

9.1 MORRIS COUNTY

This section presents the jurisdictional annex for Morris County. The annex includes a general overview of Morris County; an assessment of Morris County's risk, vulnerability, and mitigation capabilities; and a prioritized action plan to implement prior to a disaster to reduce future losses and achieve greater resilience to natural hazards.

9.1.1 Hazard Mitigation Planning Team

The following individuals are Morris County's identified HMP update primary and alternate points of contact.

Table 9.1-1. Hazard Mitigation Planning Team

| Primary Point of Contact | Alternate Point of Contact |
|---|---|
| Keith Heimburg | Jeffrey Paul |
| Office of Emergency Management | Office of Emergency Management |
| 500 West Hanover Avenue, Parsippany, NJ 07054 | 500 West Hanover Avenue, Parsippany, NJ 07054 |
| 973-829-8600 | 973-829-8600 |

9.1.2 Jurisdiction Profile

Section 3 (County Profile), Volume I of this HMP includes details on Morris County's population, location, climate, history, and growth and development.

9.1.3 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 jurisdictional annexes for each municipality summarize recent and expected future development trends, including major residential/commercial development and major infrastructure development. The Morris County Department of Planning & Preservation is responsible for reviewing subdivisions of land and site plans, advising freeholders on planning matters, and providing information for individual citizens, industries, public service groups, and government officials.

9.1.4 Capability Assessment

An inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies was developed for the County. Section 5 (Capability Assessment) in Volume I of this plan 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 legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.



• The County's adaptive capacity for the impacts of hazards.

Areas that mitigation is currently integrated are summarized in this Capability Assessment. Morris County identified specific integration activities that will be incorporated into procedures are included in the updated mitigation strategy.

PLANNING, LEGAL AND REGULATORY CAPABILITY

The table below summarizes the legal and regulatory tools that are available to Morris County and where hazard mitigation has been integrated.

Table 9.1-2. Planning, Legal and Regulatory Capability

| | | | | Has the HMP been in years? If | tegrated in the last 5 yes- how? |
|---|---|---|--|---|---|
| | Do you have this? (Yes/No) | Authority that enforces (Federal, State, Regional, County, Local) | State Mandated / Allowed | If yes- how? Describe in comments | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| Codes, Ordinances, & Requireme | nts | | | | |
| Building Code | No | State, Local | Yes | No | - |
| Comment: NJAC 5:23-3, 14; enforce | ed at the local lev | vel. The local municip | ality enforces the | e building code. | |
| Zoning Code | No | Local | Yes | No | - |
| Comment: Per State of NJ Municipa | al Land Use Law | (MLUL) L. 1975, s. 2, | eff Aug 1, 1976, | 40-55D-62: 49. Enforced | at the local level. |
| Subdivisions | No | Local | Yes | No | - |
| Comment: Site Plan and Subdivisio Board must review any subdivisions | | | | | |
| Stormwater Management | No | Local | Yes | No | - |
| Comment: Title 7 of the NJ Adminis | trative Code (N.J | I.A.C. 7:8); enforced a | t the local level. | While the County does no | t have a stormwater |
| Post-Disaster Recovery | Yes | County | - | Yes | - |
| Comment: | | | | | |
| Real Estate Disclosure | Yes | State – Division of Consumer Affairs | Yes | Yes | - |
| (POS) approved by the New Jersey | Comment: N.J.A.C. 13:45A-29.1; 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 proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision. | | | | |
| Growth Management | No | - | | - | - |
| Comment: | | | | | • |
| Shoreline Development | No | - | Yes; however, for coastal communities | - | - |
| Comment: | Comment: | | | | |
| Site Plan Review | Yes | County and Local | Yes | Yes | - |
| Comment: The Morris County Plan drainage facilities. For these types plan review process is done at the n | of projects, the C | | | | |
| Environmental Protection | No | - | - | - | - |
| Comment: The rules that are utilize Administrative Code. | d by the NJDEP o | and other environment | al agencies are c | codified at Title 7 of the NJ | Municipal |
| Flood Damage Prevention | No | Local | Yes | - | - |
| | | | • | | |



| | | | | Has the HMP been into years? If y | |
|---|----------------------------------|---|--------------------------------|---|---|
| | Do you have this? (Yes/No) | Authority that enforces (Federal, State, Regional, County, Local) | State Mandated / Allowed | If yes- how? Describe in comments | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| Comment: Floodplain management of | enforced at the lo | | | | |
| Wellhead Protection | Yes | County but enforced at the local level | No | No | No |
| Comment: The County has these may enforces. | pped out through | County GIS; but is up | to the municipa | lities if they have an overlo | y zone and the State |
| Emergency Management | No | - | - | - | - |
| Comment: | | | | | |
| Climate Change | No | - | - | - | - |
| Comment: | | | | | |
| Disaster Recovery Ordinance | No | - | - | - | - |
| Comment: | | | | | |
| Disaster Reconstruction Ordinance | No | - | - | - | - |
| Comment: | T | | T | | |
| Other | Yes | County | No | - | - |
| Land Development Standards – May 12, 2004 – presents the procedures, standards and requirements that the Planning Board will follow in its review and approval of land development applications. They supersede and replace the Standards adopted May 26, 1971, as amended and adopted through February 24, 1988. | | | | | |
| Planning Documents | | | | | |
| Master Plan | Yes | County | Yes | Yes | - |
| Comment: Elements of the County's master plan include: Bicycle and Pedestrian Circulation Farmland Preservation Future Land Use Historic Preservation Open Space Wastewater Management Water Supply | | | | | |
| Capital Improvement Plan | Yes | County | Yes | Yes | - |
| Comment: This is included in the con | unty's budget eac | ch year and performed | by the County A | dministration and Freehol | ders |
| Disaster Debris Management Plan | Yes | County | No | Yes | - |
| Comment: Completed in April 2012 during each storm. | and incorporated | l the County's HMP vi | ulnerability asses | ssment to obtain estimated | debris produced |
| Floodplain or Watershed Plan | Yes | County | No | - | - |
| Comment: No specific plan but have the Natural Resource Management Guide – Planning Department | | | | | |
| Stormwater Management Plan | No | - | Yes – local level | - | - |
| Comment: At the time of the 2020 update, the County does not have a countywide stormwater management. The County indicated they would like to develop one and have it include the location of all county, local and state stormwater management systems and their outflows. Refer to 2020-MORRIS COUNTY-001 for details on this mitigation action. At the municipal level, the County Planning Board reviews and approves stormwater management plans and ordinances. | | | | their outflows. Refer to | |
| Stormwater Pollution Prevention Plan | Yes | County - Engineering | - | - | - |
| Comment: Individual plans for county-owned facilities | | | | | |



| | | | | | ntegrated in the last 5 fyes- how? |
|--|----------------------------------|---|--------------------------------|---|---|
| | Do you have this? (Yes/No) | Authority that enforces (Federal, State, Regional, County, Local) | State Mandated / Allowed | If yes- how? Describe in comments | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| Urban Water Management Plan | No | - | - | - | - |
| Comment: | | | | | |
| Habitat Conservation Plan | Yes | County | No | - | - |
| Comment: Highlands Commission; I | Natural Resource | e Management Guide | | | |
| Economic Development Plan | No | County | No | - | - |
| Comment: The County currently doe | s not have a plar | but one is being deve | loped and should | d be completed by the end | l of 2021 |
| Shoreline Management Plan | No | - | - | - | - |
| Comment: | | | • | | |
| Community Wildfire Protection Plan | No | - | - | - | - |
| Comment: | | Τ | | T | |
| Community Forest Management Plan | Yes | Local | No | - | - |
| Comment: Done at the municipal lev | el but the County | y Parks is developing o | one for ash trees | (EABs) | |
| Transportation Plan | Yes | County | No | - | - |
| Comment: This is an element in the C | County's Master | Plan | | | |
| Agriculture Plan | Yes | County | No | - | - |
| Comment: Comprehensive Farmland | l Preservation P | lan – being updated in | 2020 | | |
| Climate Action Plan | No | - | - | - | - |
| Comment: | | | | | |
| Tourism Plan | No | County | No | - | - |
| Comment: Part of the Economic Dev | elopment Plan ti | hat is being developed | • | | |
| Business Development Plan | No | County | No | - | - |
| Comment: Part of the Economic Dev | elopment Plan ti | hat is being developed | | • | - |
| Other | Yes | County | No | - | - |
| Comment: • The County developed pla | ns for certain we | utersheds in the county | v. This includes | I Jackson Brook, Troy Bro | ok, and McCule Brook |
| Response/Recovery Planning | | | | | |
| Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP) | Yes | County | Yes | - | - |
| Comment: County EOP updated in April 2018; OEM is responsible for maintaining and updating | | | | | |
| Threat & Hazard Identification & Risk Assessment (THIRA) | Yes | County | No | - | - |
| Comment: September 2014; OEM is | responsible for 1 | naintaining and updat | ring | | |
| Post-Disaster Recovery Plan | Yes | County | No | - | - |
| Comment: Part of the County's EOP | (April 2018) | | | • | |
| Continuity of Operations Plan | Yes | County | No | - | - |
| Comment: October 2012; OEM Is re | sponsible for ma | intaining and updatin | g | • | |
| Public Health Plan | Yes | County | No | | |



| | | | | Has the HMP been int years? If y | |
|---|----------------------------------|---|--------------------------------|---|---|
| | Do you have this? (Yes/No) | Authority that enforces (Federal, State, Regional, County, Local) | State Mandated / Allowed | If yes- how? Describe in comments | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| Comment: Public Health - public health nursing portion and REHS portion and health officers portion (Practice Standards); ESF in the County EOP; Pandemic Flu Plan; Regional POD Plans . HAZMAT plan is part of the state plan | | | | | |
| Other | Yes | County | No | - | - |
| Comment: | | | | | |

- Mass Evacuation
- School Emergency Response
- Reunification Plan
- Code Blue Plan
- Passaic River Climate Resilience Plan
- Sheltering Plan (Medical Needs and County)
- Long Term Care
- Mass Causality
- Medical Needs Sheltering

Table 9.1-3. Development and Permitting Capability

| Criterion | Response |
|---|--|
| Does your jurisdiction issue development permits? - If no, who does? If yes, which department? | No – done at the municipal level but County Engineering requires right-of- way occupancy permits |
| Does your jurisdiction have the ability to track permits by hazard area? | No |
| Does your jurisdiction have a buildable lands inventory? -If yes, please describe brieflyIf no, please quantitatively describe the level of buildout in the jurisdiction. | Yes – part of the wastewater management plan (vacant lands inventory – and identified which were developable). Majority of the development going on in the County is redevelopment. |

ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to Morris County.

Table 9.1-4. Administrative and Technical Capabilities

| Staff/Personnel Resource | Available? | Department/Agency/Position |
|----------------------------------|------------|---|
| Administrative Capability | | |
| Planning Board | Yes | Morris County Planning Board - assists municipalities by providing a regional framework for municipal planning so that each municipal master plan can be developed as a logical part of its surrounding area; advises Board of Freeholders on planning matters. |
| Mitigation Planning Committee | Yes | Morris County Flood Mitigation Committee |
| Environmental Board / Commission | Yes | Morris County Park Commission – oversees the County park system (over 13,000 acres); Morris County Flood Mitigation Committee; Soil Conservation District (noncounty) |
| Open Space Board / Committee | Yes | Morris County Open Space Committee - reviews, prioritizes and makes recommendations to the Morris County Board of Chosen Freeholders on the funding of projects which fall into the municipal/qualified |



| Staff/Personnel Resource Av | vailable? | Department/Agency/Position |
|---|-----------|--|
| | | charitable conservancy category; Morris County Park |
| Economic Development Commission / Committee | Yes | Commission Morris County Economic Development Corporation is a division of the Morris County Chamber of Commerce, serves as an ally for businesses seeking a new location as well as for those currently operating in the county. It is a partnership of government, businesses and allies dedicated to growing the economy of Morris County, New Jersey through aggressive and effective programs and services that result in business attraction, creation, retention, expansion and transition. |
| Warning Systems / Services (reverse 911, outdoor warning signals) | | AlertMorris allows residents to get emergency notifications through phone, email, text, or social media. Residents can sign-up online. Through this system, Morris County can relay information related to major storms or other emergencies taking place in the County. The County also uses the Rave Notification System where the County sends notification to municipality and they will issue; but if its countywide then the county will send out. The County also uses social media (Facebook and Twitter) to provide information to residents. |
| Maintenance program to reduce risk | Yes | Through Buildings and Grounds, Engineering and Transportation, and Roads/Bridges/Shade Tree |
| Mutual aid agreements | Yes | There are no inter-county mutual aid agreements; there are intra-county agreements among the County and municipalities (Health Departments, Road Departments, etc.). The County is also part of Jersey City/Newark UASI which enhances regional preparedness in the counties of Bergen, Essex, Hudson, Middlesex, Morris, Passaic, and Union. |
| Technical/Staffing Capability | | |
| Planners or engineers with knowledge of land development and land management practices | Yes | Morris County Planning & Preservation |
| Engineers or professionals trained in building or infrastructure construction practices | Yes | Morris County Public Works, Division of Engineering & Transportation, Building Construction and Reconstruction, Road and Bridge Division |
| Planners or engineers with an understanding of natural hazards | Yes | Morris County Planning & Preservation |
| Staff with training in benefit/cost analysis | Yes | Morris County Planning & Preservation |
| Staff with training in green infrastructure | Yes | Parks – Natural Resources Team, Horticultural |
| Staff with education/knowledge/training in low impact development | Yes | Morris County Planning & Preservation |
| Surveyor | No | Private consultant as needed |
| Stormwater engineer | Yes | Public Works & County Engineering Department – The Engineer's scope is very limited to storm water facilities and impacts along County roads and properties |
| Personnel skilled or trained in GIS applications | Yes | Department of Information Technology – Morris County GIS |
| applications | | Public Works & County Engineering Department – The |
| Local or state water quality professional | Yes | storm water engineer also reviews water quality as they are both a NJDEP requirement of any storm water mitigation. |
| | Yes | are both a NJDEP requirement of any storm water |
| Local or state water quality professional Scientist familiar with natural hazards in local | | are both a NJDEP requirement of any storm water |



| Staff/Personnel Resource | Available? | Department/Agency/Position |
|--------------------------|------------|---|
| Environmental specialist | Yes | Park Commission, Mosquito Control, OEM, Health Mgt, HazMat |
| Grant writers | No | - |
| Resilience Officer | Yes | Morris County Planning & Preservation |
| Other | No | - |

FISCAL CAPABILITY

The table below summarizes financial resources available to Morris County.

Table 9.1-5. Fiscal Capabilities

| Financial Resource | Accessible or Eligible to Use? |
|--|--------------------------------|
| Community Development Block Grants (CDBG, CDBG-DR) | Yes |
| Capital Improvements Project Funding | Yes |
| Authority to Levy Taxes for Specific Purposes | Yes |
| User Fees for Water, Sewer, Gas or Electric Service | No |
| Incur Debt through General Obligation Bonds | Yes |
| Incur Debt through Special Tax Bonds | Yes |
| Incur Debt through Private Activity Bonds | No |
| Withhold Public Expenditures in Hazard-Prone Areas | No |
| State-Sponsored Grant Programs | Yes |
| Development Impact Fees for Homebuyers or Developers | No |
| Clean Water Act 319 Grants (Nonpoint Source Pollution) | No |
| Other | Yes |

EDUCATION AND OUTREACH CAPABILITY

The table below summarizes the education and outreach resources available to Morris County.

Table 9.1-6. Education and Outreach Capabilities

| Criterion | Response |
|--|---|
| Do you have a public information officer or communications office? | Yes – Office of Communication and Digital Media |
| Do you have personnel skilled or trained in website development? | Yes – Communication and Digital Media performs all website development and maintenance for all county departments |
| Do you have hazard mitigation information available on your website? • If yes, briefly describe. | OEM - Provides links to the County's HMP, lists NWS warnings Park Commission - Use the website to list when parks are closed and will post signs at the entrances of the parks; some parks are closed during hunting season |
| Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe. | Yes – Facebook and Twitter |
| Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe. | Yes – CRS Users Group |
| Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe. | Yes – weekly county newsletter emails |



| Criterion | Response |
|---|---|
| Do you have any established warning systems for hazard events? • If yes, briefly describe. | AlertMorris allows residents to get emergency notifications through phone, email, text, or social media. Residents can sign-up online. Through this system, Morris County can relay information related to major storms or other emergencies taking place in the County. The County also uses the Rave Notification System where the County sends notification to municipality and they will issue; but if its countywide then the county will send out. The County also uses |
| | social media (Facebook and Twitter) to provide information to residents. |

COMMUNITY CLASSIFICATIONS

The table below summarizes the classifications for community programs available to Morris County.

Table 9.1-7. Community Classifications

| Program | Participating? | Classification | Date Classified |
|--|----------------|----------------|-----------------|
| Community Rating System | N/A | N/A | N/A |
| Building Code Effectiveness Grading Schedule (BCEGS) | N/A | N/A | N/A |
| Public Protection (Fire ISO Protection Class) | N/A | N/A | N/A |
| Storm Ready Certification | No | - | - |
| Firewise Community Classification | No | - | - |
| Sustainable Jersey | No | - | - |

N/A = Not applicable

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 ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the County's rating.

- Does the County have access to resources to determine the possible impacts of climate change upon the municipality? Yes
- Is the administrative supportive of integrating climate change in policies or actions? Yes
- Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the County? Yes

Table 9.1-8. Adaptive Capacity

| Hazard | Adaptive Capacity (Capabilities) - High/Medium/Low |
|---------------------|--|
| Dam Failure | Medium |
| Disease Outbreak | Medium |
| Drought | Medium |
| Earthquake | Medium |
| Extreme Temperature | Medium |



| Hazard | Adaptive Capacity (Capabilities) - High/Medium/Low |
|-----------------------|--|
| Flood | Medium |
| Geologic | Medium |
| Harmful Algal Bloom | Medium |
| Hazardous Substances | Medium |
| Infestation | Medium |
| Severe Weather | Medium |
| Severe Winter Weather | High |
| Wildfire | Medium |

Notes:

Low = jurisdiction does not have the capability to effectively respond, which leads to increase in vulnerability

Medium = minimum requirements are in place; moderate capabilities; mitigation measures are identified but not implemented widespread; jurisdiction can recover but needs outside resources

High = jurisdiction has the capability to effectively respond, plans/policies exceed minimum requirements; deployable resources all of which decrease vulnerability

NATIONAL FLOOD INSURANCE PROGRAM

Management and regulation of the regulatory floodplains are done at the local level. Refer to the individual jurisdictional annexes for details on the NFIP for each municipality.

ADDITIONAL AREAS OF EXISTING INTEGRATION

The following describes the areas of integration in Morris County.

- Morris County Division of Mosquito Control has the goal of reducing the number of nuisance and disease transmitting mosquitoes within the County. It employs a number of techniques to provide this service to residents with minimal impact on the environment. The program conducts extensive monitoring (mosquito surveillance) to determine the number and types (species) of mosquitoes present before any work is carried out. Operations of the Division includes inspection, control, water management, and education and public awareness.
 - Inspection The Division conducts surveillance and inspection programs to monitor mosquito
 populations. When necessary, staff implement the appropriate control measures. Since 2000, the
 Division has implemented a comprehensive monitoring, testing, and control program to contain
 West Nile Virus.
 - Control If surveillance shows the need for control measures, the Division will start control
 measures. They typically act against the aquatic stage and only control adult mosquitoes when they
 are extremely abundant.
 - Water Management The Division is responsible for brush cutting, the removal of blockages, and hand restoration of drainage ditches. They also assist municipalities and other County agencies with tree removal if they are creating a mosquito issue. This program will also work on restoring ponds, storm retention facilities, and drainage systems as needed.
 - Education and Public Awareness The Division has an extensive education and awareness program. They provide information handouts, attend public events, and give presentations to groups and schools.
 - o After flooding events in the County, Mosquito Control will conduct site reconnaissance and treat areas to prevent the growth of the mosquito population.
- Division of Engineering & Transportation The division secures funding for road, bridge, railroad, bicycle, and pedestrian projects. It serves the county through regional transportation planning, design,



implementation, and coordination of various modes of transportation. The engineering staff is responsible for design, construction, reconstruction, and paving of county roads, as well as bridge and culvert construction, drainage, and repair specifications. Transportation planning staff conduct studies and coordinate planning efforts with state agencies, municipalities, county departments, and the North Jersey Transportation Planning Authority, and supervise three county-owned freight railroads.

- Division of Road and Bridge Maintains, reconstructs, and repairs the 300-mile county-own roads and the County's 1,000 bridges and culverts.
- Shade Tree Management Protects and cares for trees and ornamental plant life along the rights-of-way
 of the country road system. Operates a leaf mulch program and nursery to provide trees for roadside planting.
 Provides consultation to municipalities and non-profit groups.
- Morris County Municipal Utilities Authority (MUA) The Morris County MUA is responsible for solid waste management, recycling services, and water supply planning. Operates transfer station system, household hazardous waste disposal facility and programs, recycling center, curbside recycling collection program, and administers regional composting facilities. Develops and operates the county well fields and potable water distribution system.
- Southeast Morris County Municipal Utilities Authority (SMCMUA) -The SMCMUA provides high quality drinking water to customers in Morristown, Morris Township, Morris Plains and Hanover Township with some service in Mendham Township and Harding Township, and to certain customers and municipalities outside its District in Morris County, New Jersey. The 2018 America's Water Infrastructure Act will require SMCMUA to conduct a Risk and Resilience project to be completed by December 2020. In parallel, and subsequent to this, SMCMUA is also required to complete an updated Incident Response Plan.
- Morris County Community Rating System (CRS) Users Group Morris County encourages municipalities to participate in this group to advance their knowledge and understanding of the CRS program. The group meets quarterly, shares information and best practices and maintains continuous dialogue to maintain and improve ratings.
- Morris County Historic Preservation Trust Fund This fund was established by the Morris County Board of Chosen Freeholders to help support the preservation of the County's abundance of historic resources. The fund was created in November 2002 and authorizes the Freeholders to allow historic preservation funding under the Open Space Trust Fund, as permitted under state legislation. The Fund considers grants for the acquisition, stabilization, rehabilitation, restoration or preservation of historic resources by municipalities, qualified non-profits and the County. In 2019, the Board of Chosen Freeholders approved \$2.9 million in county grants to help preserve, restore, or protect 26 historic sites in 18 municipalities across Morris County.
- Farmland Preservation Program This program began in 1987 after the permanent preservation of the Cupo Farm in Washington Township. Since 1987, over 8,000 acres of farmland have been permanently preserved in Morris County. As part of the County's Preservation Trust Fund, established in 1992, 25% of the fund each year is allocated for farmland preservation purposes.
- Flood Mitigation Program The Preservation Trust Fund provides funding for the Flood Mitigation Program. Through this, Morris County provides grant funding to municipalities to purchase floodprone homes and land. Once acquired, the homes are demolished and the land is deed restricted as permanently preserved open space. This fund can also be used as a local match for FEMA funded flood mitigation acquisitions. As of May 2020, 77 homes have been acquired through this program (\$8.7 million).
 - Boonton Town
 - Denville Township
 - Lincoln Park Borough
 - Morristown



- Parsippany-Troy Hills Township
- Long Hill Township
- Pequannock Township
- Riverdale Borough

Advisory Boards and Committees

- o **Flood Mitigation Committee** reviews municipal applications for the acquisition and permanent preservation of flood-prone residential properties. The Committee then makes funding recommendations to the Board of Chosen Freeholders. Meetings are held on a monthly basis.
- Historic Preservation Trust Fund Review Board reviews, prioritizes and make recommendations
 to the Morris County Board of Chosen Freeholders on the funding of historic preservation projects
 under the Historic Preservation Trust Fund.
- Open Space Trust Fund Committee reviews municipal and non-profit land trust applications for funding the permanent preservation of open space. Funding recommendations are provided to the Board of Chosen Freeholders.

9.1.5 Hazard Event History Specific to the Jurisdiction

Morris County has a history of hazard events, as detailed in Volume I, Section 4 (Risk Assessment) of this plan.

9.1.6 Jurisdiction-Specific Vulnerabilities and Hazard ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazards of greatest concern and risk to the County. For additional vulnerability information relevant to this jurisdiction, refer to Section 4 (Risk Assessment).

REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the County. These properties are not owned by the County; therefore, the County has no jurisdiction to mitigate however supports local mitigation projects to address repetitive flooding. Refer to Section 4.3.6 (Flood) for more detailed information on NFIP statistics by municipality, and the municipal annexes in Sections 9.2 through 9.40 for details on the number of mitigated properties in each municipality.

- Number of repetitive loss (RL) properties: 901
- Number of severe repetitive loss (SRL) properties: 196

CRITICAL FACILITIES

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

Table 9.1-9. Potential Flood Losses to Critical Facilities and Lifelines

| | | Ex | | |
|--------------------|------------------|----------|------------|----------------------|
| Name | Type | 1% Event | 0.2% Event | Status of Mitigation |
| Long Valley Garage | County- owned | | X | |



ADDITIONAL IDENTIFIED VULNERABILITIES

The County has not identified additional vulnerabilities at this time.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps have been generated for the County that illustrate the probable areas impacted. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes (Section 4.3).

HAZARD RANKING

The hazard ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; 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 plan participant may have differing degrees of risk exposure and vulnerability compared to Hudson County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential hazards across Hudson County. The Steering Committee and Planning Committee reviewed the Hudson County hazard ranking table, as well as its individual results, to reflect the relative risk of the hazards of concern to the County. During the review of the hazard ranking, the calculated rankings were adjusted to incorporate the perceived adaptive capacity with respect to the relevant hazard.

During the review of the hazard ranking, the Steering Committee agreed that flood should be a high-ranked hazard. It was noted as a medium-ranked hazard in 2015; however, flood impacts continue to be high and with the addition of climate change the Steering Committee agreed high is the best ranking to reflect risk across the County.

Table 9.1-10. Morris County Hazard Ranking Input

| Dam Failure | Disease Outbreak | Drought | Earthquake | Extreme Temperature | Flood |
|-------------|---------------------|---------|------------|------------------------|-------|
| Medium | High | Medium | Medium | Medium | High |

| Geological Hazards | Harmful Algal Bloom | Hazardous Substances | Infestation | Severe Weather | Severe Winter Weather | Wildfire |
|-----------------------|---------------------------|-------------------------|-------------|-------------------|-----------------------------|----------|
| Medium | Low | High | Medium | High | High | Medium |

9.1.7 Mitigation Strategy and Prioritization

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



PAST MITIGATION INITIATIVE STATUS

The following table summarizes the jurisdiction's progress on their mitigation strategy identified in the 2015 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 may also be found under 'Capability Assessment' presented previously in this annex.

Table 9.1-11. Status of Previous HMP Mitigation Actions

| | | | Status (In Progress, No | | ne 2020 HMP late? |
|-------------------------|---|-------------------|--|-----------------|-------------------------------|
| 2015 | Action Number Action Description | Responsible Party | Progress, Ongoing Capability, or Completed) | Check if Yes | Enter 2020 HMP Action # |
| Morris County - 1 | Collect geologic information on seismic sources and soil conditions to gain an understanding as to what areas in the County are exposed and vulnerable to earthquakes. Develop an inventory of critical facilities that may be vulnerable to earthquake damage. | DP & PW | Ongoing Capability – Included in the County's HMP update | | |
| Morris County - 2 | Collect an inventory of locations where County-owned critical facilities are vulnerable to landslides and develop a database to track the County's vulnerability to landslides. | DP & PW | Ongoing Capability – Included in the County's HMP update | | |
| Morris County - 3 | Using a prioritized list of state, county, and local facilities, coordinate with state effort to survey wind vulnerabilities, based on criteria such as age of the facility, value of operations, etc. | OEM | Ongoing Capability | | |
| Morris County - 4 | Conduct wind risk assessments on a limited number of high-priority facilities that appear to be vulnerable to high winds, including facilities that serve as county emergency shelters during disaster. Assessments will use standard FEMA guidelines, procedures and software, including the wind hazard database. | ОЕМ | Complete - New EOC was constructed and meetings current building codes; county emergency shelter (Mennen Arena) meets FEMA requirements | | |
| Morris County - | Utilize GIS analysis and mapping to identify potential areas of impact related to hazardous material sites. | OHM | Ongoing Capability | | |
| Morris County - 6 | Undertake a survey of County-owned critical facilities to identify and prioritize those that may have structural characteristics that make them vulnerable to excessive snow and ice loads. | DP&PW | Complete - Buildings meet the applicable building codes | | |
| Morris County - 7 | Work with appropriate agencies to identify specific areas that are vulnerable to storm effects, then inventory assets and populations in these areas as the basis for a risk calculation. | OEM | Complete - As part of the 2020 HMP update, all planning partners identified areas that flood outside the floodplain as a result of rain events to assist with identifying drainage problems. | | |
| Morris County - 8 | Undertake more detailed engineering studies of dams that may pose risks to the county, based on additional data collected from state or federal agencies. | DP&PW | Complete - County maintains a list of high hazard dams. NJDEP regulates the high hazard dams | | |
| Morris County - 9 | Conduct detailed risk assessments for dams that appear to have vulnerabilities, | DP&PW | Complete – The Emergency Action Plans include the | | |



| | | | Status (In Progress, No | | he 2020 HMP date? |
|--------------------------|--|-------------------|--|-----------------|-------------------------------|
| 2015 | Action Number Action Description | Responsible Party | Progress, Ongoing Capability, or Completed) | Check if Yes | Enter 2020 HMP Action # |
| | and where there is potential for significant damage or loss of life. | | potential vulnerability of downstream residents. | | |
| Morris County - 10 | Participate in the Emergency Preparedness Conference and workshops. | OEM | Ongoing Capability - Something the county always doing - attend several conferences and workshops each year | | |
| Morris County - 11 | Develop a database inventory of critical facilities countywide (county-, local-, and privately-owned), including fire and police stations, medical facilities, major public buildings important for emergency response and recovery, and critical lifeline transportation and utility nodes such as bridges, water treatment plants, wastewater treatment plants, high voltage electric substations, and hazardous materials facilities. | OEM | Complete / Ongoing - Part of the 2015 HMP update and the critical facility inventory for the 2020 HMP included an update using County data | | |
| Morris County - 12 | Continue working with the State, as well as local jurisdictions, to encourage local cooperation in making Repetitive Loss (RL) (and SRL) property mitigation a high priority, and to offer municipalities technical support in carrying out the requirements of FEMA mitigation programs as well as current information related to RL and SRL properties. | DP&PW | Ongoing Capability - Incorporated into the Planning Department; works with communities to mitigate RL and SRL properties | | |
| Morris County - 13 | Provide outreach and education to municipal OEMs on the plan maintenance of the County HMP and future plan updates. | ОЕМ | Ongoing Capability - Through website, Facebook and twitter | | |
| Morris County - 14 | Conduct municipal and community outreach, workshops and training to increase NFIP knowledge and opportunities | DP&PW OEM | Ongoing Capability - Incorporated into the Planning Department | | |
| Morris County - 15 | Encourage municipalities to participate in the CRS program, including potentially setting up CRS site visits and/or workshops for interested jurisdictions. | DP&PW | Ongoing Capability | | |
| Morris County - 16 | Develop a simple GIS platform, or build upon an existing platform, to maintain and analyze critical facilities inventories and information about hazards. | OEM | Complete / Ongoing - Done through GIS department and they maintain and update as appropriate | | |
| Morris County - 17 | Coordinate with state efforts to develop and implement a detailed severe repetitive loss mitigation strategy that will qualify the county and municipalities for additional floodplain management mitigation funding. | DP&PW | Ongoing Capability | | |
| Morris County - 18 | Integrate hazard mitigation priorities into Capital Improvement Plans, transportation planning, and other capital planning | DP&PW | Ongoing Capability | | |
| Morris County - 19 | Jaqui Mill Pond Dam conduct inspection/risk assessment. | Park Commission | No progress – remove from HMP; this is a County-owned high- hazard dam that the County maintains and updates the EAP | | |
| Morris County - 20 | Dam EAP development for five Class III Dams in Morris County. | Park Commission | Complete - County maintains EAPs for the Class III dams | | |



| | | | Status (In Progress, No | | he 2020 HMP date? |
|--------------------------|---|-------------------|---|-----------------|-------------------------------|
| 2015 | Action Number Action Description | Responsible Party | Progress, Ongoing Capability, or Completed) | Check if Yes | Enter 2020 HMP Action # |
| Morris County - 21 | Prepare classification reports to NJDEP for the following Class III dams: Hedden Park, Hedden Reservoir, Doland Tract and Pyramid Mountain | Park Commission | Ongoing Capability - Class II dams inspected every 2 years Class II dams inspected every 4 years County has outside contractor to do the inspections which are then sent to NJDEP | res | |
| Morris County - 22 | Work with the Office of Health Management to engage additional agencies for input regarding traditional public health discussions, such as epidemiology or vaccinations. | ОНМ | Ongoing Capability | | |
| Morris County - 23 | Develop Memorandums of Understanding with national chain pharmaceutical companies to establish a resource for medications during disaster | ОНМ | In Progress - Working with a local pharmacy to have them be part of the Medical Reserve Corps - looking to purchase pill counters and have pharmacist on board to help with dispensing of emergency response medications; form relationship with local pharmacies | | |
| Morris County - 24 | Coordinate with municipalities to remove downed vegetative debris within a timely manner and work with Health Management to mitigate against potential infectious disease outbreaks that may occur as a result of uprooted trees. | DP&PW | Ongoing Capability – Mosquito Control will treat as necessary. As trees are uprooted, the area under the root system is a good habitat for mosquitoes | | |
| Morris County - 25 | Develop and conduct public outreach about Lyme Disease. | ОНМ | Ongoing Capability - Something the County is already doing - information is on their website; provide information to residents and communities | | |
| Morris County - 26 | Work with GIS and Fire to develop a database of hydrants throughout Morris County | OEM | Complete | | |
| Morris County - 27 | Conduct an assessment of currently identified county shelter locations to ensure Americans with Disabilities Act compliance. | ОЕМ, ОНМ | Complete - the only county shelter is Mennen Arena which is ADA compliant | | |
| Morris County - 28 | Work with municipalities to conduct outreach to local colleges and universities to increase the volunteer pool for CERT and MRC. | ОЕМ ОНМ | Ongoing Capability | | |
| Morris County - 29 | Develop a communication strategy for specialized messaging for populations with disabilities or access/functional needs. | ОЕМ | Ongoing Capability - The county currently has a system in place and maintains/updates as appropriate | | |
| Morris County - 30 | Develop a list of warming and cooling centers throughout the County | OEM DHS | Complete / Ongoing – every time there is an extreme temperature event, the list is updated | | |



| | | | Status (In Progress, No | | ne 2020 HMP late? |
|---|---|-------------------|--|-----------------|-------------------------------|
| 2015 Action Number Action Description Morris Work with Dark Commission to identify | | Responsible Party | Progress, Ongoing Capability, or Completed) | Check if Yes | Enter 2020 HMP Action # |
| Morris County - 31 | Work with Park Commission to identify and remove harmful insect colonies from County operated park lands. | Park Commission | Ongoing Capability – the Park Commission has an Emerald Ash Borer Response Program | | |
| Morris County - 32 | Flanders Adult Training Center (ATC) Backup Power: Install natural gas backup power to ARC Morris Flanders ATC facility (Loretta and Julius Krauklis Center). | ARC Morris | Discontinue - This is not a county-related action; this should be a Mt Olive action | | |

ARC American Red Cross

DHS Department of Human Services
DP&PW Department of Public Works
EAP Emergency Action Plan
OEM Office of Emergency Management

OHM Office of Health Management

OHM Office of Health Management

PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

Morris County participated in a risk assessment workshop in November 2019 in which detailed information was provided about assets exposed and vulnerable to the identified hazards of concern. Morris County participated in a mitigation action workshop in March 2020 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Morris County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments; and 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). Section 6 (Mitigation Strategy) and Appendix F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.2 12 summarizes the comprehensive-range of specific mitigation initiatives Morris County would like to pursue in the future to reduce the effects of hazards. Some of these initiatives might be previous actions carried forward for this HMP update. Initiatives are dependent upon available funding (grants and local match availability) and can 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 (Mitigation Strategy), 14 criteria were used to evaluate each action, including an evaluation of the benefits and costs. For each new mitigation action, a numeric rank was assigned (-1, 0, or 1) for each of the 14 evaluation criteria. The results of this evaluation, in addition to input from the County, were then used to prioritize the mitigation initiatives as 'High', 'Medium', or 'Low.' Table 9.2-13 summarizes the evaluation of each mitigation initiative and the resulting priority, listed by Action Number.



Table 9.1-12. Proposed Hazard Mitigation Initiatives and Associated Priority

| Initiative Number | Mitigation Initiative Name | Description of the Problem and Solution | New or Existing Assets? | Hazard(s) to be Mitigated | Goals Met | <u>Lead</u> and Support Agencies | Potential Funding Sources | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|-----------------------------------|---|---|-------------------------------|---------------------------------|---------------|---|---|---|-------------------|------------------|----------|------------------------|------------------|
| 2020- MORRIS COUNTY- 001 | Countywide Stormwater Management Plan | Problem: Morris County does not have a countywide stormwater management plan. The County also does not have a system in place that identifies the location of stormwater systems and their outflows in the county. The systems can lead to flooding Solution: Develop a countywide stormwater management plan. The plan will include a study to identify all county, local and state stormwater management systems and their outflows because it impacts flooding in the county and downstream. This will also help with local and county emergency services to identify floodprone areas and aid in identifying where water goes in the event of a HAZMAT incident. | New and Existing | Severe Weather, Flood | 3, 4, 5 | Planning and Public Safety, Public Works, Health Management | FEMA PDM, County Budget | Identifies stormwater systems throughout County, identifies ways to reduce flooding, increase water quality | \$50,000+ | Within 2 years | High | LPR, NSP | PR, NR |
| 2020- MORRIS COUNTY- 002 | User-Friendly Countywide Flood Map Set | Problem: The current flood maps for the County are inconsistent – they are updated, reviewed, and adopted at different times. This can be confusing for residents to determine whether or not they are located in a floodplain and whether or not they are required to have flood insurance on their structure. Solution: Develop a user-friendly flood map set for municipalities and residents to refer to. The maps will include SFHA and areas subject to stormwater flooding. This will allow an easy way to determine which areas throughout the County are at flood risk. | New and Existing | Flood, Severe Weather | All | Planning, GIS | County Budget | Provides resources for residents to understand flooding and where it floods | \$50,000+ | Within 3 years | High | LPR, EAP | PR, PI, PP |
| 2020- MORRIS COUNTY- 003 | Backup Power Source for Mennen Arena | Problem: Mennen Arena, located at 161 East Hanover Ave. in Morris Township, serves as the Morris County shelter. While the arena has the appropriate electrical equipment for a generator, the arena does not | Existing | All | 1, 2, 3, 5 | Parks Commission, Public Safety | FEMA HMGP or PDM, County Budget for local match | Continuity of operations, shelter facility for residents | \$75,000 | Within 1 year | High | SIP | PP, ES |



| Initiative Number | Mitigation Initiative Name | Description of the Problem and Solution | New or Existing Assets? | Hazard(s) to be Mitigated | Goals Met | <u>Lead</u> and Support Agencies | Potential Funding Sources | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|-----------------------------------|--|---|-------------------------------|---|---------------|---|---------------------------------|--|-------------------|----------------|----------|------------------------|-----------------|
| | | have a generator. In the event of a power outage, the arena cannot be used as a proper shelter for residents. Solution: Determine the proper size generator to provide power to Mennen Arena. Once identified, purchase the generator and install. | | | | | | | | | | | |
| 2020- MORRIS COUNTY- 004 | Emerging Diseases Education and Outreach | Problem: The County Office of Health Management works to promote public health, to prevent the spread of disease, and to protect the environment, through awareness, compliance, education, training, and emergency response. They provide information on their website, attend public events, and work with municipalities. Due to the everchanging environment of the types of emerging diseases impacted the County, the County does not have information available for those diseases (e.g. Ebola, new mosquitoborne and tick-borne diseases, etc.). Solution: Develop public outreach materials for emerging diseases. Diseases will include, but not limited to, Zika, Ebola, Chikungunya, and COVID-19. This will include handouts at municipal halls, information on the county and municipal websites, and presentations at schools and municipal meetings. Resources will also be developed for emergency responders and health care workers. | N/A | Disease Outbreak | 1, 2, 3, 5 | Office of Health Management | County Budget | Increase awareness throughout county; preparedness of potential diseases | \$25,000+ | Within 2 years | High | EAP | PI, ES |
| 2020- MORRIS COUNTY- 005 | Structural Improvements at Highland Woods and Picatinny Tanks | Problem: After the tank inspection, 2 out of 15 tanks in the system located in Morris Township had broken rafters. In the event of a major snow storm, the roofs may collapse. Solution: Roof rafters at both the tanks need to be repaired or replaced. | Existing | Severe Weather, Severe Winter Weather | 2, 3, 5 | Southeast Morris County Municipal Utilities Authority | FEMA HMGP | Reduce risk of water loss; protect infrastructure | \$1 million | 4 years | High | SIP | PP, ES |
| 2020- MORRIS | | Problem : Currently no backup power supply at the mentioned sites | Existing | All | 1, 2, 3, 5 | Southeast Morris County | FEMA HMGP | Continuity of operations | \$1.5 million | 1 year | High | SIP | PP, ES |



| Initiative Number | Mitigation Initiative Name | Description of the Problem and Solution | New or Existing Assets? | Hazard(s) to be Mitigated | Goals Met | <u>Lead</u> and Support Agencies | Potential Funding Sources | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|-----------------------------------|--|--|-------------------------------|---------------------------------|---------------|---|---|--|-------------------|-----------------|----------|------------------------|------------------|
| COUNTY- 006 | Backup Power at Various Sites | below in Hanover Township. Potential power loss at major water supply sites in the system in the event of a natural hazard like flood or storm. Solution: Backup power generators required at the following sites: Wing Well, Todd Well, Black Brook Wells (all sites located in Hanover Township) | | | | Municipal Utilities Authority | | | | | | | |
| 2020- MORRIS COUNTY- 007 | Clyde Potts Dam Spillway Improvement | Problem: The Clyde Potts Dam in Mendham Township has visible cracks observed in the dam spillway. Structural damage may result in flooding. Residential areas downstream of dam may get flooded. This is a high hazard dam with structural damage to the spillway which is causing capacity concerns. Solution: NJDEP Dam Safety Division has been currently engaged in a regional study for design flood analysis. Based on the results of the study, site specific study will be performed for the Clyde Potts Dam. The site specific study may require the size of the spillway to be evaluated and upgraded. The spillway design work is anticipated to be performed within 4 to 5 years. | Existing | Dam Failure, Flood | 2, 3, 5 | Southeast Morris County Municipal Utilities Authority | NJDEP Dam Restoration & Inland Water Projects Loan Program, FEMA High Hazard Potential Dam Grant Program | Spillway repair will reduce risk of dam failure and potential loss of life/ property for areas downstream | \$2 million | 4 to 5 years | High | SIP | PP |
| 2020- MORRIS COUNTY- 008 | Black Brook Wells and Treatment Plant Upgrade | Problem: Two groundwater wells and a treatment plant building are below flood elevation in Hanover Township. Loss of water service may happen in the event of a major flood. Solution: Upgrade of the wells and treatment plant buildings to raise them above the flood elevation. | Existing | Flood, Severe Weather | 2, 3, 5 | Southeast Morris County Municipal Utilities Authority | EPA Clean Water State Revolving Fund, CDBG, NJDEP Environmental Infrastructure Financing Program | Raising the structure levels will eliminate risk of water service loss during a major flood. | \$3 million | 2 to 3 years | High | SIP | PP |
| 2020- MORRIS COUNTY- 009 | HAZMAT Access Points | Problem: There is currently a lack of access points to rivers in the County. During a HAZMAT incident, the HAZMAT team is unable to add booms to areas of | Existing | Hazardous Substances | 1, 2, 3, 5 | Morris County Office of Health Management, | County Budget | Identifies access points to assist with HAZMAT response | \$20,000 | Within 2 years | High | LPR, EAP | PR, PI, ES |



| ative nber | Mitigation Initiative Name | Description of the Problem and Solution | New or Existing Assets? | Hazard(s) to be Mitigated | Goals Met | <u>Lead</u> and Support Agencies | Potential Funding Sources | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|---------------|----------------------------------|--|-------------------------------|---------------------------------|--------------|--|---------------------------------|-----------------------|-------------------|----------|----------|------------------------|-----------------|
| | | waterbodies because it is unknown as to where the access points are. | | | | Environmental Services | | | | | | | |
| | | Solution: Identify pre-determined access points to use during a HAZMAT incident to install proper equipment. | | | | | | | | | | | |

Notes:

Acronyms and Abbreviations:

CAV Community Assistance Visit CRS Community Rating System DPW Department of Public Works

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 PDM Pre-Disaster Mitigation Grant 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 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. 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 preserve or restore the functions of natural systems. 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. 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 9.1-13. Summary of Action Evaluation and Action Priority

| Initiative Number | Mitigation Initiative 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 |
|-----------------------------------|---|-------------|------------------------|--------------------|-----------|-----------|-------|--------|---------------|--------|----------------|--------------|----------|-----------------|-------------------------------|-------|---------------------------|
| 2020- MORRIS COUNTY- 001 | Countywide Stormwater Management Plan | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 10 | High |
| 2020- MORRIS COUNTY- 002 | User-Friendly Countywide Flood Map Set | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 12 | High |
| 2020- MORRIS COUNTY- 003 | Backup Power Source for Mennen Arena | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 11 | High |
| 2020- MORRIS COUNTY- 004 | Emerging Diseases Education and Outreach | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 11 | High |
| 2020- MORRIS COUNTY- 005 | Structural Improvements at Highland Woods and Picatinny Tanks | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 12 | High |
| 2020- MORRIS COUNTY- 006 | Backup Power at Various Sites | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 11 | High |
| 2020- MORRIS COUNTY- 007 | Clyde Potts Dam Spillway Improvement | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 12 | High |
| 2020- MORRIS COUNTY- 008 | Black Brook Wells and Treatment Plant Upgrade | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 11 | High |
| 2020- MORRIS COUNTY- 009 | HAZMAT Access Points | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 10 | High |

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.



Table 9.1-14. Analysis of Mitigation Actions by Hazard and Category

| Hazard | Prevention | Property Protection | Public Education and Awareness | Natural Resource Protection | Emergency Services | Structural Projects | Climate Resilient | Community Capacity Building |
|---------------------------------|------------|------------------------------------|---|-----------------------------------|-----------------------|---------------------------|----------------------|-----------------------------------|
| Dam Failure | | -003, -006, -007 | | | -003, -006 | -003, -006, -007 | | |
| Disease Outbreak | | -003, -006 | -004 | | -003, -004, - 006 | -003, -006 | | |
| Drought | | -003, -006 | | | -003, -006 | -003, -006 | | |
| Earthquake | | -003, -006 | | | -003, -006 | -003, -006 | | |
| Extreme Temperature | | -003, -006 | | | -003, -006 | -003, -006 | | |
| Flood | -001, -002 | -002, -003, -006, -007, -008 | -001, -002 | -001 | -003, -006 | -003, -006, -007, -008 | | |
| Geological Hazards | | -003, -006 | | | -003, -006 | -003, -006 | | |
| Harmful Algal Bloom (new) | | -003, -006 | | | -003, -006 | -003, -006 | | |
| Hazardous Substances | -009 | -003, -006 | -009 | | -003, -006, - 009 | -003, -006 | | |
| Infestation | | -003, -006 | | | -003, -006 | -003, -006 | | |
| Severe Weather | -001, -002 | -002, -003, -005, -006, -008 | -001, -002 | -001 | -003, -005, - 006 | -003, -005, -006, -008 | | |
| Severe Winter Weather | | -003, -005, -006 | | | -003, -005, - 006 | -003, -005, -006 | | |
| Wildfire | | -003, -006 | | | -003, -006 | -003, -006 | | |

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

9.1.8 Staff and Local Stakeholder Involvement in Annex Development

Morris County followed the planning process described in Section 2 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. 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 who participated and in what capacity. 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 9.1-15. Contributors to the Annex

| Entity | Entity | Method of Participation |
|----------------|---|---|
| Jeff Paul | Morris County OEM | Attended meetings; provided information to update the annex |
| Keith Heimburg | Morris County OEM | Attended meetings; provided information to update the annex |
| Cindie Bella | Morris County Office of Health Management | Attended meetings; provided information to update the annex |
| Craig Gross | Morris County Office of Health Management | Attended meetings; provided information to update the annex |
| Kris McMorland | Morris County Mosquito Control Division | Attended meetings; provided information to update the annex |



| Entity | Entity | Method of Participation | | |
|-------------------|---|---|--|--|
| Christine Marion | Morris County Planning & Preservation | Attended meetings; provided information to update the annex | | |
| Joe Barilla | Morris County Planning & Preservation | Attended meetings; provided information to update the annex | | |
| Virginia Michelin | Morris County Planning & Preservation | Attended meetings; provided information to update the annex | | |
| Tim Rack | Morris County Park Commission | Attended meetings; provided information to update the annex | | |
| Zehra Karim | Southeast Morris County Municipal Utilities Authority | Attended meetings; provided information to update the annex | | |
| Jeff Elam | Southeast Morris County Municipal Utilities Authority | Attended meetings; provided information to update the annex | | |



| нянер | A | ction W | orksheet | | | | | | |
|---|---|----------|--|---|--|--|--|--|--|
| Project Name: | Countywide Stormw | | | | | | | | |
| Project Number: | 2020-MORRIS COUN | | | | | | | | |
| Project Number: | | | novohility | | | | | | |
| Y 16 > 40 | Risk / Vulnerability | | | | | | | | |
| Hazard(s) of Concern: | Severe Weather, Floo | | | | | | | | |
| Description of the Problem: | Morris County does not have a countywide stormwater management plan. The County also does not have a system in place that identifies the location of stormwater systems and their outflows in the county. The systems can lead to flooding. | | | | | | | | |
| Action or Project Intended for Implementation | | | | | | | | | |
| Description of the Solution: | | | | | | | | | |
| Is this project related to a (Lifeline? | Critical Facility or | Yes | □ No ⊠ | | | | | | |
| Level of Protection: | N/A | | Estimated Benefits (losses avoided): | Identifies stormwater systems throughout County, identifies ways to reduce flooding, increase water quality | | | | | |
| Useful Life: | N/A | | Goals Met: | 3, 4, 5 | | | | | |
| Estimated Cost: | \$50,000+ | | Mitigation Action Type: | LPR, NSP | | | | | |
| | Plan | for Imp | lementation | | | | | | |
| Prioritization: | High | | Desired Timeframe for Implementation: | Within 2 years | | | | | |
| Estimated Time Required for Project Implementation: | With 6 months of rec funds | ceiving | Potential Funding Sources: | FEMA PDM, County Budget | | | | | |
| Responsible Organization: | Planning and Public Public Works, Health Management | 1 | Local Planning Mechanisms to be Used in Implementation if any: | Hazard Mitigation | | | | | |
| | | Consid | ered (including No Action) | Production | | | | | |
| | Action No Action | | Estimated Cost \$0 | Evaluation Current problem continues | | | | | |
| Alternatives: | Rely on the municip and state to provid information to the C | e the | \$0 | Might not receive accurate information; sources could have different information | | | | | |
| | Upgrade all stormwate systems in the County | | \$10 million+ | Costly; not feasible; long- term project | | | | | |
| | Progress Re | port (fo | r plan maintenance) | | | | | | |
| Date of Status Report: | | | | | | | | | |
| Report of Progress: | | | | | | | | | |
| Update Evaluation of the Problem and/or Solution: | | | | | | | | | |



| ASHED | | |
|-------------------------------|----------------------------|---|
| | Acti | ion Worksheet |
| Project Name: | Countywide Stormwate | er Management Plan |
| Project Number: | 2020-MORRIS COUNTY | 7-001 |
| Criteria | Numeric Rank (-1, 0, 1) | Provide brief rationale for numeric rank when appropriate |
| Life Safety | 1 | Protects residents from stormwater flooding |
| Property Protection | 1 | Increases integrity of stormwater system |
| Cost-Effectiveness | 1 | Benefits outweigh the costs - identifies stormwater systems throughout County, identifies ways to reduce flooding, increase water quality |
| Technical | 1 | |
| Political | 0 | |
| Legal | 0 | |
| Fiscal | 0 | |
| Environmental | 1 | |
| Social | 1 | |
| Administrative | 1 | |
| Multi-Hazard | 1 | Severe Weather, Flood |
| Timeline | 1 | To be completed within 2 years (depends on funding) |
| Agency Champion | 1 | |
| Other Community Objectives | 0 | |
| Total | 10 | |
| Priority (High/Med/Low) | High | |



| Canel | Α | ction W | orksheet | | | | | |
|--|---|--|---|--|--|--|--|--|
| Project Name: | Backup Power Source | | | | | | | |
| Project Number: | 2020-MORRIS COUN | | | | | | | |
| 1 Toject Number: | | | nerability | | | | | |
| Hazard(s) of Concern: | All hazards | | | | | | | |
| inizaru(o) or concerm | | Mennen Arena, located at 161 East Hanover Ave. in Morris Township, serves as the | | | | | | |
| Description of the | Morris County shelter. While the arena has the appropriate electrical equipment for a | | | | | | | |
| Problem: | generator, the arena does not have a generator. In the event of a power outage, the arena cannot be used as a proper shelter for residents. | | | | | | | |
| | | | ded for Implementation | | | | | |
| | ĺ | | • | | | | | |
| Description of the | | | enerator to provide power to M | Iennen Arena. Once | | | | |
| Solution: | identified, purchase | the gene | erator and install. | | | | | |
| Is this project related to a (| Critical Facility or | | | | | | | |
| Lifeline? | | Yes | ⊠ No □ | T | | | | |
| Level of Protection: | N/A | | Estimated Benefits (losses avoided): | Continuity of operations, shelter facility for residents | | | | |
| Haaful I ifo. | 15 mans | | Goals Met: | • | | | | |
| Useful Life: | 15 years | | Goals Met: | 1, 2, 3, 5 | | | | |
| Estimated Cost: | \$75,000 | | Mitigation Action Type: | SIP | | | | |
| Plan for Implementation | | | | | | | | |
| | Plan | for Imp | | | | | | |
| Prioritization: | Plan High | for Imp | Desired Timeframe for | Within 1 year | | | | |
| Estimated Time Required | High | | Desired Timeframe for Implementation: | | | | | |
| Estimated Time Required for Project | | | Desired Timeframe for | Within 1 year FEMA HMGP or PDM, County Budget | | | | |
| Estimated Time Required for Project Implementation: | High With 6 months of rec | ceiving | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning | FEMA HMGP or PDM, County Budget | | | | |
| Estimated Time Required for Project | High With 6 months of rec | ceiving | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used | FEMA HMGP or PDM, | | | | |
| Estimated Time Required for Project Implementation: Responsible | High With 6 months of rec funds Parks Commission, F Safety | ceiving | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning | FEMA HMGP or PDM, County Budget | | | | |
| Estimated Time Required for Project Implementation: Responsible | High With 6 months of received funds Parks Commission, For Safety Three Alternatives Action | ceiving | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation | | | | |
| Estimated Time Required for Project Implementation: Responsible | High With 6 months of rec funds Parks Commission, F Safety Three Alternatives | ceiving | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues | | | | |
| Estimated Time Required for Project Implementation: Responsible | High With 6 months of received funds Parks Commission, For Safety Three Alternatives Action No Action | ceiving Public | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not | | | | |
| Estimated Time Required for Project Implementation: Responsible | High With 6 months of received funds Parks Commission, For Safety Three Alternatives Action | ceiving Public | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: | High With 6 months of received funds Parks Commission, For Safety Three Alternatives Action No Action | ceiving Public | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: | High With 6 months of received funds Parks Commission, For Safety Three Alternatives Action No Action Install solar pan | ceiving Public S Conside | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost \$0 \$15,000+ | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term solutions Not suite for long term solutions; would need | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: | High With 6 months of received funds Parks Commission, For Safety Three Alternatives Action No Action | ceiving Public S Conside | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term solutions Not suite for long term solutions; would need multiple generators to | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: | High With 6 months of received funds Parks Commission, F Safety Three Alternatives Action No Action Install solar pan Use portable generations | Public S Considerators | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost \$0 \$15,000+ | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term solutions Not suite for long term solutions; would need | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: Alternatives: | High With 6 months of received funds Parks Commission, F Safety Three Alternatives Action No Action Install solar pan Use portable generations | Public S Considerators | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost \$0 \$15,000+ | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term solutions Not suite for long term solutions; would need multiple generators to | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: Alternatives: Date of Status Report: | High With 6 months of received funds Parks Commission, F Safety Three Alternatives Action No Action Install solar pan Use portable generations | Public S Considerators | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost \$0 \$15,000+ | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term solutions Not suite for long term solutions; would need multiple generators to | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: Alternatives: Date of Status Report: Report of Progress: | High With 6 months of received funds Parks Commission, F Safety Three Alternatives Action No Action Install solar pan Use portable generations | Public S Considerators | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost \$0 \$15,000+ | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term solutions Not suite for long term solutions; would need multiple generators to | | | | |
| Estimated Time Required for Project Implementation: Responsible Organization: Alternatives: Date of Status Report: | High With 6 months of received funds Parks Commission, F Safety Three Alternatives Action No Action Install solar pan Use portable generations | Public S Considerators | Desired Timeframe for Implementation: Potential Funding Sources: Local Planning Mechanisms to be Used in Implementation if any: ered (including No Action) Estimated Cost \$0 \$15,000+ | FEMA HMGP or PDM, County Budget Hazard Mitigation Evaluation Current problem continues Maintenance costs; not suitable for long term solutions Not suite for long term solutions; would need multiple generators to | | | | |



| | Actio | on Worksheet | | | | | | |
|-------------------------------|----------------------------|--|--|--|--|--|--|--|
| Project Name: | Backup Power Source fo | or Mennen Arena | | | | | | |
| Project Number: | 2020-MORRIS COUNTY- | 003 | | | | | | |
| Criteria | Numeric Rank (-1, 0, 1) | Provide brief rationale for numeric rank when appropriate | | | | | | |
| Life Safety | 1 | Provide a shelter for residents in the event of an emergency | | | | | | |
| Property Protection | 1 | Allows building to function as a shelter during a power outage | | | | | | |
| Cost-Effectiveness | 1 | Benefits outweigh the costs | | | | | | |
| Technical | 1 | | | | | | | |
| Political | 1 | | | | | | | |
| Legal | 1 | | | | | | | |
| Fiscal | 0 | Need funding to purchase generator | | | | | | |
| Environmental | 0 | | | | | | | |
| Social | 1 | | | | | | | |
| Administrative | 1 | | | | | | | |
| Multi-Hazard | 1 | All hazards | | | | | | |
| Timeline | 1 | | | | | | | |
| Agency Champion | 1 | | | | | | | |
| Other Community Objectives | 0 | | | | | | | |
| Total | 11 | | | | | | | |
| Priority (High/Med/Low) | High | | | | | | | |



| | Λ | ation W | orksheet | | | | | | |
|---|---|---|--|---|--|--|--|--|--|
| B 1 W | | | | m 1 | | | | | |
| Project Name: | | | Highland Woods and Picatinny | Tanks | | | | | |
| Project Number: | 2020-MORRIS COUN | | | | | | | | |
| | Ri | sk / Vul | nerability | | | | | | |
| Hazard(s) of Concern: | Severe Weather, Sev | Severe Weather, Severe Winter Weather | | | | | | | |
| Description of the Problem: | | After the tank inspection, 2 out of 15 tanks in the system located in Morris Township had broken rafters. In the event of a major snow storm, the roofs may collapse. | | | | | | | |
| | Action or Projec | ct Intend | ded for Implementation | | | | | | |
| Description of the Solution: | Roof rafters at both the tanks need to be repaired or replaced. | | | | | | | | |
| Is this project related to a C Lifeline? | Critical Facility or | Yes | X No 🗌 | | | | | | |
| Level of Protection: | Depends on the size impacting the area | storm | Estimated Benefits (losses avoided): | Reduce risk of water loss; protect infrastructure | | | | | |
| Useful Life: | 50 years | | Goals Met: | 2, 3, 5 | | | | | |
| Estimated Cost: | \$1 million | | Mitigation Action Type: | SIP | | | | | |
| | Plan | for Imp | lementation | | | | | | |
| Prioritization: | HIGH | | Desired Timeframe for Implementation: | 6 months | | | | | |
| Estimated Time Required for Project Implementation: | 4 year | | Potential Funding Sources: | HMGP | | | | | |
| Responsible Organization: | SMCMUA | | Local Planning Mechanisms to be Used in Implementation if any: | Hazard Mitigation | | | | | |
| | | Consid | ered (including No Action) | | | | | | |
| | Action | | Estimated Cost | Evaluation | | | | | |
| Alternatives: | No Action | | \$0 \$5 million+ | Current problem continues | | | | | |
| | Rebuild tanks | i | \$5 million+ | Costly; long-term project | | | | | |
| | Progress Re | port (fo | r plan maintenance) | | | | | | |
| Date of Status Report: | | | <u>, </u> | | | | | | |
| Report of Progress: | | | | | | | | | |
| Update Evaluation of the Problem and/or Solution: | | | | | | | | | |



| SHED | | |
|-------------------------------|----------------------------|--|
| | Actio | on Worksheet |
| Project Name: | Structural Improvement | ts at Highland Woods and Picatinny Tanks |
| Project Number: | 2020-MORRIS COUNTY- | 005 |
| Criteria | Numeric Rank (-1, 0, 1) | Provide brief rationale for numeric rank when appropriate |
| Life Safety | 1 | Project implementation will eliminate risk of impact on quality of life and property loss during next major flood event. |
| Property Protection | 1 | |
| Cost-Effectiveness | 1 | |
| Technical | 1 | |
| Political | 0 | |
| Legal | 1 | SMCMUA is the sole authority having jurisdiction of the well sites |
| Fiscal | 1 | Project would require new funding/grant source |
| Environmental | 1 | Proj. implementation may eliminate env. impacts during major flood |
| Social | 0 | No adverse social impacts |
| Administrative | 1 | Jurisdiction has personnel or administrative capabilities |
| Multi-Hazard | 1 | |
| Timeline | 1 | Project can be finished within next 12 months |
| Agency Champion | 1 | Project is supported by Board members from 4 Creating Municipalities (Morristown, Morris Township, Morris Plains & Hanover Twp.) |
| Other Community Objectives | 1 | |
| Total | 12 | |
| Priority (High/Med/Low) | High | |



| Action Worksheet | | | | |
|---|---|---------------|--|---|
| Project Name: | Backup Power at Various Sites | | | |
| Project Number: | 2020-MORRIS COUNTY-006 | | | |
| r roject Number. | | | nerability | |
| н 1() (С | | isk / vui | ner ability | |
| Hazard(s) of Concern: | All Hazards | | | |
| Description of the Problem: | Currently no backup power supply at the mentioned sites below in Hanover Township. Potential power loss at major water supply sites in the system in the event of a natural hazard like flood or storm. | | | |
| | Action or Projec | ct Intend | ded for Implementation | |
| Description of the Solution: | Backup power generators required at the following sites: Wing Well, Todd Well, Black Brook Wells (all sites located in Hanover Township) | | | |
| Is this project related to a (Lifeline? | Critical Facility or | Yes | X No 🗌 | |
| Level of Protection: | N/A | | Estimated Benefits (losses avoided): | Continuity of operations |
| Useful Life: | 15 years | | Goals Met: | 1, 2, 3, 5 |
| Estimated Cost: | \$1,500,000 | | Mitigation Action Type: | SIP |
| | Plan | for Imp | lementation | |
| Prioritization: | HIGH | | Desired Timeframe for Implementation: | 6 to 12 months |
| Estimated Time Required for Project Implementation: | 12 months | | Potential Funding Sources: | НМСР |
| Responsible Organization: | SMCMUA | | Local Planning Mechanisms to be Used in Implementation if any: | Hazard Mitigation |
| | Three Alternatives | Consid | ered (including No Action) | |
| | Action | | Estimated Cost | Evaluation |
| | No Action | | \$0 | Current problem continues |
| Alternatives: | Install solar panels | | \$15,000+ | Weather dependent, not ideal for long term power outages, need space to install |
| | Install wind turbines | | \$15,000+ | Weather dependent, need space to install |
| Progress Report (for plan maintenance) | | | | |
| Date of Status Report: | | | | |
| Report of Progress: | | | | |
| Update Evaluation of the Problem and/or Solution: | | | | |



| Action Worksheet | | | |
|-------------------------------|-------------------------------|--|--|
| Project Name: | Backup Power at Various Sites | | |
| Project Number: | 2020-MORRIS COUNTY-006 | | |
| Criteria | Numeric Rank (-1, 0, 1) | Provide brief rationale for numeric rank when appropriate | |
| Life Safety | 1 | Project implementation will eliminate risk of impact on quality of life during next major flood event. | |
| Property Protection | 0 | | |
| Cost-Effectiveness | 1 | | |
| Technical | 1 | | |
| Political | 0 | | |
| Legal | 1 | SMCMUA is the sole authority having jurisdiction of the well sites | |
| Fiscal | 1 | Project would require new funding/grant source | |
| Environmental | 1 | Proj. implementation may eliminate env. impacts during major flood | |
| Social | 0 | No adverse social impacts | |
| Administrative | 1 | Jurisdiction has personnel or administrative capabilities | |
| Multi-Hazard | 1 | | |
| Timeline | 1 | Project can be finished within next 12 months | |
| Agency Champion | 1 | Project is supported by Board members from 4 Creating Municipalities (Morristown, Morris Township, Morris Plains & Hanover Twp.) | |
| Other Community Objectives | 1 | | |
| Total | 11 | | |
| Priority (High/Med/Low) | High | | |



| | A | ction W | orksheet | |
|---|---|----------------------|--|---|
| Project Name: | Clyde Potts Dam Spillway Improvement | | | |
| Project Number: | 2020-MORRIS COUNTY-007 | | | |
| Troject Number: | | Risk / Vulnerability | | |
| H 1() (0 | | sk / vui | nerability | |
| Hazard(s) of Concern: | | Dam Failure, Flood | | |
| Description of the Problem: | The Clyde Potts Dam in Mendham Township has visible cracks observed in the dam spillway. Structural damage may result in flooding. Residential areas downstream of dam may get flooded. This is a high hazard dam with structural damage to the spillway which is causing capacity concerns. | | | |
| | | | led for Implementation | |
| Description of the Solution: | NJDEP Dam Safety Division has been currently engaged in a regional study for design flood analysis. Based on the results of the study, site specific study will be performed for the Clyde Potts Dam. The site specific study may require the size of the spillway to be evaluated and upgraded. The spillway design work is anticipated to be performed within 4 to 5 years. | | | |
| Is this project related to a (Lifeline? | Critical Facility or | Yes | X No 🗆 | |
| Level of Protection: | To be determined after the site study of the dam | | Estimated Benefits (losses avoided): | Spillway repair will reduce risk of dam failure and potential loss of life/ property for areas downstream |
| Useful Life: | 50 years | | Goals Met: | 2, 3, 5 |
| Estimated Cost: | \$2,000,000 | | Mitigation Action Type: | SIP |
| | Plan | for Imp | lementation | |
| Prioritization: | HIGH | | Desired Timeframe for Implementation: | 6 to 12 months |
| Estimated Time Required for Project Implementation: | 4 to 5 years | | Potential Funding Sources: | NJDEP Dam Restoration & Inland Water Projects Loan Program, FEMA High Hazard Potential Dam Grant Program |
| Responsible Organization: | SMCMUA | | Local Planning Mechanisms to be Used in Implementation if any: | Hazard Mitigation |
| | Three Alternatives | Consid | ered (including No Action) | |
| | Action | | Estimated Cost | Evaluation |
| Alternatives: | No Action Acquire all homes in the area of the dam and downstream | | \$0 \$5 million+ | Current problem continues Not feasible; not all homes are susceptible to flooding; costly; reduce tax base |
| | Elevate all homes in the area of the dam and downstream | | \$5 million+ | Not feasible; not all homes are susceptible to flooding; costly |
| D | Progress Rep | JUPT (101 | r plan maintenance) | |
| Date of Status Report: | | | | |
| Report of Progress: | | | | |
| Update Evaluation of the Problem and/or Solution: | | | | |



| Action Worksheet | | | |
|-------------------------------|--------------------------------------|--|--|
| Project Name: | Clyde Potts Dam Spillway Improvement | | |
| Project Number: | 2020-MORRIS COUNTY-007 | | |
| Criteria | Numeric Rank (-1, 0, 1) | Provide brief rationale for numeric rank when appropriate | |
| Life Safety | 1 | Project implementation will reduce/eliminate loss of life and property during next major flood event | |
| Property Protection | 1 | | |
| Cost-Effectiveness | 1 | | |
| Technical | 1 | | |
| Political | 0 | | |
| Legal | 1 | SMCMUA is the sole authority having jurisdiction of the Dam | |
| Fiscal | 1 | Project would require new funding/grant source | |
| Environmental | 1 | Proj. implementation may eliminate env. impacts during major flood | |
| Social | 0 | No adverse social impacts | |
| Administrative | 1 | Jurisdiction has personnel or administrative capabilities | |
| Multi-Hazard | 1 | | |
| Timeline | 1 | Project can be finished within 5 years | |
| Agency Champion | 1 | Project is supported by Board members from 4 Creating Municipalities (Morristown, Morris Township, Morris Plains & Hanover Twp.) | |
| Other Community Objectives | 1 | | |
| Total | 12 | | |
| Priority (High/Med/Low) | High | | |



| | A | ction W | orksheet | |
|---|---|---------|--|---|
| Project Name: | Black Brook Wells and Treatment Plant Upgrade | | | |
| • | 2020-MORRIS COUNTY-008 | | | |
| Project Number: | | | nerability | |
| | | | пегарицу | |
| Hazard(s) of Concern: | Flood, Severe Weath | er | | |
| Description of the Problem: | Two groundwater wells and a treatment plant building are below flood elevation in Hanover Township. Loss of water service may happen in the event of a major flood. | | | |
| | Action or Projec | t Inten | ded for Implementation | |
| Description of the Solution: | Upgrade of the wells and treatment plant buildings to raise them above the flood elevation. | | | |
| Is this project related to a C Lifeline? | Critical Facility or | Yes | X No 🗌 | |
| Level of Protection: | 1% annual chance flood event | | Estimated Benefits (losses avoided): | Raising the structure levels will eliminate risk of water service loss during a major flood. |
| Useful Life: | 25 years | | Goals Met: | 2, 3, 5 |
| Estimated Cost: | \$3,000,000 | | Mitigation Action Type: | SIP |
| | Plan | for Imp | lementation | |
| Prioritization: | HIGH | | Desired Timeframe for Implementation: | 12 months |
| Estimated Time Required for Project Implementation: | 2 to 3 years | | Potential Funding Sources: | НМСР |
| Responsible Organization: | SMCMUA | | Local Planning Mechanisms to be Used in Implementation if any: | Hazard Mitigation, Capital Improvement |
| | Three Alternatives | Consid | ered (including No Action) | |
| | Action | | Estimated Cost | Evaluation |
| Alternatives: | No Action Relocate the existing structure | | \$0 \$5 million+ | Current problem continues Not feasible; costly; need to find land to relocate structure |
| | Install generators at each pump | | \$50,000+ | Generators might not function properly during a flood; does not provide a long term solution |
| | Progress Report (for plan maintenance) | | | |
| Date of Status Report: | | | | |
| Report of Progress: | | | | |
| Update Evaluation of the Problem and/or Solution: | | | - | |



| Action Worksheet | | | | |
|-------------------------------|---|--|--|--|
| Project Name: | Black Brook Wells and Treatment Plant Upgrade | | | |
| Project Number: | 2020-MORRIS COUNTY-008 | | | |
| Criteria | Numeric Rank (-1, 0, 1) | Provide brief rationale for numeric rank when appropriate | | |
| Life Safety | 0 | | | |
| Property Protection | 1 | Project implementation will eliminate risk of property damage during next major flood event | | |
| Cost-Effectiveness | 1 | | | |
| Technical | 1 | | | |
| Political | 0 | | | |
| Legal | 1 | SMCMUA is the sole authority having jurisdiction of the wells and TP building | | |
| Fiscal | 1 | Project would require new funding/grant source | | |
| Environmental | 1 | Proj. implementation may eliminate env. impacts during major flood | | |
| Social | 0 | No adverse social impacts | | |
| Administrative | 1 | Jurisdiction has personnel or administrative capabilities | | |
| Multi-Hazard | 1 | | | |
| Timeline | 1 | Project can be finished within 5 years | | |
| Agency Champion | 1 | Project is supported by Board members from 4 Creating Municipalities (Morristown, Morris Township, Morris Plains & Hanover Twp.) | | |
| Other Community Objectives | 1 | | | |
| Total | 11 | | | |
| Priority (High/Med/Low) | High | | | |