conferences, and social media posts. Public information officers often take the lead in development and oversight of public outreach and education campaigns.

Highway/Public Works Department

County highway/public works departments are responsible for the planning, design, construction, and maintenance of roads, bridges, and traffic control devices on county highway systems. These departments often are also responsible for projects and maintenance of county-owned buildings and open space.

County Staffing Capabilities

Local HMPs were reviewed for discussion of county staffing capabilities, particularly those that provide technical support to municipalities. Workshops, surveying, and review of county websites provided additional information. Table 5.0-7 indicates the

types of staffing capabilities currently in place in New Jersey counties to support hazard mitigation and pre- and post-disaster response.

Table 5.0-7 County Staffing Capabilities

County	Emergency Management Department	Planning Department	Engineer	GIS Department/ Specialist	Grant Writer	Open Space	Public Information Officer	Highway/ Public Works Department
Atlantic	X	X	X	X	-	X	X	X
Bergen	X	X	X	X	-	X	X	X
Burlington	X	X	X	X	X	X	X	X
Camden	X	X	X	X	X	X	X	X
Cape May	X	X	X	X	X	X	X	X
Cumberland	X	X	X	X	-	X	X	X
Essex	X	X	X	X	X	-	X	X
Gloucester	X	X	X	X	-	X	X	X
Hudson	X	X	X	X	X	X	X	X
Hunterdon	X	X	X	X	-	X	X	X
Mercer	X	X	X	X	X	X	X	X
Middlesex	X	X	X	X	-	X	X	X
Monmouth	X	X	X	X	X	X	X	X
Morris	X	X	X	X	-	X	X	X
Ocean	X	X	X	X	-	X	X	X
Passaic	X	X	X	X	X	X	X	X
Salem	X	-	X	-	-	X	X	X
Somerset	X	X	X	X	X	X	X	X
Sussex	X	X	X	X	X	X	X	X
Union	X	X	X	X	X	X	X	X
Warren	X	X	X	X	-	-	X	X

Notes:

X Jurisdiction currently has this capability in place

- No capability in place

Fiscal Capabilities

Fiscal capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions. The table below describes programs available at the county level to support hazard mitigation activities.

Capital Improvement Plans (CIP)

CIPs outline capital spending and investments necessary for public improvements. Many municipalities and counties in New Jersey have CIPs. It coordinates strategic planning, financial capacity, and physical development. A capital improvement plan typically has two parts – a capital budget and a capital program. The capital budget is the upcoming year’s spending plan for capital items; the capital program is a plan for capital expenditures that typically extends 5–10 years beyond the capital budget. These plans and budgets have been and may continue to be used to fund mitigation projects and demonstrate integration into daily operations.

County Open Space Funds

County Open Space Funds can be used to support local match for acquisitions and to provide funds to further the preservation of farmland, open space, and historic resources. Counties will generally have a board or committee in which potential purchases and grants are discussed and recommended to the county government.

Community Development Block Grant (CDBG) Program

This program provides annual grants on a formula basis to states, cities, and counties to develop viable urban communities by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for low- and moderate-income persons. The program is authorized under Title 1 of the Housing and Community Development Act of 1974, Public Law 93-383, as amended 42 U.S.C. 5301 et seq. CDBG funds may be used for activities which include, but are not limited to:

- Acquisition of real property
- Relocation and demolition
- Rehabilitation of residential and non-residential structures
- Construction of public facilities and improvements, such as water and sewer facilities, streets, neighborhood centers, and the conversion of school buildings for eligible purposes
- Public services, within certain limits
- Activities relating to energy conservation and renewable energy resources
- Provision of assistance to profit-motivated businesses to carry out economic development and job creation/retention activities

Community Development Block Grant Disaster Recovery (CDBG-DR) Program

This program provides grant funds, which are appropriated by Congress and allocated by HUD to rebuild disaster-impacted areas and provide crucial seed money to start the long-term recovery process. These flexible grants help cities, counties, Indian tribes, and states recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations. Since CDBG-DR assistance may fund a broad range of recovery activities, HUD can help communities and neighborhoods that otherwise might not recover due to limited resources.

Community Development Block Grant Mitigation (CDBG-MIT)

This program funds pose a unique opportunity for eligible grantees to use this assistance in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses. CDBG-MIT defines mitigation as activities that 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. Goals of CDBG-MIT funds:

- Support data-informed investments, focusing on repetitive loss of property and critical infrastructure.
- Build capacity to comprehensively analyze disaster risks and update HMPs.
- Support the adoption of policies that reflect local and regional priorities that will have long-lasting effects on community risk reduction, including risk reduction to community lifelines and decreasing future disaster costs.
- Maximize the impact of funds by encouraging leverage, private/public partnerships, and coordination with other federal dollars.

Bonds

Borrowing through issuing bonds is a common practice for county and municipal governments to finance the cost of building and maintaining infrastructure. Many completed projects will have long, useful lives but require large upfront costs. Borrowing through bonds enables local governments to spread out these costs. As a result, taxpayers who will use the infrastructure in the future help pay for it. Borrowing also makes infrastructure projects more affordable by reducing the pressure on a local government's budget in any given year (Center on Budget and Policy Priorities 2018).

County Fiscal Capabilities

Local HMPs were reviewed for discussion of county fiscal capabilities to support hazard mitigation. Workshops, surveying, and review of county websites provided additional information. Table 5.0-8 indicates county fiscal capabilities currently in place in New Jersey counties to support hazard mitigation and pre- and post-disaster response.

Table 5.0-8 County Fiscal Capabilities

County	Capital Improvement Plans	Established County Open Space Funds	Access to CDBG Funds	Authorized to Use County Bonds
Atlantic County	X	X	X	X
Bergen County	-	X	X	X
Burlington County	X	X	X	X
Camden County	-	X	X	X
Cape May County	X	X	X	X
Cumberland County	-	X	-	X
Essex County	X	-	X	X
Gloucester County	X	X	X	X
Hudson County	X	X	X	X
Hunterdon County	X	X	X	X
Mercer County	X	X	X	X
Middlesex County	X	X	X	X
Monmouth County	X	X	X	X
Morris County	X	X	X	X
Ocean County		X	X	X
Passaic County	X	X	X	X
Salem County*	-	X	X	X
Somerset County	X	X	X	X
Sussex County	X	X	X	X
Union County	X	X	X	X
Warren County	-	X	-	X

Notes:

X Jurisdiction currently has this capability in place

- No capability in place

* Salem County HMP review based on 2017 HMP. The plan is currently expired.

5.0-14 EVALUATION OF LOCAL HAZARD MITIGATION PLANS

All counties in the State have identified, leveraged, and developed capabilities that are effective in mitigating risk from natural hazards. These capabilities are discussed in their local HMPs and serve the basis for the implementation of many successful actions. A review of the county local HMPs was conducted to:

- Determine how the counties are evaluating the effectiveness of their plans.
- Determine challenges, barriers, and unmet needs the counties had identified in reaching their mitigation goals.
- Identify opportunities to address challenges and leverage existing capabilities.
- A summary of the results of the review are provided in the sections that follow. The results of this assessment were used by the State to develop its mitigation strategy for the 2024 SHMP Update.

Evaluation of Local Hazard Mitigation Effectiveness

Every county in New Jersey now has a stand-alone HMP. Municipal participation in the county HMPs is widespread, with only two municipalities in the State not actively participating in their local plans.

A review of the county local HMPs reveals that there is limited discussion of the effectiveness of mitigation actions and overall plan effectiveness. Actions are typically reviewed to provide a progress status, but the overall effectiveness of strategies toward achieving goals and objectives is not often discussed. With the implementation of the new Local Mitigation Planning Policy Guide (FEMA 2022) from FEMA, it is anticipated that review of individual actions in the mitigation strategy will include more detailed information, and the overall effectiveness of county mitigation goals and objectives will be examined and discussed.

Effectiveness of local HMPs could also be measured through successful HMA grant applications and federal funding awarded in the State. As previously noted, since Superstorm Sandy in 2012, 870 projects were submitted for HMA funding support, resulting in 713 projects funded (81.9 percent success rate). Over \$860 million dollars of federal funding support has been awarded in this time period (NJOEM 2023).

Through their continued local outreach, NJOEM will provide recommendations and technical assistance on how to more accurately and completely assess and report local capabilities in local HMPs.

5.0-15 EMERGING LOCAL CAPABILITIES

In the years since individual counties' local HMPs have been developed, there have been advances in the understanding and development of strategies to address community resilience and climate change. A few emerging capabilities in these areas include:

- Atlantic County has worked to identify low-lying and repetitively flooded areas to target for emergency planning and mitigation.
- Atlantic County is beginning work on a county-wide resiliency plan.
- Hudson County is working to acquire a drone for aerial imagery. This will help to gather information on problem areas.
- Middlesex County has worked to complete integration of the HMP through county planning documents.
- Monmouth County has expanded response to flooding by acquiring high water capable vehicles.
- The Monmouth County Homeland Security Working group provided funding to start a teen component to the Seniors Taking On Readiness Measure (STORM) program to provide outreach and stocked disaster backpacks to teens with the hope to improve individual preparedness.
- Somerset County has worked to expand services for socially vulnerable populations.
- Somerset County has worked to improve the synchronicity of the County's stormwater systems.
- Sussex County has seen an expansion of internet access, with full coverage of the County expected by the end of 2024. This will increase opportunities for outreach and emergency communications.
- The MLUL was amended on February 4, 2021, to require that any land use plan element of the master plan adopted or amended after that date, must include a climate change-related hazard vulnerability assessment, which shall include an analysis of current and future threats to, and vulnerabilities of the municipality associated with climate change-related hazards.
- In response to the EO-89, NJDEP created the Resilient NJ: Local Planning for Climate Change Toolkit to assist municipalities and counties in meeting their obligations in the MLUL, SHMP, and Plan Endorsement requirements.
- Many local HMPs are now evaluating adaptive capacity for county and municipal governments to understand how jurisdictions can adjust to changing levels of risk.

These capabilities and others identified during the course of the 2024 SHMP Update performance period will be monitored to determine their effectiveness at achieving hazard mitigation goals.

5.0-16 CHALLENGES, BARRIERS, AND OPPORTUNITIES FOR HAZARD MITIGATION IMPLEMENTATION

While the State of New Jersey has made great strides in hazard mitigation since the 2019 SHMP, numerous challenges and barriers to successful pre- and post-disaster mitigation were identified through this planning process. Progress reporting on 2019 capabilities, surveying, and conversations held during stakeholder workshops and one-on-one meetings identified obstacles at the federal, state, and local levels. The following sections summarize these findings.

Federal

During the 2024 SHMP planning process, the following federal-level challenges and barriers to successfully mitigating hazards across the State were identified:

- Federal grant funding programs are available each year. However, funding support is based on available funding in each program and is a competitive process.
- Funding availability is often inconsistent due to occasional shifting of grant program priorities or requirements that funding be tied to disaster declarations.

- Flood mapping provided by FEMA is developed using flood probabilities based on historical occurrences and does not consider areas prone to stormwater or urban flooding. This limits the ability of local jurisdictions to guide development and mitigation investments based on current and future conditions.
- Currently, some FEMA FIRMs do not delineate the NJFHADF on the mapping and plots the NJFHADF water levels on the stream profiles (NJDEP Bureau of Flood Engineering 2023).

State

During the 2024 SHMP planning process, the following state-level challenges and barriers to successfully mitigating hazards across the State were identified:

- Despite investments, funding limitations prevent expansion of staffing for many State agencies, limiting technical capabilities. Funding is also a barrier for implementation of many mitigation strategies identified by various State agencies.
- With so many state agencies and organizations involved in hazard mitigation, interagency coordination can be difficult.
- Occasional shifting of organization or government agency priorities makes partnering with other groups and jurisdictions difficult. Reorganization or restructuring of State agencies also can have the same impact.
- State investments in mitigation projects in flood-prone communities have been significant but have not historically considered long-term increases in flood risk or how investments in critical infrastructure protections can encourage development and sustained exposure to flood hazards.
- Certain legal restrictions at the State level pose an obstacle to implementation of new or progressive mitigation strategies. While these restrictions are often identified and targeted for updates by State agencies, rulemaking takes time to occur. Many State agencies are also limited to advisory roles and are reliant on elected officials to approve changes. Even if laws are amended or updated, the implementation of these changes can take a very long time.
- Evidence shows underreporting of Substantial Damage Determinations to the State. Mapping and analysis of areas likely to experience substantial damages is still needed to guide mitigation approaches and prioritize investments.
- The State NFIP Coordinator's Office is finding it to be increasingly difficult to communicate the benefits of mitigation to some property owners where insurance rates are likely to stay high even after mitigation due to factors such as proximity to flood sources and frequency of flooding as a result of the roll out of Risk Rating 2.0: Equity in Action.

Local

At the local level (county and municipal entities), the ability to maintain and implement local hazard mitigation programs varies. This may be attributed, at least in part, to the fact that New Jersey is a "home rule" state with 565 municipalities, so overall county control of mitigation planning, and planning in general, is sometimes problematic; and that all local governments are operating with limited resources and mounting pressures to limit spending and "do more with less". The following county and municipal challenges and barriers to successful hazard mitigation in the State of New Jersey were identified:

- Limitations in local funding and grant support prevent many mitigation projects from being implemented.
 - While various funding sources are available to support local public and private mitigation activity, the technical and administrative challenges to both secure (e.g., grant application and Benefit-Cost Analysis) and administer such funding often exceeds local capabilities.
 - Local match (in-kind and cash) requirement on grant funding has historically challenged the initiation and implementation of both planning and project activities reliant on grant funding.
- Limitations in available staffing and staff with limited training or expertise presents an obstacle to hazard mitigation planning and implementation.
 - Not all counties have dedicated grant writing staff, limiting the ability of counties to identify and apply to mitigation grant opportunities or support local municipalities with similar efforts. Most municipalities do not have dedicated grant writing staff.
 - Engaging municipalities to participate can be difficult, especially for municipalities with small staff sizes that have limited time availability. Some municipalities that do not anticipate applying for FEMA funding support do not feel participation is a worthwhile allocation of staff time. Even when municipalities participate, requesting information is often difficult to receive in a timely manner.

- As participants in the NFIP, each municipality has a Floodplain Administrator (FPA) as identified in their local floodplain ordinance. Occasionally the local FPA is not aware of their designation and the responsibilities associated with that position. This can be attributed to a number of factors that include a general lack of attention to or understanding of their local code, frequent internal staffing changes, and the use of outside contractor services (e.g., engineering, code enforcement) that can change with time. Further, local FPAs often cite a lack of proper training, technical support, and even political support to meet their NFIP responsibilities.
- Success in the CRS program requires allocation of municipal resources to manage and document CRS activities. Smaller municipalities with limited staffing sometimes often note limited staffing resources as an obstacle to joining and moving up within the program.
- It is noted that many jurisdictions do not have certified planners on staff; therefore, land use and comprehensive planning needs are contracted out. While local capabilities continue to increase to reduce the impacts of hazards, progress is still possible regarding integration of mitigation goals and strategies into comprehensive planning.
- Jurisdictional authority for potential projects involving municipal jurisdictions and agencies at various levels of government can be complicated, making it difficult to understand the pathways for approval and implementation of mitigation projects.
- County and municipal administrations may not understand the importance of hazard mitigation and, therefore, be hesitant to allocate county or municipal funds to mitigation projects.
 - Occasionally, elected officials at the local level may not understand the science behind hazards and climate change, making them unwilling to support efforts to prepare for future conditions.
- Additional integration of local HMP risk assessment results and mitigation goals and strategies into comprehensive and land use planning is still needed despite progress that has been made.
 - While the MLUL requires that each municipality prepare a comprehensive plan and update that plan every ten years, master plan update cycles are inconsistent, and communities may be operating under plans that are outdated and ineffective at addressing current conditions.
- Local comprehensive planning is often forced to reconcile competing interests.
 - Fiscal/political challenges, such as a loss of tax rateables, whether real or perceived, may challenge mitigation or promote unwise development.
 - The desire to redevelop Brownfield sites may be at odds with limited development in hazard-prone areas.
 - There are competing interests of political pressure between the desire to develop coastal areas and efforts to reduce hazard exposure. While CAFRA is meant to help local communities strengthen local shoreline ordinances to provide for sufficient shoreline buffers, setbacks, and appropriate design to avoid or limit development on unstable shoreline slopes and infrequently flooded areas, many communities have not passed these types of ordinances because of intense political pressure to build along their coastal boundaries.
 - The required update frequency for emergency operations plans in the State of New Jersey has been reduced to every two years, resulting in an increased workload of emergency management departments.
 - Some counties have noted an increase in the homeless population, resulting in more challenges for communicating warnings and providing adequate sheltering.
- Disaster debris management plans are not consistently present throughout the State’s municipalities.
- Each municipality has specific challenges in administering its floodplain management regulations.
 - Coordination between the counties and state agencies is challenging, especially regarding data availability and sharing.
 - Floodplain management is largely carried out by local municipalities so counties may not be aware of needs or problems with local floodplain management programs.
 - Efforts to provide county support to municipal floodplain management programs may be costly or subject to changes in county priorities. Loss of county-level support can have large impacts on municipal floodplain management programs.

- Based on available responses, no counties in the State have official mechanisms in place to support municipal substantial damage determinations following major hazard events.
- Emerging or worsening hazards, such as the recent increase in tornadoes, has made hazard mitigation planning difficult as conditions to plan for are changing.
- Successful engagement with the public and stakeholders can be difficult.
 - While counties are making efforts to expand opportunities for public and stakeholder involvement during their local hazard mitigation planning processes, voluntary participation is often limited.
 - Counties noted that engaging with overburdened and socially vulnerable communities is particularly challenging.
- While many of the State's most flood-prone municipalities have made extensive progress in the mitigation of flood-prone residential properties, these efforts are not always conducted using a whole-community mitigation planning approach. Communities that have used residential elevations have not always considered the costs and responsibilities of maintenance and protection of existing infrastructure for elevated communities. Communities that have utilized acquisitions have not always considered long-term requirements for stewardship of the new open space or the costs of maintaining remaining infrastructure and services for remaining properties.