

21 – HOWELL TOWNSHIP

PLANNING TEAM AND PARTICIPATION

Name	Title	Participation
Paul Mazzeo	Police Captain / OEM Coordinator	Primary Point of Contact, Municipal Meeting #1, Municipal Meeting #2
Brian Prochnow	Chief Fire Inspector	Municipal Meeting #1
Matthew Howard	Director of Community Development/Deputy Township Manager	Municipal Meeting #2

COMMUNITY PROFILE

Overview

With a land area of 62.1 square miles, the Township of Howell stands as the largest municipality by land area in Monmouth County. Despite rapid residential and commercial development, Howell has a large network of active farmland, parks, and golf courses. The Township is home to the Manasquan Reservoir, which is the most visited park in the Monmouth County Parks System, with over 1 million visitors annually.

Howell hosts many major transportation routes, including Interstate 195, U.S. Route 9, State Routes 34 & 35, and County Routes 524, 547, & 549. Along Route 9, commuters can travel via Academy Bus Line and NJ TRANSIT. Free transportation is available to members of the Howell Senior Center to the Senior Center and affiliated outside activities.

Sustainability efforts thrive in Howell. The township' K-8 School District achieved silver level certification and Digital Schools Star recognition from Sustainable Jersey for Schools. This voluntary program exemplifies administration, teacher, and student commitment to integrating sustainability efforts in their school and through educational programs.

Land Use, Development, & Growth

In Howell Township, residential and publicly owned land constitutes a large portion of its area. As a result, in 2020, urban or developed land accounted for nearly 35 percent of the town's total area, closely followed by wetlands and forested land, which respectively accounted for 34 percent and 20 percent. From 2015 to 2020, although the Borough's developed land grew by 231 acres while its remaining land uses cumulatively diminished by 234 acres, its overall land use composition remained largely the same.

Land Use Type	Total Acres (2015)	Total Acres (2020)	Percent Change
Agriculture	2784.7	2732.7	-2%
Barren Land	440.3	376.0	-15%
Forest	7790.4	7715.9	-1%
Urban	13656.6	13888.3	2%
Water	1031.9	1034.7	>0%
Wetlands	13452.0	13408.4	>0%

Source: NJDEP Land Use/Land Cover data, 2015-2020

Recent Major Development and Infrastructure from 2020 to Present

Similar to surrounding towns with access to Route 33 and I-195, a number of large warehouse developments have been proposed and approved over the past few years in response to the demands of growing e-commerce. The Township is seeking to balance economic development with public safety and quality-of-life concerns expressed by its residents.

The Views at Monmouth Manor, which was approved in March of 2022, includes 319 market units and 92 affordable units. The Regency at Allaire, an age restricted housing development was recently completed, including 155 total units. These are not located in the floodplain.

Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years

In 2020, the state Board of Public Utilities committed to the state's plan to build a transmission system and will enter an agreement with PJM Interconnection (regional grid operator). This plan sets forth a goal to create offshore wind farms, and Howell was cited as a potential substation for injecting power into the grid.

Demographics & Vulnerable Populations

This plan analyzed census-derived data on population trends and population age distributions to help illustrate potential vulnerability within the township. A population increase or decrease can illustrate potential hazard vulnerability through development pressures on the built environment, or through physical and social impacts of marked population loss. A community with a large share of population under age five may indicate vulnerabilities in hazard response, resource allocation, and evacuation – FEMA identifies that the pediatric population is disproportionately affected during disasters, and requires special consideration in categories of anatomy and physiology, psychological, and education vulnerabilities (FEMA, 2022, NLM, 2022). Individuals over age 65 are a growing share of the country's population and often represent the greatest share of deaths from extreme weather events and other natural disasters. A larger share of population over 65 may indicate local vulnerabilities to hazard events both before and after a disaster occurs – these populations may have mobility needs, uneven access to resources, and limited social networks that makes pre-disaster engagement challenging (FEMA, 2023).

Howell Township's total estimated population is 53,479, of which an estimated 5.2% is under age 5 and 16.5% is over age 65. The Township has experienced an estimated 2.7% population growth in the periods between 2013-2017 and 2018-2022. With an aging population making up a large portion of their total community, Howell may focus hazard mitigation efforts on those with robust messaging and engagement for older residents, evacuation plans inclusive of populations with mobility issues, and resilient networks for resource accessibility post-disaster.

There is one block group in Howell which meets criteria as potentially overburdened (OBC) due to indicators of *Minority* populations. There are no parts of the Township which are designated as CEJST or CDRZ tracts.

Demographics Summary	
Total Population (2018-2022 ACS 5-year Estimates)	53,479
Population Change since 2017	2.7%
Percent of Population Age < 5	5.2%
Percent of Population > 65	16.5%

Source: 2018-2022 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates

HAZARD IDENTIFICATION

One of the first steps in developing a risk assessment is for participating municipalities to review and prioritize the hazards that can affect them. This was done based on how often a hazard has occurred, how significant effects have been in the past, the difficulty and cost of recovering from such events. Jurisdictions ranked the list of hazards as either high, medium, low, or no concern. The following include the Township's hazard ranking. The full risk assessment for each hazard is located in Section 4.0.

Hazard Ranking

High	Medium	Low
Natural Hazards		
Nor'easter	Extreme Temperature	Lightning
Flood	Extreme Wind	Coastal Erosion – N/A
Wildfire	Hurricane/ Tropical Storm	Landslide – N/A
	Tornado	Drought
	Winter Storm	Earthquake
	Dam Failure	
Human-made Hazards		
Pandemic	Civil Unrest	
Power Failure	Cyber Attack	
	Economic Disruption	
	Terrorism	

The Township ranked Coastal Erosion, Landslide, Storm Surge, and Wave Action as N/A.

Hazard Ranking Explanation

Dam failure has moved up from low in the last HMP update to medium. This is primarily due to the age of existing dams. Civil disturbance has also moved up from low to medium as there have been a couple of demonstrations in the past five years. There was no significant damage, but it required extensive police resources. Landslide and storm surges have moved to not applicable due to the Township's general geography and topography. Power failure is a high concern for the Township as municipal infrastructure is weakening. The Township loses power at a substation every week.

Significant Hazard Events Since Last Plan Update

The most significant hazards in the past five years have been tornadoes and flooding, both causing property damage. Four tornadoes have struck since the last plan update, affecting commercial properties and houses. Flooding has primarily been caused by beavers building dams, rather than by issues related to topography or stormwater management. The Township has purchased some homes that had recurrent flooding due to these animal activities. There is also serious concern about the reservoir; if it were to break, it would release all its water and inundate the Township.

Climate Change Impacts on Extent and Magnitude of Hazards

Climate change is expected to significantly impact the risks and hazards faced by Howell Township. As global temperatures rise, the frequency and intensity of extreme weather events such as hurricanes, nor'easters, and extreme temperatures are likely to increase. This will exacerbate existing vulnerabilities, particularly in flood-prone areas. The township's infrastructure, including critical facilities located within floodplains, will face heightened risks of damage and disruption. Additionally, the aging population in Howell Township may experience increased health risks during extreme weather events, necessitating robust evacuation plans and resilient networks for resource accessibility.

Moreover, climate change will likely lead to more frequent and severe droughts, which can strain water resources and increase the risk of wildfires. The township's efforts to balance economic development with public safety will become more challenging as the impacts of climate change intensify. Proactive measures, such as enhancing stormwater management systems, protecting critical facilities, and improving communication and education on hazard risks, will be essential to mitigate the adverse effects of climate change on Howell Township.

RISK ASSESSMENT

National Flood Insurance Program (NFIP) statistics

Howell Township	
Initial FIRM	1/6/1983
Effective FIRM	9/25/2009
Number of Policies In-Force:	108
Total Losses:	45
Total Payments:	\$526,567.29
Number of RL Properties:	2
Number of Mitigated RL Properties:	0
RL – Total Losses:	5
RL – Total Paid:	\$63,948.47
Number of SRL Properties:	0
Number of Mitigated SRL Properties:	0
SRL – Total Losses:	0
SRL – Total Paid:	\$0

Source: FEMA Policy and Loss Data, August 2024

Vulnerability of the Built Environment

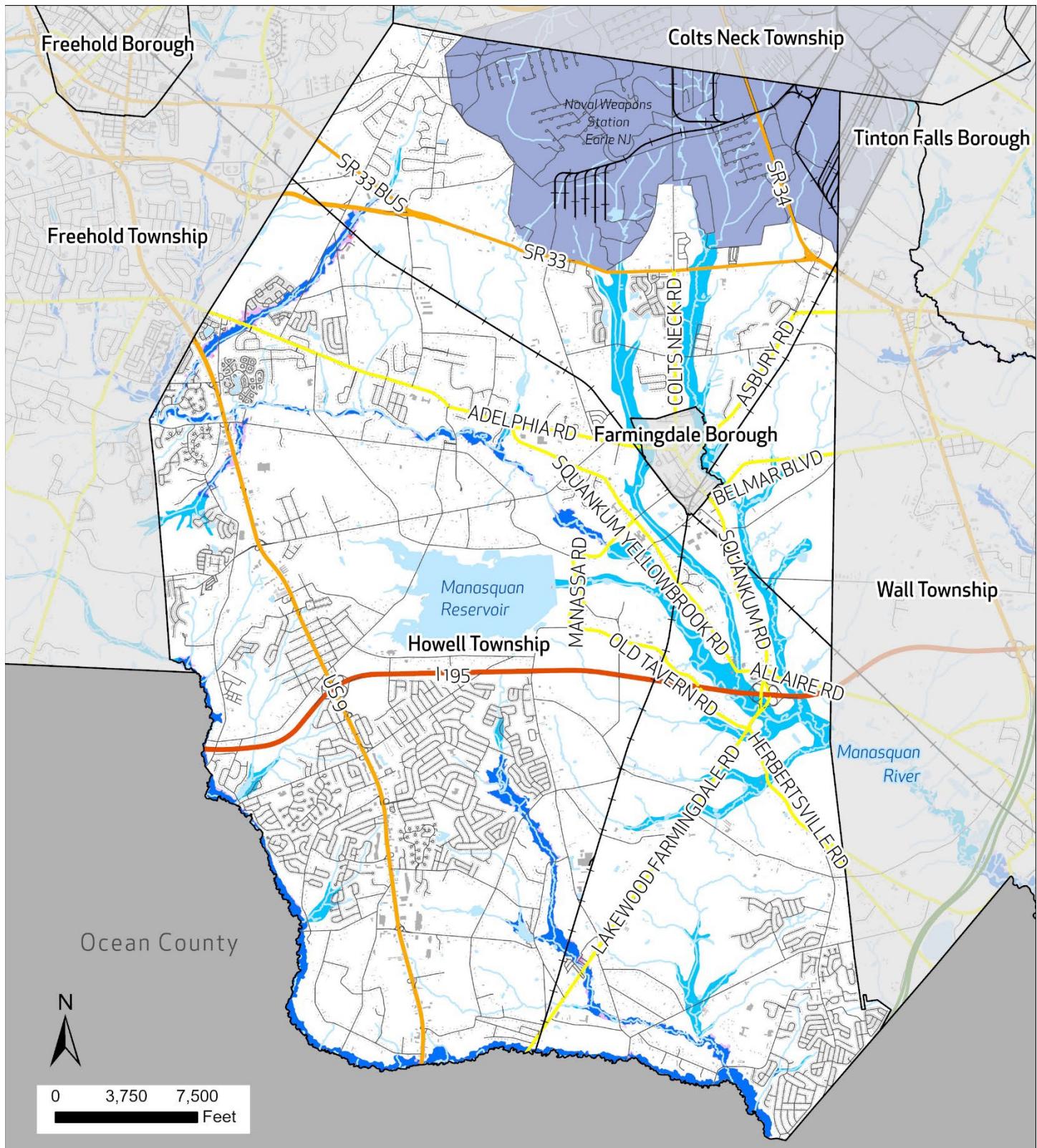
The Special Flood Hazard Area (SFHA) in the Township of Howell is primarily centered adjacent to the waterbodies of the borough the Manasquan and Metedeconk Rivers and their smaller tributaries. Approximately 8.2 percent of the total area of Howell lies within the 1% annual chance flood zone as defined by FEMA. An additional 0.4 percent of the area of the municipality is in the 0.2% annual chance flood zone.

About 61.0 percent of Howell is considered developed. Of the developed parcels of the town, 2.9 percent fall within the 1% annual chance flood zone and 0.2 percent are within the 0.2% annual chance flood zone. This illustrates that development in the municipality has generally occurred in areas that are less prone to flooding.

	Percentage in the 1% Floodplain	Percentage in the 0.2% Floodplain	5 feet of Sea Level Rise
Developed Parcels	2.9%	0.2%	NA
Exposed Land Area	8.2%	0.4%	NA

During the planning process, Howell identified critical facilities which function as community lifelines. These facilities provide the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The municipality identified 76 total facilities. Of these facilities, eight are located within the floodplain. This includes facilities in the Safety and Security and Water Systems community lifelines categories.

Community Lifeline Type	Number in the 1% Floodplain	Number in the 0.2% Floodplain	Number within 5 feet of Sea Level Rise
Safety and Security	1	-	NA
Water Systems	7	-	NA



Flood Risk

Howell Township

FEMA Flood Zone

- 0.2% Annual Chance
- A (1%)
- AE (1%)

Garden State Parkway

State Hwy

Interstate Highways

State Routes

County Routes

Local Roads

Rail Lines

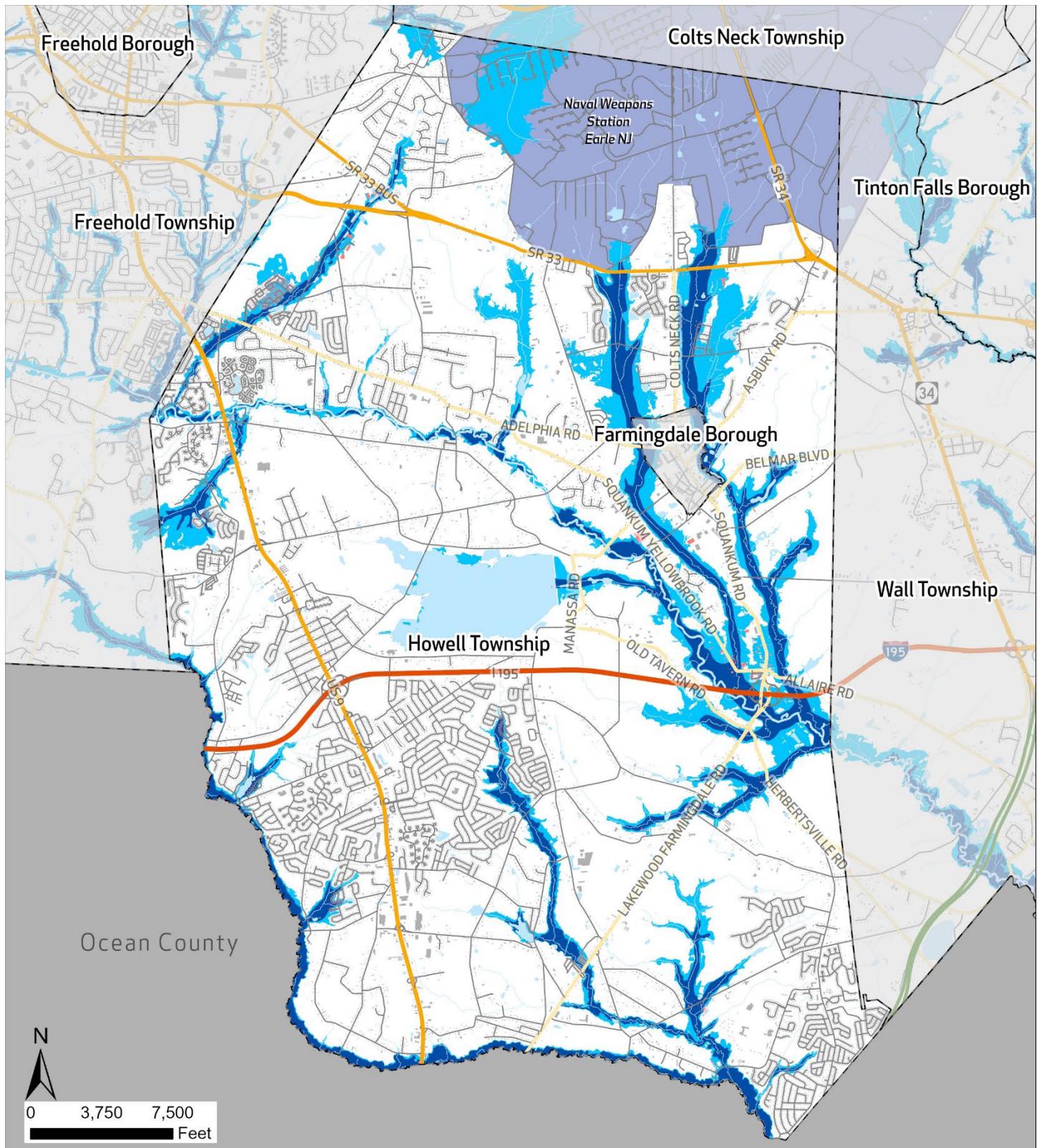
Municipal Boundaries

Building Footprints

Building Footprints within Floodplain

Water

Source: FEMA NJDEP, NJOIT, NJTransit



NJ Inland Design Flood Elevation Howell Township

Flood Zone
Current Base Flood Elevation (1%)

NJ Inland Design Flood Elevation

FEMA BFE (1%) plus 3 Feet

Interstate Highways
State Routes
County Routes
Local Roads

State Hwy
Garden State Parkway
Railroad

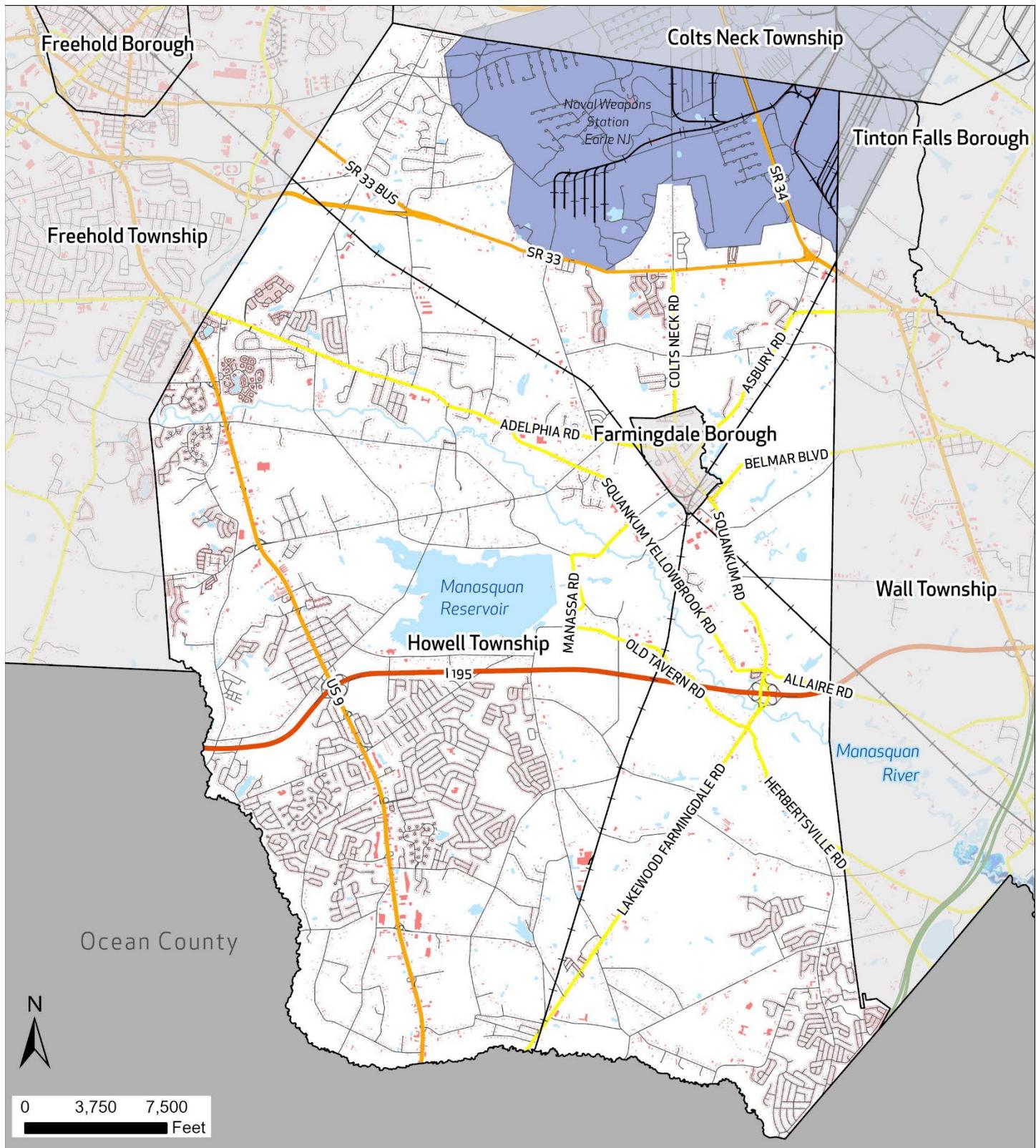
Municipal Boundaries
Water

Department of Defense
Land

Building Footprints

Building Footprints within IDFE

Source: FEMA, Rutgers University, NJDEP, NJOIT, NJTransit



Permanent Inundation Under Sea Level Rise (SLR) Scenarios

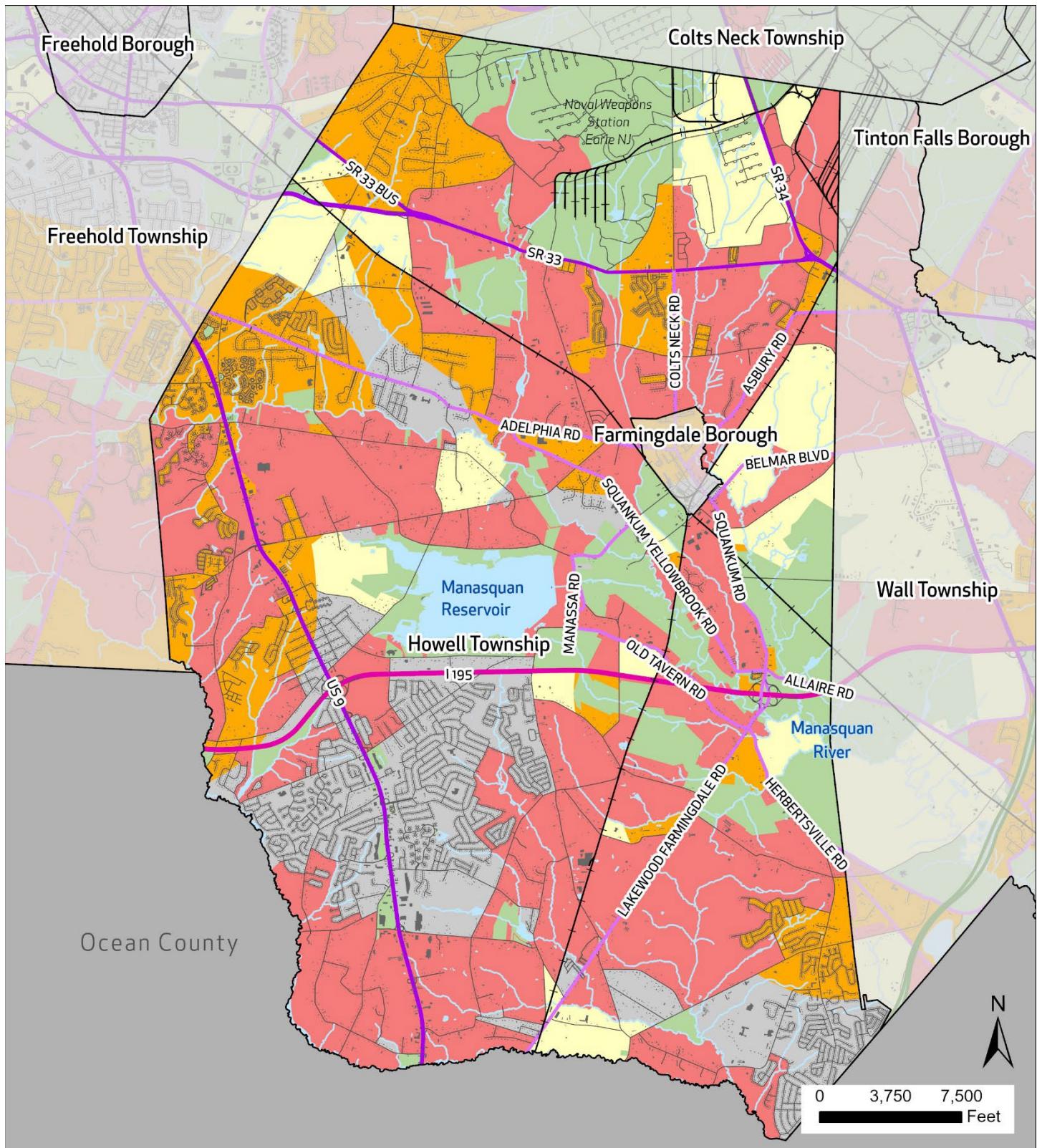
Howell Township

- Area Inundated Under 2 Feet SLR
- Area Inundated Under 3 Feet SLR
- Area Inundated Under 5 Feet SLR

- Garden State Parkway
- Interstate Highways
- State Routes
- County Routes
- Local Roads
- Rail Lines

- Municipal Boundaries
- Building Footprint
- Water
- Department of Defense Land

Source: NOAA, NJDEP, NJOIT, NJTransit



Wildland Urban Interface (WUI) Classification

Howell Township

- Interface
- Intermix
- High or Medium Density Housing
- Low or Very Low Density Housing
- No Housing

- Garden State Parkway
- State Hwy
- Interstate Highways
- State Routes
- County Routes
- Local Roads
- Rail Lines

- Municipal Boundaries
- Building Footprint
- Water

Source: USFS, NJDEP, NJOIT, NJTransit

CAPABILITY ASSESSMENT

Planning & Regulatory Capabilities

Howell Township has the following additional Planning & Regulatory capabilities:

Plan and Regulation	Yes	No	Date of last update	How does this capability support hazard mitigation?
Master Plan	X		11/18/2019	Recently updated to include storm resiliency, smart growth, environmental sustainability section in 2022 (Land Use Element update, April 2024). Howell Township's Land Use Plan Element has a section on Storm Resiliency, Smart Growth, Environmental Sustainability and Climate Change Vulnerability Assessment. The Climate Change Vulnerability Assessment including an analysis of current and future trends, a build-out analysis, identification of facilities, utilities, roadways, and infrastructure necessary for evacuation, and sustaining quality of life during a natural disaster, potential impacts of natural hazards on components and elements of the master plan, strategies and recommendations available to reduce or avoid risks associated with natural hazards, and a policy statement regarding consistency, coordination, and integration of the vulnerability assessment with various existing or proposed plans.
Capital Improvement Plan	X		Annually	Determines funding for capital projects to upgrade our infrastructure .
Local Emergency Operations Plan/Continuity of Operations Plan	X		9/19/26	Addresses how the community will respond to disasters.
Floodplain Development Ordinance	X		7/12/2022	Controls all development in regulated floodways and floodplains
Floodplain Management Plan		X		
Stormwater Management Ordinance	X		6/11/2024	Ensures all development is within State stormwater regulations
Stormwater Management Plan	X		May 2007	Plan to manage stormwater runoff.
Watershed Management Plan		X		
Sheltering Plan	X		9/19/26	Annex N of EOP
Evacuation Plan			9/19/26	Annex F of EOP
Substantial Damage/Improved Structures Response	X		9/19/26	Annex B of EOP
Repetitive Loss Plan		X		
Disaster Debris Management Plan	X		9/19/26	Annex K of EOP
Tracking elevation certificates and/or Letter of Map Change		X		
Post-Disaster Recovery Plan		X		
Current/recent redevelopment plans or studies		X		
Community Wildfire Protection Plan	X		2015	Currently being updated by NJFFS. This will outline a plan to reduce our risk of wildfires through a maintenance plan of heavily vegetative areas.
Climate Adaptation Plan	X		April 2024	Climate Change Vulnerability Assessment with Land Use Element
Other Plans that discusses hazard mitigation	X			Next Steps to Compatibility Planning Study, Monmouth County, New Jersey (2022) encourages compatible development within the NWS Earle's Military Influence Area. Among the environmental constraints are natural hazards including wildfire, flooding, and storm surge. Additionally, in 2023, Howell adopted a new farmland preservation plan.
Other ordinance and regulation that mitigate the impacts of natural hazards		X		

Administrative and Technical Capabilities

Howell Township has the following Administrative and Technical capabilities:

Position	Yes	No	Explanation
Floodplain Administrator	X		Todd Morgan, Construction Official
Grant Writer	X		Colliers Engineering

Position	Yes	No	Explanation
Staff trained to support mitigation		X	
Existing mutual aid or technical assistance agreements to support hazard mitigation projects		X	
Non-governmental organizations/other partners that work with the municipality on mitigation projects		X	
Organizations that work with socially vulnerable or underserved populations		X	

Education and Outreach Capabilities

Howell Township has the following Education and Outreach capabilities:

Education & Outreach Capability	Yes	No	Explanation
Communicate natural and human-based hazards to the public	X		Use of the Everbridge System to communicate public alerts.
StormReady		X	
Firewise USA		X	
Severe Weather Awareness Week	X		Display table at Township Municipal Building with information on hazardous weather. Social Media postings.
Community Rating System (CRS)		X	

Financial Capabilities

Within the last five years, Howell Township has used the following financial capabilities to implement hazard mitigation activities:

Financial Capability	Yes	No	Explanation
FEMA BRIC		X	
FEMA FMA		X	
FEMA Public Assistance		X	
FEMA HMGP		X	
Non-FEMA Federal Funding Programs		X	
Other FEMA resources		X	
NJ Infrastructure Bank		X	
Other state municipal assistance or grant programs	X		\$10,000 EMMA Grant Assistance for OEM Staff
Evaluation process on the prioritization of risk reduction projects against other local activities		X	
Other ongoing efforts to build additional financial capabilities		X	

Additional Capability Assessment Information:

MITIGATION STRATEGY

Overview and Progress Since Last Plan Update

The Township of Howell is consistently working on mitigation strategies to build a sustainable and resilient community. Our efforts are to improve and build-upon our current infrastructure to make us better prepared for both man-made and natural disasters. Through a collaborative effort with our stakeholders, we have identified threats and hazards and developed the following strategies to mitigate any damage that may occur to our community.

Completed or Removed Actions

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Timeline	Action Status	Notes
21-1	Purchase and Install Generators for Critical Facilities to Continue Emergency Services During Storms	Power for essential equipment to sustain Continuity of Operations during hazards that cause loss of power.	All Hazards	Medium	HTOEM, HTPD, HTDPW	FEMA HMA	\$100,000 .00	1 year	Completed	Complete. Town hall, EMS, the Police Department, and DPW all have generators.

New and Ongoing Actions

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Timeline	Action Status	Notes
21-2	Increase Hazard Education and Risk Awareness for Residents	Mass mailing to all residents to obtain contact info of all residents (email list) for constant contact, updates, and education of Township operations regarding emergencies.	All Hazards	Medium	OEM Coordinator	Local budget	\$20,000.00	1 year	Ongoing	Continuous. The township uses Everbridge and a new platform for tornado warnings.
21-3	Protect Critical Facilities Used for Sheltering from Terrorism and Flooding	Physically harden shelters by shielding windows, adding sandbags, adding embankments. Internally will add communication capabilities, add additional emergency supplies (first aid, water, cots, MREs,ec). Added element of this action is for backup generator	All Hazards	Medium	HTOEM	POMP, FMAP, EMPG, HLS, FEMA HMA	\$120,000.00	1 year	Ongoing	The police station and courthouse were targeted hardened.

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Timeline	Action Status	Notes
21-4	Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties in the Mariners Cove Neighborhood	Elevate structures to current FEMA FIRMS, specifically RL/SRL properties.	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Low	HTOEM	FEMA HMA	\$3M	1 year	Ongoing	Some homes were purchased through grant funding.
21-5	Improve Communication for Critical Facilities	Improve communications of EOC and Dispatch. EOC needs communication equipment including all office equipment, and the Redundant Dispatch system needs to be upgraded.	All Hazards	Medium	HTOEM, HTPD	Municipal budget	\$1.3M	1 year	Ongoing	Need building antennas and a new communication system.
21-6	Continue to Provide Safe Drinking Water to Residents During Power Outages	During outages, contaminated water needs to be purified and potable to disseminate to residents in shelters and all other needed areas so backup systems are needed to sustain purified water.	All Hazards	Medium	HTOEM, Health, American Water, Brick MUA	Municipal budget	\$500,000	1 year	Ongoing	Storage of water and use prior to it shelf life is a concern. Contracts to provide potable water to be looked into.
21-7	Develop a Study on the Need for Transportation of Vulnerable Populations during Emergencies	Develop a study that assesses if there is a need for transportation of elderly populations during emergencies.	All Hazards	Medium	HTOEM, HTPD	DCA	\$2,000	1 year	Ongoing	A couple of large senior centers and assisted living homes have their plans. The largest senior population is currently at The Villages.
21-8	Develop a Wildfire and Trail Maintenance Plan	Proper burning of underbrush and the removal of fallen trees along park trails will reduce the risk of wildfire.	Wildfire	Medium	HTOEM, HTPD, Fire, NJ State Forest Fire	FEMA HMA, Municipal budget	Staff Time	1 year	Ongoing	Currently re-writing the NJFF plan.

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Timeline	Action Status	Notes
21-9	Coordinate with NWS Earle on Emergency Response Protocol	NWS Earle is the largest hazard and there is no coordination or training for emergency response.	All Hazards	Medium	HTOEM, HTPD	Homeland Security funding, County funding, Municipal funding	Staff Time	1 year	Ongoing	Use the MCOEM to bridge a meeting.
21-10	Install Transfer Switches for Intersections along Route 9 and Route 33	There have been four backup batteries installed for lights at intersections along Route 9 but seven more lights at intersections need the backup battery.	All Hazards	High	HTOEM, HTPD	FEMA HMA, DOT, Homeland Security	\$100,000	1 year	Ongoing	Need NJDOT approval and awaiting NJDOT to install a new light on Rt 33 and Yellowbrook.
21-11	Conduct Routine Debris Removal and Develop a Floodplain Management Plan for Stream Corridors	There needs to be a Debris Removal and Floodplain Management Plan conducted to assess how to mitigate flooding along stream corridors.	Flood, Nor'easter, Hurricane and Tropical Storm	High	HTOEM, HTPD	Municipal budget	\$500,000	1 year	Ongoing	Additional funding needed to clean out and open up streams.
21-12	Repair, Remove, or Rehabilitate the Echo Lake Dam, Lake Louise Dam, and Manasquan Reservoir Dam	Repair, remove, or rehabilitate the Echo Lake Dam, Lake Louise Dam, and Manasquan Reservoir Dam--all High-Hazard Potential Dams.	Dam Failure	High	New Jersey Water Supply Authority (Manasquan Reservoir Dam) and Howell Township (Echo Lake Dam and Lake Louise Dam)	Lake Louise Dam is eligible FEMA's National Dam Safety Program	\$1.1M	2 years	Ongoing	Lake Louise Dam is the only dam that has been fully rehabilitated in the last 5 years (source: NJDEP).
21-13	Create a Plan to Manage Development in Landslide Hazard Areas	Create a plan to implement reinforcement measures in high-risk areas. Prioritize the slope of Manasquan River which is undercutting the road.	Landslide	Low	Township	Municipal funding		3 years	Ongoing	NJ American Water Company owns/operates the dam.
21-14	Add new drainage on low-lying roads for improved drainage.	Add new drainage on low-lying roads within the Township, including but not limited to Fairfield Rd. & Pinewood Estates.	Flood, Nor'easter, Hurricane and Tropical Storm	Medium	Township	Municipal Funding	\$1.5M	5 years	New	Fairfield Rd to be completed by a private contractor who is building in this area.