9.8 TOWNSHIP OF LAWRENCE

This section presents the jurisdictional annex for the Township of Lawrence and includes resources and information to assist public and private sectors with reducing losses from future hazard events. This annex is not intended as guidance for actions to take during a disaster. Rather, this annex provides actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex includes a general overview of the municipality and who in the community participated in the planning process, an assessment of the Township of Lawrence's risk and vulnerability, the different capabilities, and an action plan that will be implemented to achieve a more resilient community.

9.8.1 Hazard Mitigation Planning Team

The Township of Lawrence followed the planning process described in Section 2 (Planning Process) in Volume I of this plan update and developed the annex over the course of several months with input from many municipal departments as summarized in the table below. The primary and alternate points of contact represented the community on the Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity, including the Township of Lawrence hazard mitigation plan primary and alternate points of contact. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.8-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Jack Oakley, Director of Emergency Services/Emergency Management **Address:** 2207 Lawrence Road Lawrence Township, NJ 08648 **Phone Number:** 609-844-7020 **Email:** joakley@lawrencetwp.com	**Name/Title:** Brenda Kraemer, P.E., Assistant Municipal Engineer, Engineering Department **Address:** 2207 Lawrence Road Lawrence Township, NJ 08648 **Phone Number:** 609-844-7087 **Email:** bkraemer@lawrencetwp.com
NFIP Floodplain Administrator	
Name/Title: James F. Parvesse, P.E., Municipal Engineer, Engineering Department **Address:** 2207 Lawrence Road Lawrence Township, NJ 08648 **Phone Number:** 609-844-7087 **Email:** jparvesse@lawrencetwp.com	
Additional Contributors	
Name/Title: Jack Oakley, Director of Emergency Services/Emergency Management **Method of Participation:** Provided information on past events. Contributed to mitigation strategy.	
Name/Title: Brenda Kraemer, P.E., Assistant Municipal Engineer, Engineering Department **Method of Participation:** Provided information on Township capabilities, floodplain administration, previous actions. Contributed to mitigation strategy.	
Name/Title: Michael Rodgers, Construction Official **Method of Participation:** Provided permit information.	
Name/Title: Shelley Merola, Technical Assistance **Method of Participation:** Provided permit information.	
Name/Title: Greg Whitehead, Director of Public Works **Method of Participation:** Contributed to mitigation strategy.	

9.8.2 Municipal Profile

Lawrence Township is located in the center of Mercer County and encompasses an area of 22.1 square miles. The Township is bordered to the north by Hopewell Township and Princeton, to the south by Hamilton Township and the City of Trenton, to the east by Princeton and West Windsor Township, and to the west by Ewing and Hopewell Townships. Lawrenceville is a census-designated place within the Township. There are unincorporated communities located in Lawrence Township and include: Bakersville, Clarksville, Colonial Lakelands, Coxs Corner, Eldridge Park, Franklin Corner, Harneys Corner, Lawrence Station, Lewisville, Louisville, Port Mercer, Princessville, Quaker Bridge, Rosedale, Slackwood and Sturwood Hamlet.

The following waterbodies are found in the Township: Shipetaukin Creek, Strawberry Run, Little Shabakunk Creek, Shabakunk Creek, Stony Brook, Colonial Lake, and Centennial Lake.

According to the U.S. Census, the 2010 population for the Township of Lawrence was 33,472. The estimated 2019 population was 32,614, a 2.6 percent decrease from the 2010 Census. Data from the 2019 U.S. Census American Community Survey indicate that 4.6 percent of the population is 5 years of age or younger and 16.5 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.8.3 Jurisdictional Capability Assessment and Integration

The Township of Lawrence performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. Annex development included reviewing planning and policy documents and surveying each jurisdiction to obtain a better understanding of their progress in plan integration and how risk reduction is supported. Areas with current mitigation integration are summarized in this jurisdictional Capability Assessment (Section 9.8.3). The updated mitigation strategy includes opportunities the Township of Lawrence identified for integration of mitigation concepts to be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability

Section 5 (Capability Assessment) provides an overview of the planning, legal, and regulatory capabilities. The table below summarizes the regulatory tools that are available to the Township of Lawrence, what is present in the jurisdiction, and code citation and date.

Table 9.8-2. Planning, Legal, and Regulatory Capability

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations					
Building Code	Yes	Yes	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.), Article V. Chapter 130 Construction Codes	State and Local	Construction Official
How does this reduce risk? Establishes the Uniform Construction Code for the building code and the Division of Licensing and Inspection, Department of Community Development, consisting of a Construction Official, Building Subcode Official, Plumbing Subcode Official, Electrical Subcode Official, Fire Protection Subcode Official and such other subcode officials for such additional subcodes as the Commissioner of the Department of Community Affairs of the State.					
Zoning/Land Use Code	Yes	Yes, if the jurisdiction has a planning board	Articles III and IV of the Land Use Ordinance (2019)	Local	Zoning Officer and Construction Official
How does this reduce risk? Purposes of the ordinance relating to hazard mitigation include: • To guide the appropriate use or development of all lands in a manner that will promote the public health, safety, morals and general welfare; • To secure safety from fire, flood, panic and other natural and manmade disasters; • To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities and regions and preservation of the environment; and • To promote the conservation of historic sites and districts, open space, energy resources and valuable natural resources and to prevent urban sprawl and degradation of the environment through improper use of land.					
Subdivision Ordinance	Yes	Yes, if the jurisdiction has a planning board	§540 of the Land Use Ordinance (2019)	Local	Zoning Officer and Construction Official
How does this reduce risk? Subdivision layout shall be designed to encourage the development of the land which, through the standards adopted in this Ordinance, provide for flexibility in planning and development and that respect the natural character of the land, its drainage system, soil capabilities, groundwater and aquifer recharge quality, and to include only those uses that are compatible with allowed uses in the zoning district and existing uses on adjacent lands.					
Stormwater Management Ordinance	Yes	Yes	§507, §522 of the Land Use Ordinance (2019); regulations adopted per NJDEP (2020)	Local	Zoning Officer and Construction Official
How does this reduce risk? Outlines requirements for stormwater management for new development within the Township.					
Post-Disaster Recovery/ Reconstruction Ordinance	No	No	-	-	-
How does this reduce risk?					
Real Estate Disclosure	Yes	Yes	N.J.A.C. 13:45A-29.1	State	State, Division of Consumer Affairs
How does this reduce risk? Before signing a contract of sale, all purchasers must receive a New Jersey Public Offering Statement (POS) approved by the New Jersey Real Estate Commission. The POS provides information such as estimated completion dates for improvements, fees for services and amenities, the type of title and ownership interest being offered, its proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision.					
Growth Management	No	Yes, if the jurisdiction has a planning board	-	Local	-
How does this reduce risk?					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Site Plan Ordinance	Yes	Yes, if the jurisdiction has a planning board	§801 of the Land Use Ordinance (2019)	Local and County	Zoning Officer and Construction Official
How does this reduce risk? Outlines requirements for submitting site plans for review to the Planning Board and appropriate agencies.					
Environmental Protection Ordinance	Yes	Yes, depends on type of environmental areas	Sections 401, 402 and 431J of the Land Use Ordinance (2019)	Local	Zoning Officer
How does this reduce risk? Establishes Environmental Protection districts for low intensity based on poor water yields and strata for septic systems dictate large lot development in an area of little or no public infrastructure and severe environmental constraints, including but not limited to, a seasonal high water table, shallow depth to bedrock, and steep slopes along the Stony Brook.					
Flood Damage Prevention Ordinance	Yes	Yes	§427 (Flood Plain Overlay District) of the Land Use Ordinance (2019)	Federal, State, County and Local	Municipal Engineer
How does this reduce risk? It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: A. Protect human life and health; B. Minimize expenditure of public money for costly flood control projects; C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; D. Minimize prolonged business interruptions; E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard; F. Help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas; G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. In order to accomplish its purposes, this chapter includes methods and provisions for: A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters; D. Controlling filling, grading, dredging, and other development which may increase flood damage; and, E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.					
Wellhead Protection	No	No	-	-	-
How does this reduce risk?					
Emergency Management Ordinance	No	No	-	-	-
How does this reduce risk?					
Climate Change Ordinance	No	No	-	-	-
How does this reduce risk?					
Disaster Recovery Ordinance	No	No	-	-	-
How does this reduce risk?					
Disaster Reconstruction Ordinance	No	No	-	-	-
How does this reduce risk?					
Other	No	-	-	-	-
Codes, Ordinances, & Regulations Connection to Mitigation and Safe Growth					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
How are codes, ordinances and regulations contributing to risk reduction in your community? • Building Code: o The State of New Jersey has adopted the 2018 International Building Code (IBC). Flood design provisions are found in the Building Subcode (Section 1612), Residential Subcode, Rehabilitation Subcode, and Plumbing, Mechanical, and Fuel Gas subcodes. The flood provisions are deemed by FEMA to meet or exceed NFIP requirements for buildings and structures. o The IBC includes design requirements for structural wind resistance. Design wind speeds in New Jersey vary based on structure type and location, with higher wind design speeds required in coastal areas. • Flood Damage Prevention Ordinance: o A local flood damage prevention ordinance sets design standards for reducing flood losses and is required for participation in the National Flood Insurance Program. o The local flood damage prevention ordinance requires permits for floodplain development, adopts and enforces flood maps, requires new and substantially improved structures be elevated above the base flood elevation, among other standards. o In the State of New Jersey, all new and substantially improved structures are required to be elevated at least one foot above the base flood elevation. • Stormwater Ordinance o New Jersey municipalities enact stormwater management ordinances to regulate runoff quantity and quality, groundwater recharge, and erosion control. Municipalities are required to update their municipal stormwater control ordinance to reflect amendments to the Stormwater Management rules at N.J.A.C. 7:8, adopted March 2, 2020 and should use NJ DEP's Model Stormwater Control Ordinance for Municipalities. o Stormwater ordinances for major development require mitigating runoff by requiring that peak runoff rates for the 2, 10, and 100-year storms be below pre-construction conditions and not increase flood damage downstream of the site. **Prior to zoning changes or development approvals, does the jurisdiction review the hazard mitigation plan and other hazard analyses to ensure consistent and compatible land use?** Yes **Does the zoning ordinance discourage development or redevelopment within natural areas including wetlands, floodways, and floodplains?** Yes **Does the ordinance require developers to take additional actions to mitigate natural hazard risk**? Yes **Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?** Yes **Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?** Yes **Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources? Yes** **Do the regulations allow density/development transfers where hazard areas exist?** No					
Planning Documents					
Master Plan	Yes	Yes	2010 – Master Plan 2013 – Reexamination Report, Multiple Amendments to Master Plan, Municipal Land Use Law	Local	Planning Board, Planning Department
How does this reduce risk? Provides guidance on the long-term development of the Township.					
Capital Improvement Plan	Yes	Allowed	Budget	Local	Planning
How does this reduce risk? Allocated funds for potential mitigation projects.					
Disaster Debris Management Plan	No	No	-	-	-
How does this reduce risk?					
Floodplain Management or Watershed Plan	Yes	No	2008 - A Multi-Jurisdictional Flood Mitigation Plan for Municipalities in the Non-tidal, New Jersey Section	Local, Regional	Delaware River Basin Commission; Engineering

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
			of the Delaware River Basin 2016 – Updated Floodplain regulations per NJDEP, Municipal Land Use Law		
How does this reduce risk? Details flood risk and potential mitigation measures.					
Stormwater Management Plan	Yes	Yes	Stormwater Management Plan 2020, Township has adopted Municipal Stormwater Management Rules; updated Regulations adopted per NJDEP	Local	Engineering Department
How does this reduce risk?					
Stormwater Pollution Prevention Plan	Yes	Yes	SPPP, updated December 2020	Local	Engineering Department
How does this reduce risk?					
Urban Water Management Plan	No	No	-	-	-
How does this reduce risk?					
Habitat Conservation Plan	No	No	-	-	-
How does this reduce risk?					
Economic Development Plan	Yes	No	Main Street Redevelopment Plan, 2006	Local	Planning and Zoning
How does this reduce risk? Outlines plans to redevelop Main Street.					
Shoreline Management Plan	No	No	-	-	-
How does this reduce risk?					
Community Wildfire Protection Plan	No	No	-	-	-
How does this reduce risk?					
Community Forest Management Plan	Yes	No	Lawrence Township Community Forestry Management Plan adopted 2019	Local	Planning Department
How does this reduce risk? Reviews the Township's trees, identifies hazardous trees.					
Transportation Plan	Yes	No	Circulation Element of The Master Plan adopted 2019	Local, Regional	Planning Department
How does this reduce risk? Outlines improvements to the transportation system.					
Agriculture Plan	No	No	-	-	-
How does this reduce risk?					
Climate Action/ Resiliency Plan	No	No	-	-	-
How does this reduce risk?					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Tourism Plan	No	No	-	-	-
How does this reduce risk?					
Business/ Downtown Development Plan	No	No	-	-	-
How does this reduce risk?					
Other	No	-	-	-	-
Planning Connection to Mitigation and Safe Growth					
How are your plans contributing to risk reduction in your community? New developments are reviewed for conformance to applicable requirements. **Does the future land use map clearly identify natural hazard areas? We do not have a future land use map.** **Do the land use policies discourage development or redevelopment within natural hazard areas? Yes** **Does the land use plan provide adequate space for expected future growth in areas located outside natural hazard areas? Yes, the zoning plan allows adequate growth outside of hazard areas.** **Is transportation policy used to guide growth to safe locations? Yes** **Are transportation systems designed to function under disaster conditions (e.g. evacuation)? N/A** **Are environmental systems that protect development from hazards identified and mapped (i.e., dunes, rip rap, defensible space, wetlands/natural shoreline)? Yes** **Do environmental policies maintain and restore protective ecosystems? Yes**					
Response/Recovery Planning					
Emergency Operations Plan	Yes	Yes	Lawrence Township Emergency Operations Plan	Local	Emergency Management
How does this reduce risk? Details emergency response to hazard events and responsibilities for actions.					
Strategic Recovery Planning Report	No	No	-	-	-
How does this reduce risk?					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	No	-	-	-
How does this reduce risk?					
Post-Disaster Recovery Plan	No	No	-	-	-
How does this reduce risk?					
Continuity of Operations Plan	No	No	-	-	-
How does this reduce risk?					
Public Health Plan	No	No	-	-	-
How does this reduce risk?					
Other	No	-	-	-	-
Response/Recovery Planning Connection to Mitigation and Safe Growth					
How do your response/recovery plans contribute to risk reduction in your community? • Emergency Operations Plan (EOP): o NJ Rev Stat § App.A:9-43.2 (2013) requires a written Emergency Operations Plan (EOP) for each county and municipality in the State that coordinates with neighboring jurisdictions. o EOPs must address the needs of animals and individuals with animals; evacuation procedures for hospitals and health care facilities; and addressing evacuation of families and dependents of emergency responders.					

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
○ EOPs must include a basic plan as well as Emergency Support Functions (ESF) annexes that address public information, hazardous materials, emergency warnings, and related subjects. ○ Emergency operations plans must be certified for approval by the New Jersey Office for Emergency Management. **Does your EOP cover short-term response and long-term recovery to address communications, evacuation, and housing necessary for identified hazards?** The Lawrence Township EOP addresses short term recovery from all natural and man- made disasters. We do not have long term IAP's for any disaster as cooperation with additional agencies would be required to mitigate the occurrence.					

Development and Permitting Capability

The table below summarizes the capabilities of the Township of Lawrence to oversee and track development.

Table 9.8-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment
Do you issue development permits? - If yes, what department is responsible? - If no, what is your process for development?	Yes	Planning, Engineering and Construction Departments
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? - If yes, describe. - If no, quantitatively describe the level of buildout in the jurisdiction.	No	Lawrence Township is generally built out, most applications involve re-development.

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Lawrence and their current responsibilities which contribute to hazard mitigation.

Table 9.8-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Planning Board, Planning Department, Municipal Engineer. The powers of the Planning Board include the following: • Adopt a Master Plan • Hear applications and make decisions on Subdivisions, Site Plans and Conditional Uses • Adopt the Official Map • Prepare a Capital Improvement Program • Advise Township Council on changes to Land Use Ordinance.
Zoning Board of Adjustments	Yes	Zoning Board, Planning Department, Assistant Municipal Engineer. The Zoning Board of Adjustment is responsible for considering applications that require exceptions from standards in the Township's Land Use Ordinance. This body also hears appeals from decisions made by the Township's Zoning Officer.

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planning Department	Yes	Municipal Engineer, Assistant Municipal Engineer. The Municipal Engineer provides review of development applications for the Planning and Zoning Boards, technical assistance to other departments, and general assistance in interpreting zoning requirements, guidelines, and maps for the public. The Municipal Engineer also implements the annual Capital Improvement Program, as authorized and funded by Council, by planning and prioritizing needs, obtaining grants for project funding, collecting information, and preparing plans and specifications for the construction of various public projects. The Engineer also manages, supervises, and inspects the construction of both public and private improvements within the Township. The tax maps, geographic information system, flood zone maps, and general engineering records are maintained in the department.
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	Environmental Resources and Sustainability Green Committee. The mission of the Committee is to: • Advise and consult with the council and the manager with respect to the environmental needs of the township. • Review and make recommendations with respect to township acquisition and administration of open space and other conservation areas and projects. • Study and develop proposals for the conservation and preservation of natural features, including landscaping of the township and make recommendations with respect thereto to the council and manager. • Review and make recommendations to the zoning board of adjustment and the planning boards on all site plans and subdivisions submitted to the board.
Open Space Board/Committee	Yes	Trails, Open Space, and Stewardship Advisory Committee. The Committee evaluates community open space assets and requirements and advise Township Council and other boards regarding acquisition and development of open space. The Committee completes the following actions: • Recommend properties for acquisition • Review Master Plan and recommend revisions to conservation and community facilities and recreation elements. • Study and recommend to Township Council regarding development of parkland. • Assist in development of Open Space Plan
Economic Development Commission/Committee	Yes	Growth and Redevelopment Committee. The Committee consults with and advises the Council on matters pertaining to economic development and redevelopment in the Township.
Public Works/Highway Department	Yes	The Department of Public Works. The Department works to utilize cost effective practices, technology, shared services, and innovation and respond to the

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		routine services or public emergencies. Through special projects, capital improvements, and supporting special events, the Public Works staff is focused on maintaining community assets. The Township's Public Works Department manages a 22 square mile municipality in Mercer County with approximately 33,000 residents. The Department has several Divisions with 35 full time employees responsible for: • Streets/Roads • Facilities • Motor Pool • Sanitation/Recycling • Parks/Open Space The Public Works Department coordinates emergency snow/ice removal for 200 lane miles of municipal roads and coordinates and repairs roadways, drainage, traffic signs, road markings, and completes emergency storm response.
Construction/Building/Code Enforcement Department	Yes	Construction Code Enforcement Division. The Division is responsible for the issuance of permits, certificates of occupancy and certificates of approval. Perform plan review for code compliance and perform field inspections. Provide customer service support to the general public and design professionals regarding code compliance. Supervise and organize all clerical staff, inspectors and subcode officials each day for field inspections and plan examination. Review and inspect for unsafe structures and code violations. Interact with Lawrence citizens, contractors, architectural and engineering community.
Emergency Management/Public Safety Department	Yes	Emergency Management Department. Exists to protect life and property during such emergencies, in events such as severe weather, snowstorms, hurricanes, fires, health/medical crises or hazardous chemical spills.
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Nixle Alert system through Police Department
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Maintenance programs include the Emerald Ash Borer Mitigation Program, stormwater facilities maintenance of Township facilities, and stream clearing of logs and debris by Public Works Department.
Mutual aid agreements	Yes	Fire Departments
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning/Zoning Department, Engineering Division
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering Division, Public Works Department, Code Enforcement Division

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planners or engineers with an understanding of natural hazards	Yes	Planning/Zoning Department, Engineering Division
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Engineering Division
Scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Emergency Management
Grant writer(s)	Yes	Grant Coordinator. Moving forward, information from the HMP will be used to support grant applications.
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-
How do your administrative/technical capabilities contribute to risk reduction in your community? The staff is sufficient to review development applications with respect to hazard mitigation.		

Fiscal Capability

The table below summarizes financial resources available to the Township of Lawrence.

Table 9.8-5. Fiscal Capabilities

Financial Resources	Are these accessible or eligible to use for mitigation? (Yes/No) If yes, please describe. If no, can this be used to support in the future?
Community development Block Grants (CDBG, CDBG-DR)	Yes, if grant approved
Capital improvements project funding	Yes, if approved by governing body
Authority to levy taxes for specific purposes	Yes, if approved by governing body
User fees for water, sewer, gas or electric service	Yes, if mandated by utility
Impact fees for homebuyers or developers of new development/homes	No, not planned
Stormwater utility fee	No, not planned
Incur debt through general obligation bonds	Yes, if approved by governing body
Incur debt through special tax bonds	No, not planned
Incur debt through private activity bonds	No, not planned
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes, if grant approved
Open Space Acquisition funding programs	Yes, if approved by regulating agency
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	N/A
Fiscal Connection to Mitigation and Safe Growth	
How do your fiscal capabilities contribute to risk reduction in your community? Projects are evaluated for funding if deemed necessary for mitigation however, no projects under consideration at this time.	

Financial Resources	Are these accessible or eligible to use for mitigation? (Yes/No) If yes, please describe. If no, can this be used to support in the future?
When constructing upcoming budgets, hazard mitigation actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the hazard mitigation goals. No projects are planned at this time. **Annually, the jurisdiction will review mitigation actions when allocating funding.** **Do budgets limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?** The Township does not encourage development in areas vulnerable to hazards. **Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?** Yes **Do budgets provide funding for hazard mitigation projects identified in the County HMP?** The budget provided funding for viable projects in the plan.	

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Township of Lawrence.

Table 9.8-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? If yes, please describe.
Public information officer or communications office	Yes	Nixle Alert system through eh Police Department, Social media accounts including Facebook and Twitter.
Personnel skilled or trained in website development	Yes	Township staff
Hazard mitigation information available on your website	Yes	Flood Hazard Area map available on Township website.
Social media for hazard mitigation education and outreach	Yes	Fire Prevention Programs
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Other programs already in place that could be used to communicate hazard-related information	No	-
Warning systems for hazard events	Yes	Nixle Alert system through Police Department
Natural disaster/safety programs in place for schools	No	-
Other	No	-

Community Classifications

The table below summarizes classifications for community programs available to the Township of Lawrence.

Table 9.8-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	10	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	???	???
Sustainable Jersey	Yes	Silver Certified	October 18, 2019
StormReady Certification	No	-	-
Firewise Communities classification	No	-	-

Note:
N/A *Not applicable*
NP *Not participating*
- *Unavailable*

The Township of Lawrence is a silver certified community in the Sustainable Jersey program. The Township has earned points to support this certification through various actions, including the following actions that relate to hazard mitigation:

- *Rain Gardens:* A rain garden demonstration project was constructed in October 2010 at the Lawrence Nature Center (LNC), located at the south end of Drexel Avenue in Lawrence Township, New Jersey. he Lawrence Township Department of Public Works installed downspout connections to the rain garden location, excavated the garden area, amended the native soils with sand, and placed mulch at the surface. Native planting were installed in the rain garden by community volunteers. The plantings were purchased by Lawrence Township from Pinelands Nursery & Supply. The rain garden is approximately 250 square feet, and manages runoff from a portion of the LNC rooftop, as well as a portion of the yard.
- *Green Building and Environmental Sustainability Element:* Lawrence adopted and updated their Green Building and Environmental Sustainability Element (GBESE) of the Master Plan. The Green Building and Environmental Sustainability Element was made to create a more sustainably developed town, while combating climate change through reducing emissions, creating more efficient public transportation, building more energy efficient buildings and reducing waste. All of these tasks are acknowledged in the GBESE with resolutions for future projects to meet these standards.
- *Environmental Commission:* The Lawrence Township Environmental Resources Committee was combined with the Green Team by the Township Council by ordinance (attached) on January 8, 2013. The powers of the Environmental Resources Committee (which functioned as the Township's Environmental Commission) were retained in the new Environmental and Green Advisory Committee (EGAC). The Environmental Committee reviews all major subdivision and site plan applications that are submitted to the Planning Board and Zoning Board. The administrative officer for each Board transmits the plans and stormwater management reports for review and comment. Upon receipt of comments, the reports are forwarded to the appropriate Board for consideration during the public review process. Comments are included in the Resolution of Approval, with compliance monitored by township staff.
- *Environmental Assessment Ordinance:* An Environmental Impact Statement is required by the Lawrence Township Land Development Ordinance to provide a comprehensive analysis of the impact of proposed land development on the environment and the community. This statement must include an inventory of the natural features, the environmental performance controls required during construction and the impact and alternatives to the project, together with proposals for mitigating any potential impact on the natural resources.
- *Tree Protection Ordinance:* The Lawrence Township Land Use Ordinance controls and regulates the indiscriminate removal of trees for the purposes of protecting the trees, the environment, and for the health and safety of the community. The ordinance is designed to prevent conditions which cause an increase in storm water runoff, sedimentation, soil erosion, reflected heat, air or noise pollution, or inhibit aquifer

recharge. This section of the LUO provides for tree protection zones, standards and methods of tree protection to achieve the goal of preserving where possible and replanting through the Required Tree Density and Tree Replacement Section if removal is unavoidable.

- *Community Forestry Management Plan:* The Township applied for and received a 2018 Green Communities Grant which to pay for the services of a consultant to assist the Shade Tree Advisory Committee in preparing the 2019 – 2024 Community Forestry Management Plan. The plan has been completed and was submitted in March 2019 to the Department of Forestry for approval.
- *Tree Hazard Inventory:* The Emerald Ash Borer has destroyed millions of Ash trees since 2002 when it first appeared in North America. This insect pest was identified as present in Mercer County several years ago. Experts warn that the Emerald Ash Borer will kill 99 percent of untreated Ash trees. In response to this threat, Lawrence Township, led by the Shade Tree Advisory Committee, has taken preventative action by alerting the public using the Township website and community messaging system, providing educational outreach programs, and conducting a tree hazard inventory. The hazard inventory includes the tree location and size, assessment, and recommended action (i.e., removal, removal and replacement, or treatment). The Township identified 255 Ash trees located on public property and another 221 Ash trees on private property. The last of the Ash on public property identified in the inventory were removed in 2018. Additional Ash will continue to be removed. The remaining Ash on public property that were identified for treatment are continuing to be treated. In 2019 the Township contracted with Bartlett Tree Experts to treat 109 Ash with a 2-year systemic trunk injection for $8,355. The 2019 Township budget included $100,000 for the handling of Ash trees. The Department of Public Works (DPW) monitors all hazardous trees including Ash and receives homeowner requests for tree removals on an on-going basis.

Adaptive Capacity

Adaptive capacity is defined as "the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences" (IPCC 2014). In other words, it describes a jurisdiction's current capabilities to adjust to, protect from, or withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each hazard of concern and the jurisdiction's rating.

Table 9.8-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Dam Failure	Moderate
Disease Outbreak	Strong
Drought	Moderate
Earthquake	Moderate
Flood	Strong
Geological Hazards	Moderate
Hazmat	Moderate
Hurricane	Moderate
Infestation and Invasive Species	Moderate
Nor'Easter	Strong
Severe Weather	Strong
Severe Winter Weather	Strong
Wildfire	Moderate

**Strong = Capacity exists and is in use, Moderate = Capacity may exist; but is not used or could use some improvement, Weak = Capacity does not exist or could use substantial improvement.*

9.8.4 National Flood Insurance Program (NFIP) Compliance

Th table below provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.

Table 9.8-9. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
• # NFIP Policies: 233 • # RL properties: 12 • # SRL properties: 2 • # RL/SRL mitigated: 0	• # claims filed: 143 • Total loss payments: $6,824,706
Describe areas prone to flooding in your jurisdiction.	Areas prone to flooding include parcels adjacent to the Shabakunk Creek in the southern section of the Township.
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation, and if so, how many are interested in (elevation or acquisition)?	To date, no property owners have been interested in elevation or acquisition.
How do you make Substantial Damage determinations? • How many were declared for recent flood events in your jurisdiction?	None
Detail any RiskMAP projects currently underway in your jurisdiction.	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes
NFIP Administration	
What local department is responsible for floodplain management?	Engineering and Building Departments
Are any staff certified floodplain managers (CFMs) or is a consultant retained?	There are no staff certified floodplain managers.
Provide an explanation of who in your municipality provides NFIP administration services (permit review, GIS, education/outreach, inspections, engineering capability).	Engineering and Building Departments
What specific training or support does your floodplain management staff need to support its floodplain management program?	None requested at this time.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Not an issue at this time.
Do you have access to resources to determine possible future flooding conditions from climate change?	Not at this time.
NFIP Compliance	
List any outstanding NFIP compliance violations.	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	October 12, 1994
What is the local law number or municipal code of your flood damage prevention ordinance? What is the date that your flood damage prevention ordinance was last amended?	Ordinance 2236-16 adopted May 17, 2016. The ordinance will require update to meet the new model ordinance standards from NJ DEP.
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Our program meets minimum requirements
Are there other local ordinances, plans, or programs (site plan review, consideration of flood risk reduction when granting height variances) that support floodplain management and meeting the NFIP requirements?	The Land Use Ordinance contains a section on Flood Prevention (427) and compliance with Stream Buffers (431.J).

NFIP Topic	Comments
Does your jurisdiction participate in CRS? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	The Township has entered the program at Class 10 but is not interested in moving forward with the program.

Source: FEMA Region 2 2019

Notes:

RL—Repetitive Loss; SRL—Severe Repetitive Loss; NA—Not applicable

9.8.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. The table below summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.8-10. Recent and Expected Future Development

Type of Development	2016		2017		2018		2019		2020		2021	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ outside regulatory floodplain)												
	Total	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**
Single Family	3	0	4	0	35	0	41	0	32	0	3	0
Multi-Family	1	0	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	12	0	9	0	5	0	6	0	3	0	1	0
Total Permits Issued	**16**	**0**	**13**	**0**	**40**	**0**	**41**	**0**	**35**	**0**	**4**	**0**

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
Shake Shack	Commercial	1	3303 Brunswick Pike, Block 5201, Lot 29	None identified	Completed
First Baptist Church Fellowship Hall	Other	1	121 Hillcrest Avenue, Block 2321, Lot 1.01	None identified	Completed
Aqua NJ	Infrastructure	1	25 Green Avenue, Block 5703, Lot 109	0.2 Percent Annual Chance Flood	Completed
Carriage Park Building 2	Residential	100	2000 Colts Circle	None identified	Completed
Briad	Commercial	107 rooms (hotel)	1300 Lenox Drive, Block 5101, Lot 19 (CO4)	None identified	Completed

Berk's Walk	Residential	8	Block 3901, Lot 10	None identified	Completed
Bristol Myers Squibb Childcare Facility	Commercial	N/A	Block 5001, Lot 1,01	None identified	Completed
PSE&G Bunker Hill Expansion	Infrastructure	N/A	60 Bunker Hill Road Block 2701, Lots 33-38,40	None identified	Completed
2 Princess Road MAB Assoc. LLC	Commercial	N/A	2 Princess Road, Block 3901, Lot 1.01	None identified	Completed
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
LA Fitness	Commercial	1	Block 2001, Lot 3	None identified	Construction in progress
Amazon Services, LLC	Commercial	1	10 Princess Road, Block 3901, Lot 4.01	None identified	Construction in progress
Chick Fil A	Commercial	1	2950 Brunswick Pike, Block 3601, Lot 1.01	None identified	Construction in progress
N/A	Commercial	1	34 Black Road, Block 4201, Lot 21	0.2 Percent Annual Chance Flood	Construction in progress
N/A	Commercial	1	32 Black Road, Block 4201, Lot 22	None identified	Construction in progress
Lawrenceville School Campus Expansion	Other	2 - new dining and athletic buildings	Block 5801, Lot 1.02	None identified	Construction in progress
Bristol Myers Squibb expansion	Commercial	2 new buildings	3551 Lawrenceville Road	None identified	Construction in progress
Bucci subdivision	Residential	6	Block 1901, Lots 6.02-6.07	None identified	Construction in progress
Venue at Cobblestone Creek	Residential	97	Block 3004, Lots 208-271; Block 304.01 Lots 1-35	None identified	Construction in progress
PSE&G Texas Avenue Substation Upgrade	Infrastructure	1	20 Texas Avenue, Block 2005, Lot 9.01	None identified	Approved by board or committee
Trail at Princeton Pike	Residential	189	Block 5101, Lot 18	None identified	Approved by board or committee
Bridge Academy	Other	N/A	Block 3004, Lot 154	1 Percent Annual Chance Flood	Approved by board or committee

SFHA Special Flood Hazard Area (1% annual chance flood event)

** Only location-specific hazard zones or vulnerabilities identified.*

9.8.6 Jurisdictional Risk Assessment

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 4.2 (Methodology and Tools), Section 4.3 (Hazards of Concern), and Section 4.4 (Hazard Ranking) provide a detailed summary for the Township of Lawrence's risk assessment results, and data used to determine the hazard ranking are discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps were only generated for those hazards that can be clearly identified using mapping techniques and technologies and for which the Township of Lawrence has significant exposure. The maps also show the location of potential new development, where available.

Figure 9.8-1. Township of Lawrence Hazard Area Extent and Location Map 1

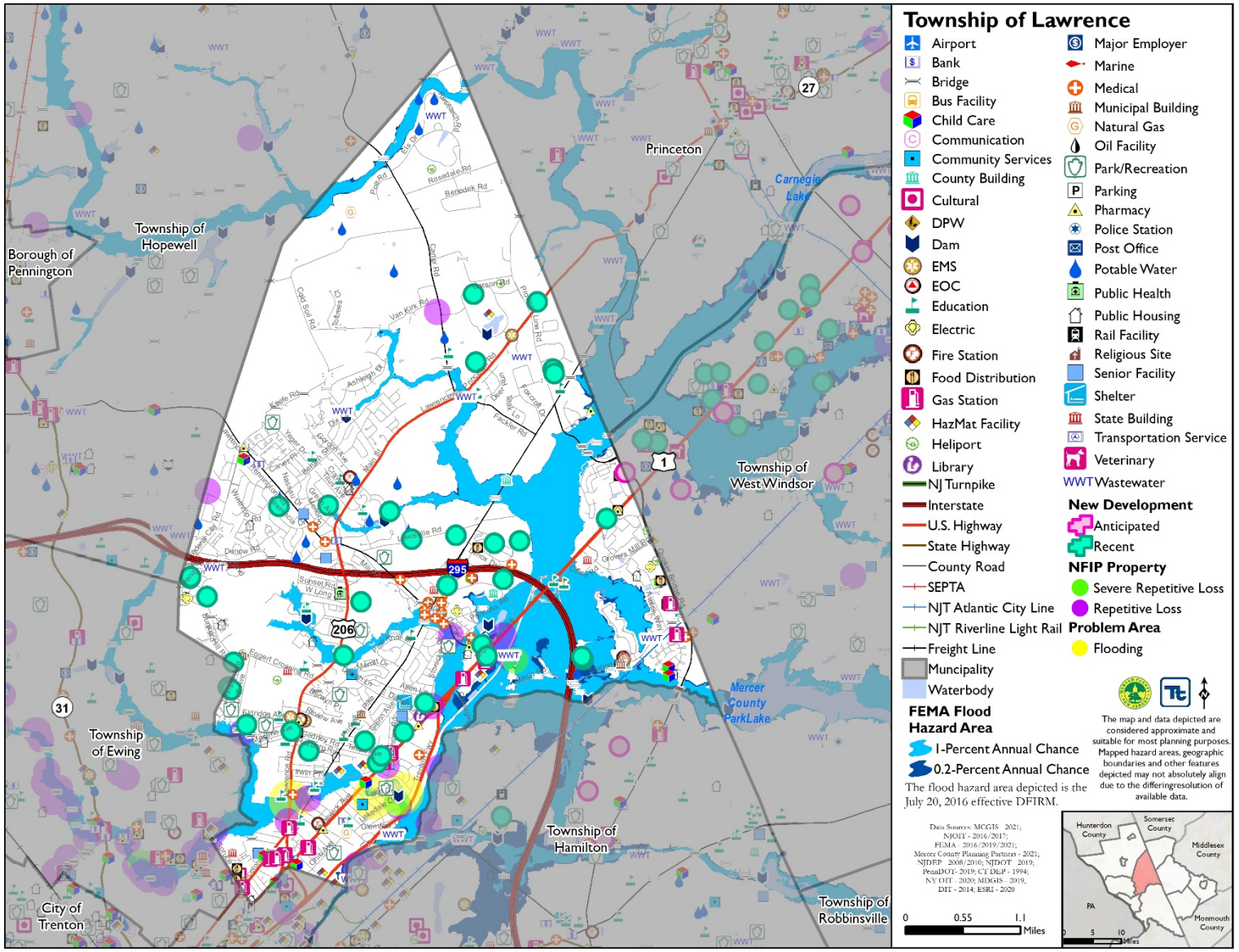


Figure 9.8-2. Township of Lawrence Hazard Area Extent and Location Map 2

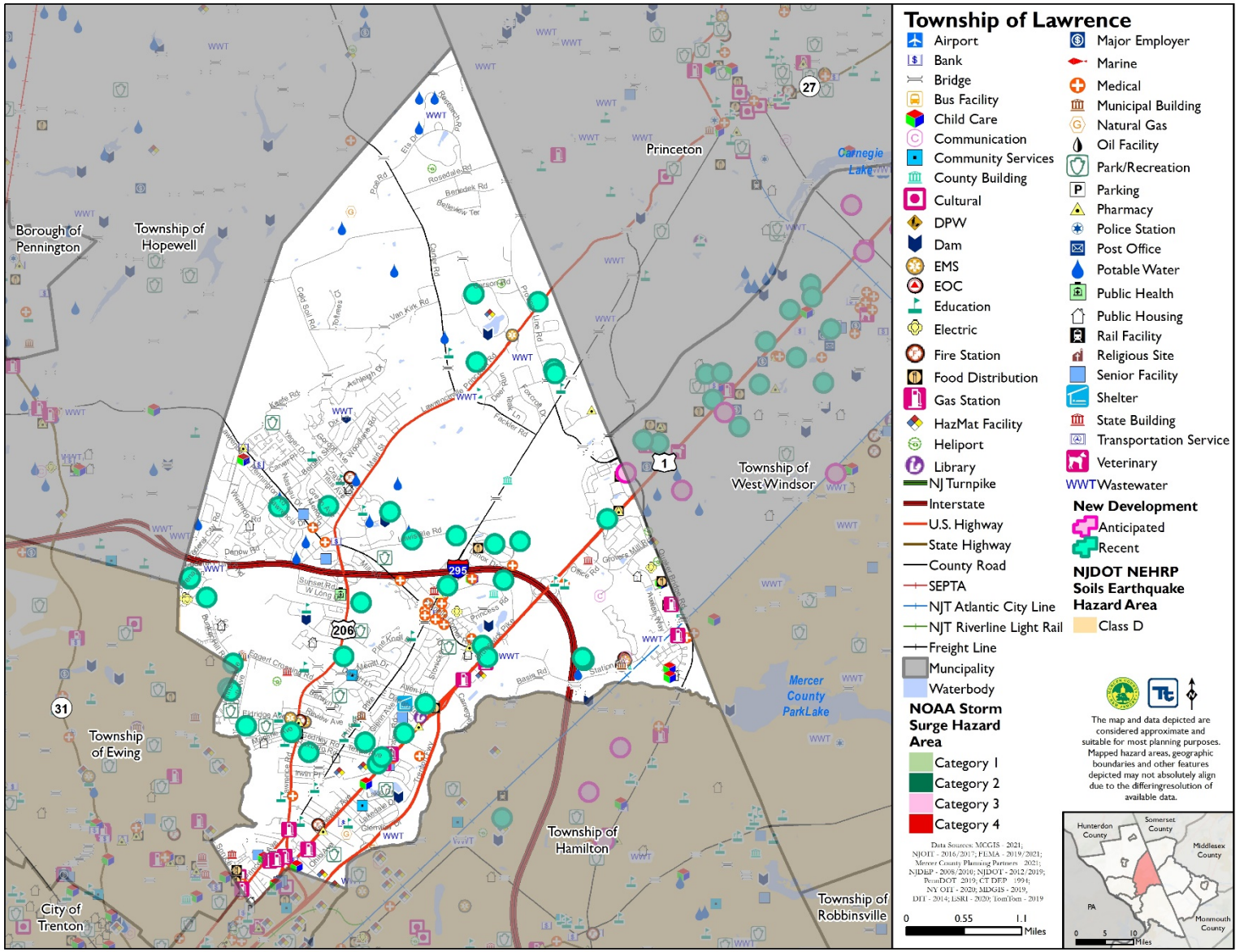


Figure 9.8-3. Township of Lawrence Hazard Area Extent and Location Map 3

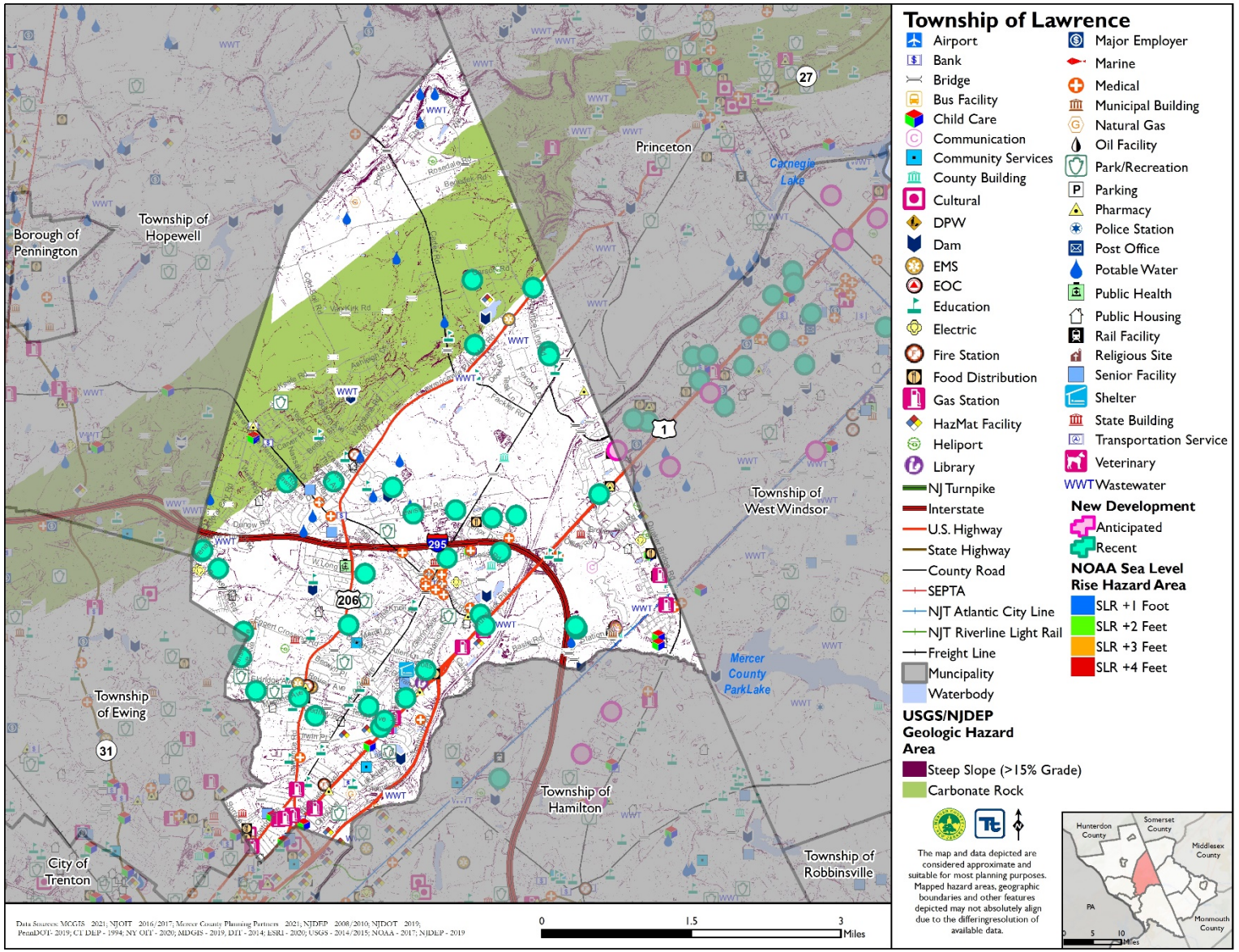
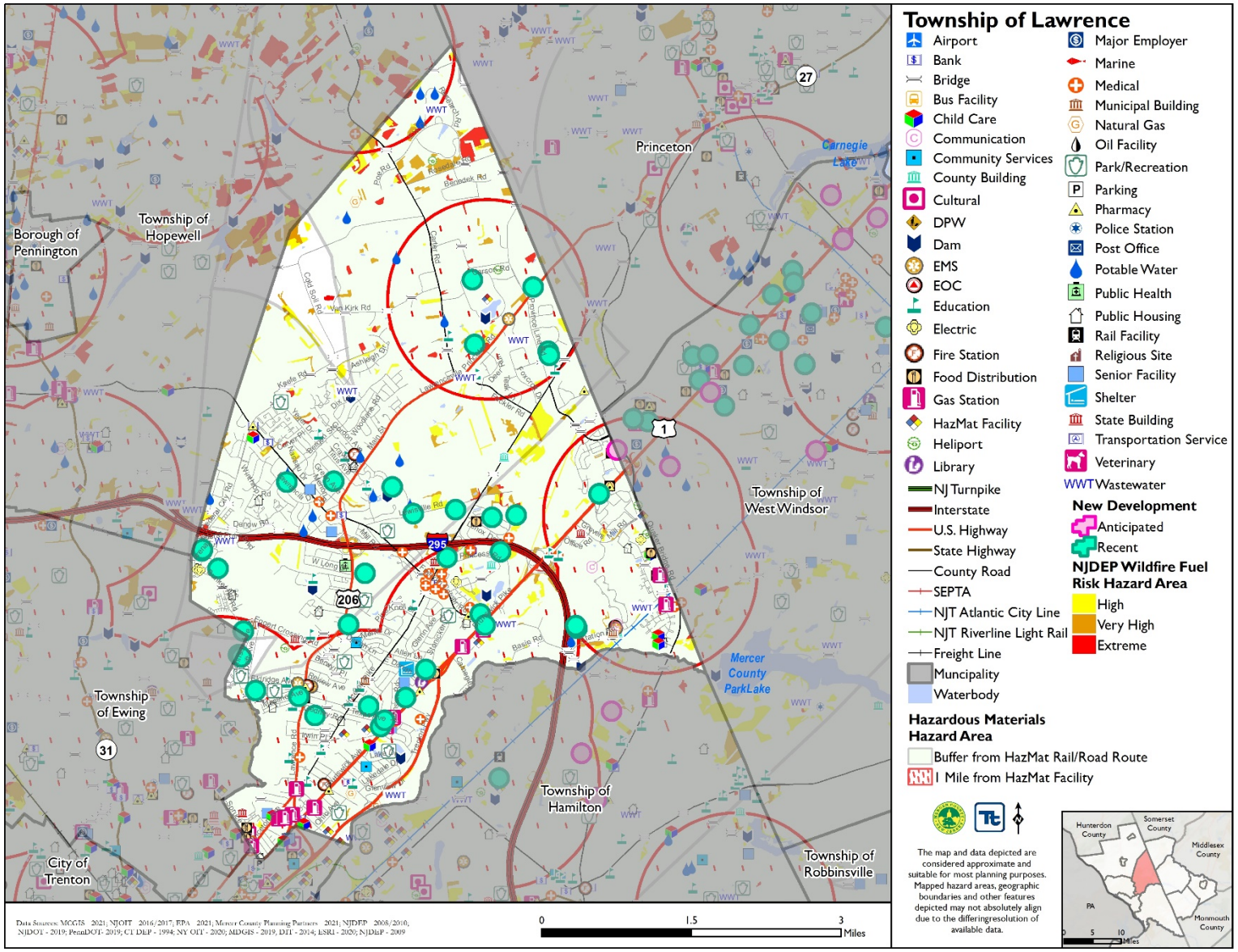


Figure 9.8-4. Township of Lawrence Hazard Area Extent and Location Map 4



Hazard Event History

Mercer County has a history of natural hazard events as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the county and its municipalities.

The Township of Lawrence's history of federal declarations (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Mercer County. The table below provides details regarding municipal-specific loss and damages the County experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

Table 9.8-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
February 13-14, 2015	Cold/Wind Chill	No	The center of an arctic air mass brought some of the lowest wind chills and temperatures of the winter season to New Jersey. Wind chill factors were recorded as low as 22 degrees below zero, with actual temperatures reaching -2ºF.	Many local governments across the area set up Code Blue shelters for the vulnerable population
January 22 – 24, 2016	Blizzard (DR-4264-NJ)	Yes	A low-pressure system moved up along the Carolina Coast intensifying into a major nor'easter, producing record snowfall in New Jersey on January 23. Wind gusts reached upwards of 60 mph and visibility was one-quarter mile or less throughout the region. Damages across the state were estimated at $82.6 million.	Up to 24 inches of snow was reported in Mercer County.
March 7, 2018	Winter Storm	No	A low pressure system moved northeast across Delaware and New Jersey bringing a wintery snow/rain mix overnight on March 6. Across the state, snowfall totals ranged from 6 to 24 inches. Heavy, wet snow downed trees and limbs leaving 350,000 customers state-wide without power.	Up to 11.5 inches of snowfall was reported in Mercer County.
August 4, 2020	Tropical Storm	N/A	Tropical Storm Isaias brought high winds, heavy rain, several tornadoes, and coastal flooding to the mid-Atlantic region, becoming the most impactful tropical cyclone to impact most of the region since Sandy in 2012.	Although the County was impacted, the Township did not report damages.
January 20, 2020 – Present	Covid-19 Pandemic (EM-3451-NJ) (DR-4488-NJ)	Yes	Beginning on January 20, 2020, the pandemic resulting from the Coronavirus Disease (COVID-19) created conditions of sufficient severity and magnitude to warrant a disaster declaration in the State of New Jersey.	The coronavirus pandemic resulted in closures and masking and social distancing requirements.
April 2, 2016	Hail	No	A strong cold front associated with a low pressure system moving through New York State swept across the area during the late evening hours of April 2nd and early morning hours of April 3rd, accompanied by thunderstorms,	Three-quarter inch hail was produced in Lawrence Township.

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			very strong convectively driven winds, and small hail.	
July 31, 2016	Heavy Rain	Yes	Several clusters of thunderstorms associated with several shortwaves and a cold front became nearly stationary over Mercer County on the 29th	Just under four inches of rain fell in 24 hours from thunderstorms. Many power outages.
May 27, 2018	Flash Flood	No	Heavy rain fell on the morning of May 27 from Bucks County in southeastern Pennsylvania eastward into central New Jersey. Rainfall amounts of 2 to 4 inches were common with some locations receiving up to 5 or 6 inches of rain.	Portions of the Princeton Pike were closed in Lawrence Township, including the areas around Shipetaukin Creek and Shabakunk Creek.
August 7, 2019	Thunderstorm Wind	Yes	A cold front along with a robust shortwave trough gradually approached the eastern mid-Atlantic on August 7. A pre-frontal surface trough was also in place. Ahead of the front, a warm and moist air mass built through the day. Strong instability developed, along with moderate wind shear. Convection initially developed along the pre-frontal trough. Later, a squall line associated with the front and trough combination moved through the region. Given the strong instability and adequate shear, numerous storms became severe, primarily producing damaging winds. In addition, low level shear was sufficient to help spawn a couple of brief tornadoes in New Jersey	Power lines were downed at Lawrenceville Rd and Province Line Rd.
April 21, 2020	Thunderstorm Wind	Yes	Strong low pressure tracked through southern Canada on April 21. A warm front associated with the low moved through the mid-Atlantic during the morning hours, with a strong and fast moving cold front following closely behind for the afternoon. This was an unseasonably strong cold front which marked the leading edge of a much colder than average air mass moving into the region behind it. A strongly forced and highly sheared environment existed ahead of the front. Widespread morning cloudiness and rain showers limited instability, but a brief window of clearing allowed for heating and destabilization to occur. A severe squall line developed, producing considerable wind damage over eastern portions of the mid-Atlantic. A weak tornado also occurred along the New Jersey coast.	Several trees were downed near Quaker Bridge Mall.
June 3, 2020	Thunderstorm Wind	Yes	A derecho developed just southeast of Lake Erie during the early morning hours of June 3, 2020, then moved rapidly southeast across Pennsylvania before exiting the central New Jersey coast during the early afternoon hours, approximately 130 PM. Damaging	Trees down in Lawrenceville.

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			winds in excess of 60 MPH were sporadic over western and central Pennsylvania, but as the thunderstorm complex moved into increasingly unstable air in the eastern part of the state just before noon, wind damage reports became more numerous and widespread Wind gust reports between 60 and 70 MPH were common within this swath.	

Hazard Ranking and Vulnerabilities

The hazard profiles in Section 4.3 (Hazards of Concern) of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Township of Lawrence's risk assessment results and data used to determine the hazard ranking.

Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 4 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.4 (Hazard Ranking), each participating jurisdiction can have differing degrees of risk exposure and vulnerability compared with Mercer County as a whole. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Township of Lawrence. The Township of Lawrence reviewed the community's hazard risk/vulnerability risk ranking table, including municipal-specific results, to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Township of Lawrence indicated the following:

- The Township changed the hazard ranking for disease outbreak from high to medium, noting the establishment of the Vulnerable Populations Coordinator position to respond to public health emergencies.
- The Township changed the hazard ranking for nor'easter from medium to high, noting geographic position of the Township which results in greater risk. This mirrors the 2017 ranking.
- The Township agreed with the remainder of the risk rankings.

Table 9.8-12. Hazard Ranking Input

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geological Hazards	Hazardous Materials
Low	Medium	Medium	Low	High	Low	High

Hurricane/ Tropical Storm	Infestation and Invasive Species	Nor'Easter	Severe Weather	Severe Winter Weather	Wildfire
High	High	High	High	High	Medium

Note: The scale is based on the hazard rankings established in Section 4.4 (Hazard Ranking) and modified as appropriate during review by the jurisdiction.

Critical Facilities

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain.

Table 9.8-13. Potential Flood Losses to Critical Facilities

Name	Type	Exposure	
		1% Event	0.2% Event
SANTANDER BANK	Bank	X	X
WELLS FARGO BANK	Bank	X	X
BANK OF PRINCETON	Bank	X	X
LAWRENCE POND DAM	Dam	X	X
LAWRENCEVILLE SCHOOL DAM	Dam	X	X
CENTENNIAL LAKE DAM	Dam	X	X
COLONIAL LAKE DAM	Dam	X	X
542.16 - BALSAM DR OVER LITTLE SHABAKUNK CRK	Bridge	X	X
6-540.5 - BASIN RD OVER ASSUNPINK CRK	Bridge	X	X
543.6 - PRINCETON PIKE RT 583 OVER SHIPETAUKIN CRK	Bridge	X	X
543.1 - BAKERS BASIN RD OVER SHIPETAUKIN CRK	Bridge	X	X
542.2 - PRINCETON PIKE RT 583 OVER LITTLE SHABAKUNK CRK	Bridge	X	X
543.7 - CARTER RD RT 569 OVER SHIPETAUKIN CRK	Bridge	X	X
6-540.4 - CARNEGIE RD OVER ASSUNPINK CRK	Bridge	X	X
533.5 - PROVINCE LINE RD RT 569 OVER D&R CANAL TRIB	Bridge	X	X
541.2 - PRINCETON PIKE RT 583 OVER SHABAKUNK CRK	Bridge	X	X
INTERIM HEALTH CARE	Medical Center	X	X
LAWRENCE MEDICAL ASSOCIATES	Medical Center	X	X
LAWRENCE OB-GYN	Medical Center	X	X
541.6 - FAIRFIELD AVE OVER SHABAKUNK CRK TRIB	Bridge	X	X
LAWRENCEVILLE FAMILY THERAPY ASSOC	Medical Center	X	X
LAWRENCEVILLE NEUROLOGY ASSOCIATES P A	Medical Center	X	X
AL BERNSTEIN APARTMENTS	Public Housing	X	X
VITELLA APARTMENTS	Public Housing	X	X
MONTERVINO APARTMENTS	Public Housing	X	X
LITTLE KIDS COLLEGE LAWRENCE	Child Care	X	X
LAWRENCE GROUP HOME	Community Services	X	X

Name	Type	Exposure	
		1% Event	0.2% Event
LAWRENCE TWP ECOLOGICAL CENTER	County Building	X	X
THE BRIDGE ACADEMY	Primary Education	X	X
RIDER UNIVERSITY - ACADEMIC ANNEX	Post-Secondary Education	X	X
HAPPY HOLLOW NURSERY SCHOOL	Primary Education	X	X
LAWRENCEVILLE SCHOOL MASTER FILE	Primary Education	X	X
LAWRENCE TOWNSHIP OEM/ MUNICIPAL BUILDING	EOC	X	X
BRISTOL MYERS SQUIBB FD	Fire Station	X	X
CAREMARK	Medical Center	X	X
CENTRAL JERSEY SPINE ASSOCIATES	Medical Center	X	X
CLINICAL CONNECTION	Medical Center	X	X
DELAWARE VALLEY PHYSICAL THERAPY	Medical Center	X	X
NEURO-GROUP	Medical Center	X	X
543.22 - PRINCESS RD OVER SHIPETAUKIN CRK TRIB	Bridge	X	X
530.1 - CARTER RD RT 569 OVER STONY BRK	Bridge	X	X
544.3 - LAWRENCE STATION RD OVER ASSUNPINK CRK TRIB	Bridge	X	X
543.19 - FACKLER RD RT 569 OVER SHIPETAUKIN CRK	Bridge	X	X
530.2 - PROVINCE LINE RD OVER STONY BRK	Bridge	X	X
520.2 - PROVINCE LINE RD RT 569 OVER D&R CANAL	Bridge	X	X
531.1 - PRETTY BROOK RD OVER STONY BRK TRIB	Bridge	X	X
541.7 - ZOAR AVE OVER SHABAKUNK CRK TRIB	Bridge	X	X
544.5 - YOUNGS RD OVER ASSUNPINK CRK TRIB	Bridge	X	X
544.1 - BASIN RD OVER ASSUNPINK CRK TRIB	Bridge	X	X
541.16 - HAZLEHURST AVE OVER SHABAKUNK CRK TRIB	Bridge	X	X
520.1 - TRAIL OVER D&R CANAL TRIB	Bridge	X	X
ROUTE ONE FARM MARKET	Food Distribution	X	X
EXXON	Gas Station	X	X
BENECARD PRESCRIPTION BENEFIT	Pharmacy	X	X
CHOUDHRI DEEPIKA	Pharmacy	X	X
QUEST DIAGNOSTICS	Medical Center	X	X
ST LAWRENCE REHABILITATION CENTER	Medical Center	X	X
LAWRENCE TOWNSHIP OEM/ MUNICIPAL BUILDING	Municipal Building	X	X

Name	Type	Exposure	
		1% Event	0.2% Event
COLONIAL LAKE PARK LAWRENCE	Park/Recreation	X	X
STONICKER PARK LAWRENCE	Park/Recreation	X	X
DIOCESE OF TRENTON	Religious	X	X
LAWRENCEVILLE PRESBYTERIAN CHURCH	Religious	X	X
SEVENTH DAY ADVENTIST	Religious	X	X
SLACKWOOD PRESBYTERIAN CHURCH	Religious	X	X
ELSA BAKERS BASIN	Wastewater Lift Station	X	X
ELSA FACKLER ROAD	Wastewater Lift Station	-	X
EDUCATIONAL TESTING SERV	Potable Water Well	X	X
FELLOWSHIP BAPTIST CHURC	Potable Water Well	-	X
Strayer University	Post-Secondary Education	X	X
WELLNESS DERMATOLOGY	Medical Center	X	X
COOPER PESTS	Hazardous Material Facility	X	X
QUAKER ROAD BRIDGE OVER D&R CANAL	Bridge	X	X
Trenton Gas District HQ	Natural Gas Facility	X	X
Strayer University	Post-Secondary Education	X	X
Wellness Dermatology	Medical Center	X	X

Source: Mercer County 2021, FEMA 2016

Identified Issues

After review of the Township of Lawrence's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Township of Lawrence has identified the following vulnerabilities within their community:

- Backup power sources are necessary to maintain critical services for critical facilities. The EMS Building houses emergency medical service personnel 24 hours a day, 7 days a week and is a critical facility. The building lacks a backup power source.
- The spillway of the Colonial Lake Dam will require repair or replacement in the future. The dam has an insufficient ability to control flow of water during severe weather due to debris buildup.
- Silt buildup in Colonial Lake causes roadway/residential flooding during severe storms. Although some dredging (2016) and hydroraking (2021) took place to remove silt in Colonial Lake, additional dredging and/or hydroraking is still needed to remove accumulated silt to restore necessary carrying capacity to reduce flooding risk.
- Lawrence Road experiences flooding between Princeton Pike and Notre Dame Road during storms due to low elevation. Lawrence Road is under the jurisdiction of NJDOT.
- The Public Works Building at 240 Bakers Basin Road where all equipment and vehicles are stored and the only fueling station is located is exposed to flooding.
- The flood damage prevention ordinance requires update.

- The Township lacks a Disaster Debris Management Plan.
- The Township has equipment needs to adequately complete risk reduction and emergency response and cleanup.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Township has 12 repetitive loss properties and 2 severe repetitive loss properties. Areas prone to flooding include parcels adjacent to the Shabakunk Creek in the southern section of the Township. The Township has completed outreach in the past to mitigate flood prone properties but interest was limited at the time (roughly 10 years ago).

9.8.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the Township of Lawrence's mitigation strategy identified in the 2016 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and are discussed in the 'Capability Assessment' presented previously in this annex.

Table 9.8-14. Status of Previous Mitigation Actions

2017 Action Number and Action Description		Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2021 HMP?	
				Check if Yes	Enter 2021 HMP Action #
Lawrence Twp-1 (new)	Reach out to colleges and universities for technical assistance with natural hazard mitigation activities in the Township.	Fire Department, local colleges / universities	Ongoing Capability. The Township will continue to network with higher educational facilities.	-	-
Lawrence Twp-2 (new)	Prepare a Fire Plan that will include a risk assessment and identify vulnerable areas in the Township.	Fire Department	Complete. Fire Plan was completely revised and instituted.	-	-
Lawrence Twp-3 (new)	Include a line item in the municipal budget to fund mitigation projects.	Township	Ongoing Capability. Mitigation projects are funded through the Capital Budget on as needed basis.	-	-
Lawrence Twp-4 (new)	Work with NJDOT to elevate Lawrence Road between Princeton Pike and Notre Dame Road	DPW, NJDOT	No Progress.	X	Flooding issues during storms.
Lawrence Twp-5 (old Lawrence Township 11)	Send project out to bid for construction - dredging of Colonial Lake	DPW	In Progress. Colonial Lake dredging and hydroraking were both completed to remove accumulated silt in the lake. Funding through the Township Capital budget (Dredging $181,500 in 2016, Hydroraking and Debris Removal $193,000 in 2021)	X	Although these actions were completed, dredging and/or hydroraking is still needed to remove accumulated silt. Project estimate is $400,000.
Lawrence Twp-6 (old Lawrence Township 12)	Engineering study of Princeton Pike culvert near Fairfield Avenue.	DPW, Engineering	No Progress	-	-
Lawrence Twp-7 (new and old Lawrence Township 1-4)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option (in progress). Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Engineering via NFIP FPA with NJOEM, FEMA support	In Progress	X	
Lawrence Twp-8 (new)	Purchase and install backup power at the senior center/shelter.	Township	Completed, generators installed.	-	-

Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Township of Lawrence has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2017 HMP:

- None identified

Proposed Hazard Mitigation Initiatives for the HMP Update

The Township of Lawrence participated in a mitigation action workshop in June 2021 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

The table below indicates the range of proposed mitigation action categories.

Table 9.8-15. Analysis of Mitigation Actions by Hazard and Category

	FEMA						CRS			
Hazard	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	X	X							X	X
Disease Outbreak	X									X
Drought	X									X
Earthquake	X									X
Flood	X	X	X		X	X		X	X	X
Geological Hazards	X									X
Hazmat	X									X
Hurricane	X	X								X
Infestation and Invasive Species	X									X
Nor'Easter	X	X								X
Severe Weather	X	X				X				X
Severe Winter Weather	X	X								X
Wildfire	X									X

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

The table below summarizes the comprehensive range of specific mitigation initiatives the Township of Lawrence would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.1-17 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.8-16. Proposed Hazard Mitigation Initiatives and Associated Priority

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
2021-Township of Lawrence -001	EMS Building Backup Power	**Problem**: Backup power sources are necessary to maintain critical services for critical facilities. The EMS Building (165 Pilla Ave., Lawrenceville, NJ 08648) houses emergency medical service personnel 24 hours a day, 7 days a week and is a critical facility. The building lacks a backup power source. **Solution**: The Engineer will research what size generator is needed to power the EMS Building (anticipated at 75kW). The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the EMS Building.	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	1, 6	Engineer, Public Works, EMS	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensures continuity of operations of EMS Building	$75,000	Within 5 years	High	SIP	ES
2021-Township of Lawrence -002	Colonial Lake Dam Spillway	**Problem**: The spillway of the Colonial Lake Dam will require repair or replacement in the future. The dam has	Existing	Dam Failure, Flood	2, 7	Engineer, Public Works	High Hazard Potential Dam Program, Township budget	Dam failure avoided, meet safety requirements	High	Within 5 years	High	SIP	SP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		an insufficient ability to control flow of water during severe weather due to debris buildup. **Solution**: The Township will complete installation of a new spillway for Colonial Lake Dam.											
2021-Township of Lawrence -003	Colonial Lake Dredging	**Problem**: Although some dredging (2016) and hydroraking (2021) took place to remove silt in Colonial Lake, additional dredging and/or hydroraking is still needed to remove accumulated silt to restore necessary carrying capacity to reduce flooding risk. **Solution**: The Township will complete the necessary dredging of Colonial Lake to restore the flood storage capacity.	N/A	Flood	2	Engineering Department, DPW	Township budget	Lake related flooding reduced	$400,000	Within 2 years	High	NSP	NR
2021-Township of Lawrence -004	Lawrence Road Elevation	**Problem**: Lawrence Road experiences flooding between Princeton Pike and Notre Dame Road during storms due to low elevation. Lawrence Road is	Existing	Flood, Severe Weather	2	NJDOT, Township Administration, Public Works	NJDOT, HMGP, BRIC, Township budget	Access maintained, flooding reduced	High	Within 5 years	High	SIP	PP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		under the jurisdiction of NJDOT. **Solution**: The Township will work with NJDOT to elevate Lawrence Road between Princeton Pike and Notre Dame Road. The Township will determine if the elevation of Lawrence Road will require elevation of adjoining local roads and make those improvements as necessary.											
2021-Township of Lawrence -005	Public Works Flood Protection	**Problem**: The Public Works Building at 240 Bakers Basin Road where all equipment and vehicles are stored and the only fueling station is located is exposed to flooding. Flooding events have damaged the facility in the past and reduced the Township's emergency response capabilities. **Solution**: The Township will explore options to protect the facility through a feasibility assessment.	Existing	Flood	1, 2, 6	Engineer, Public Works	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Continuity of operations of Public Works, access to fueling of Township fleet	TBD by feasibility assessment. $150,000 for flood doors	Within 5 years	High	SIP	PP, SP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		Potential mitigation actions include relocation of the facility, installation of flood doors to protect the facility, and establishing a backup emergency fueling station. The Township will implement the cost-effective options that have funding support.											
2021-Township of Lawrence -006	Disaster Debris Management Plan	**Problem**: The Township lacks an adopted Disaster Debris Management Plan. **Solution**: The Township will complete and adopt the in-progress Disaster Debris Management Plan.	Existing	All Hazards	6	Public Works, OEM	Township budget	Increased planning for post-disaster response and cleanup.	Staff time	6 months	High	LPR	ES
2021-Township of Lawrence -007	Flood Damage Prevention Ordinance Update	**Problem:** The current flood damage prevention ordinance does not meet the state's recommendation for a code-coordinated flood damage prevention ordinance. **Solution:** The Township will update the flood damage prevention ordinance using the NJ DEP's	New	Flood	2	Floodplain Administrator, Administration	Township budget	Meet state and FEMA standards for flood damage prevention, reduce flood risk on new development	Staff time	6 months	Medium	LPR	PR

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		model code coordinated ordinance to create better coordination between NFIP implementation by the floodplain administrator, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the Uniform Construction Code (UCC) implemented by the Construction Official.											
2021-Township of Lawrence -008	Equipment for Increased Mitigation and Response Capabilities	**Problem:** The Township has equipment needs to adequately complete risk reduction and emergency response and cleanup. **Solution:** The Township will pursue funding support to purchase equipment to increase municipal capabilities: • Emergency equipment such as chainsaws • Compactor trucks for hauling wood debris	N/A	All Hazards	1, 2, 5	OEM, DPW	Municipal budget	Increased mitigation and emergency response capabilities	Compactor truck: $250,000	Within 5 years	High	LPR	ES

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		• Mobile generator											
2021-Township of Lawrence -009	Repetitive Loss Mitigation	**Problem:** Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Township has 12 repetitive loss properties and 2 severe repetitive loss properties. Areas prone to flooding include parcels adjacent to the Shabakunk Creek in the southern section of the Township. The Township has completed outreach in the past to mitigate flood prone properties but interest was limited at the time (roughly 10 years ago). **Solution:** Conduct outreach to 30 flood-prone property owners, including RL/SRL property owners and provide information on	Existing	Flood, Severe Weather	1, 2	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	$3Million	3 years	High	SIP	PP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/ moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).											

Notes:
Not all acronyms and abbreviations defined below are included in the table.

Acronyms and Abbreviations:

CAV	*Community Assistance Visit*
CRS	*Community Rating System*
DPW	*Department of Public Works*
EHP	*Environmental Planning and Historic Preservation*
FEMA	*Federal Emergency Management Agency*
FPA	*Floodplain Administrator*
HMA	*Hazard Mitigation Assistance*
N/A	*Not applicable*
NFIP	*National Flood Insurance Program*
OEM	*Office of Emergency Management*

Potential FEMA HMA Funding Sources:

FMA	*Flood Mitigation Assistance Grant Program*
HMGP	*Hazard Mitigation Grant Program*
BRIC	*Building Resilient Infrastructure and Communities Program*

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Mitigation Category:

- *Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.*

- *Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.*
- *Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.*
- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.*

CRS Category:

- *Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.*
- *Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.*
- *Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.*
- *Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.*

Table 9.8-17. Summary Evaluation and Action Priority

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2021-Township of Lawrence-001	EMS Building Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ⚠
2021-Township of Lawrence-002	Colonial Lake Dam Spillway	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Township of Lawrence-003	Colonial Lake Dredging	0	1	0	1	1	1	1	1	1	1	1	1	1	1	12	High
2021-Township of Lawrence-004	Lawrence Road Elevation	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	High
2021-Township of Lawrence-005	Public Works Flood Protection	1	1	1	1	1	1	-1	1	1	1	0	0	1	1	10	High
2021-Township of Lawrence-006	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Township of Lawrence-007	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Township of Lawrence-008	Equipment for Increased Mitigation and Response Capabilities	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2021-Township of Lawrence-009	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High

Note: Section 6 (Mitigation Strategy), which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).

⚠ *This action has been identified as being of highest importance to the municipality and an action that the municipality would like to complete as soon as funding is received.*

9.8.8 Action Worksheets

The following action worksheets have been developed by the Township of Lawrence to aid in the submittal of grant applications to support the funding of high priority proposed actions. The State of New Jersey requires at least two projects be developed with action worksheets.

Action Worksheet			
Project Name:	EMS Building Backup Power		
Project Number:	2021-Township of Lawrence-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
Description of the Problem:	Backup power sources are necessary to maintain critical services for critical facilities. The EMS Building (165 Pilla Ave., Lawrenceville, NJ 08648) houses emergency medical service personnel 24 hours a day, 7 days a week and is a critical facility. The building lacks a backup power source.		
Action or Project Intended for Implementation			
Description of the Solution:	The Engineer will research what size generator is needed to power the EMS Building (anticipated at 75kW). The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the EMS Building.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Ensures continuity of operations of EMS Building
Useful Life:	20 years	**Goals Met:**	1, 6
Estimated Cost:	$75,000	**Mitigation Action Type:**	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, Public Works, EMS	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Emergency Management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Install solar panels	$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	EMS Building Backup Power	
Project Number:	2021-Township of Lawrence-001	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Project will protect critical services of EMS Building
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works, EMS
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Colonial Lake Spillway		
Project Number:	2021-Township of Lawrence-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Dam Failure, Flood		
Description of the Problem:	The spillway of the Colonial Lake Dam requires replacement.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will complete installation of a new spillway for Colonial Lake Dam.		
Is this project related to a Critical Facility or Lifeline?	Yes ☒	No ☐	
Level of Protection:	500-year flood	**Estimated Benefits (losses avoided):**	Dam failure avoided, meet safety requirements
Useful Life:	50 years	**Goals Met:**	2, 7
Estimated Cost:	High	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	HMGP, FMA, FEMA High Hazard Potential Dam Grant, Township budget
Responsible Organization:	Engineer, DPW	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation Planning

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Repair existing spillway	High	Unlikely to meet Dam Safety requirements
	Remove Dam	$1.5 million	Dam cannot be removed for safety reason.

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Colonial Lake Spillway	
Project Number:	2021-Township of Lawrence-002	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Project protects life from dam failure
Property Protection	1	Project protects property from dam failure
Cost-Effectiveness	1	
Technical	1	
Political	1	There is public support for the project
Legal	1	The Township has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Dam Failure, Flood
Timeline	0	1-2 years
Agency Champion	1	Engineer, DPW
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Lawrence Road Elevation		
Project Number:	2021-Township of Lawrence-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather		
Description of the Problem:	Lawrence Road experiences flooding between Princeton Pike and Notre Dame Road during storms due to low elevation. Lawrence Road is under the jurisdiction of NJDOT.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will work with NJDOT to elevate Lawrence Road between Princeton Pike and Notre Dame Road. The Township will determine if the elevation of Lawrence Road will require elevation of adjoining local roads and make those improvements as necessary.		
Is this project related to a Critical Facility?	Yes ☐	No ☒	
Level of Protection:	6" to 12" elevation and stormwater upgrades	**Estimated Benefits (losses avoided):**	Access maintained, flooding reduced
Useful Life:	50 years	**Goals Met:**	2
Estimated Cost:	High	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	NJDOT, HMGP, BRIC, Township budget
Responsible Organization:	NJDOT, Township Administration, Public Works	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Remove flood prone roadway	N/A	Loss of access to neighborhoods, increased emergency risk
	Buyout properties that exist along flood prone roadways	$Tens of Millions	Costly, loss of large portion of community
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Evaluation and Prioritization		
Project Name:	Lawrence Road Elevation	
Project Number:	2021-Township of Lawrence-004	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Project will protect emergency access
Property Protection	1	Project will protect roadway from flood damage
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	0	Lawrence Road is under the jurisdiction of NJ DOT
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	NJDOT, Township Administration, Public Works
Other Community Objectives	1	
Total	13	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Public Works Flood Protection		
Project Number:	2021-Township of Lawrence-005		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	The Public Works Building at 240 Bakers Basin Road where all equipment and vehicles are stored and the only fueling station is located is exposed to flooding. Flooding events have damaged the facility in the past and reduced the Township's emergency response capabilities.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will explore options to protect the facility through a feasibility assessment. Potential mitigation actions include relocation of the facility, installation of flood doors to protect the facility, and establishing a backup emergency fueling station. The Township will implement the cost-effective options that have funding support.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Level of Protection:	500-year flood level	**Estimated Benefits (losses avoided):**	Continuity of operations of Public Works, access to fueling of Township fleet
Useful Life:	TBD by feasibility assessment	**Goals Met:**	1, 2, 6
Estimated Cost:	TBD by feasibility assessment. $150,000 for flood doors	**Mitigation Action Type:**	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, Public Works	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Emergency Management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Relocate facility	High	High Cost
	Floodproof facility	$150,000	Access to facility still limited during flood events.

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Public Works Flood Protection	
Project Number:	2021-Township of Lawrence-005	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Project will protect critical services of Public Works
Property Protection	1	Project will protect Public Works from flood damage.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project.
Fiscal	-1	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	Protection of critical services
Total	10	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Repetitive Loss Mitigation		
Project Number:	2021-Township of Lawrence-009		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather		
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Township has 12 repetitive loss properties and 2 severe repetitive loss properties. Areas prone to flooding include parcels adjacent to the Shabakunk Creek in the southern section of the Township. The Township has completed outreach in the past to mitigate flood prone properties but interest was limited at the time (roughly 10 years ago).		
Action or Project Intended for Implementation			
Description of the Solution:	Conduct outreach to 30 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☒	
Level of Protection:	1% annual chance flood event + freeboard *(in accordance with flood ordinance)*	**Estimated Benefits (losses avoided):**	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
Useful Life:	Acquisition: Lifetime Elevation: 30 years (residential)	**Goals Met:**	1, 2
Estimated Cost:	$3Million	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	6-12 months
Estimated Time Required for Project Implementation:	Three years	**Potential Funding Sources:**	FEMA HMGP and FMA, local cost share by residents
Responsible Organization:	NFIP Floodplain Administrator, supported by homeowners	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Elevate homes	$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	$500,000	Elevated roadways would not protect the homes from flood damages

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Repetitive Loss Mitigation	
Project Number:	2021-Township of Lawrence-009	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from the flood prone areas of the Township.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	