



## 9.37 Township of Washington

This section presents the jurisdictional annex for the Township of Washington.

### 9.37.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan’s primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Barbara Somes, OEM Coordinator 609.965.3242 ext. 208 <a href="mailto:bsomes@wtbcnj.org">bsomes@wtbcnj.org</a>	Horace A. Somes, Assistance OEM Coordinator 609.965.3242 ext. 207 <a href="mailto:hsomes@wtbcnj.org">hsomes@wtbcnj.org</a>

### 9.37.2 Municipal Profile

What is now Washington Township was originally formed from Evesham, Little Egg Harbor, and Northampton townships in November of 1802. Portions of the Township were taken to form Shamong in 1852, Bass River in 1864, Woodland in 1866, and Randolph in 1870. Randolph was reannexed into the Township in 1893.<sup>1</sup> The small community area at Speedwell was recently transferred to Tabernacle Township.

Washington Township is governed under the Township form of government with a three-member Township Committee. The Township Committee is elected directly by the voters at-large in partisan elections to serve three-year terms of office on a staggered basis, with one seat coming up for election each year. [http://en.wikipedia.org/wiki/Washington\\_Township, Burlington County, New Jersey](http://en.wikipedia.org/wiki/Washington_Township,_Burlington_County,_New_Jersey) - cite note-DataBook-3 The Township Committee selects one of its members to serve as Mayor at an annual reorganization meeting,<sup>2</sup>

Washington Township is located in the southern portion of Burlington County. The Township is bordered by Bass River to the east, Woodland to the northeast, Tabernacle to the north, and Shamong to the north and northwest. In addition, the Township is bordered by Atlantic County to the south and west. The Township has a total of 102.7 square miles, of which 99.5 square miles is land and 3.2 square miles is water. There are several unincorporated communities found within the Township: Batsto, Bear Swamp Hill, Bridgeport, Bulltown, Crowleypoint, Friendship Bogs, Green Bank, Hermon, Hog Islands, Jemima Mount, Jenkins, Jenkins Neck, Lower Bank, Mount, Penn Place, Pleasant Mills, Quaker Bridge, Tylertown and Washington. According to the 2010 Census, the community's population was 687.

Washington contains lands within the Pinelands which is managed by the Pinelands Comprehensive Management Plan. The plan establishes nine land use management areas with goals, objectives, development intensities and permitted uses for each. The boundaries of these management areas are displayed on the Pinelands Land Capability Map. They are implemented through local zoning that must conform with Pinelands land use standards. The Township has lands designated as preservation area district, forest area, and Pinelands Village.

### Growth/Development Trends

The following table summarizes recent residential/commercial development since 2013 to present and any known or anticipated major residential/commercial development and major infrastructure development that has

<sup>1</sup> <http://www.state.nj.us/dep/njgs/enviroed/oldpubs/bulletin67.pdf>

<sup>2</sup> <http://www.twp.mountholly.nj.us/content/386/557/default.aspx>





been identified in the next five years within the municipality. Refer to the map in 9.37.8 of this annex which illustrates the hazard areas along with the location of potential new development.

**Table 9.37-1. Growth and Development**

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or block/lot)	Known Hazard Zone(s)	Description/Status of Development
<b>Recent Development from 2013 to present</b>					
Washington Turnpike Fuelbreak	Public	N/A	Wharton State Forest	Wildfire: Extreme	On-Going Development of Fireline And Fuel break.
<b>Known or Anticipated Development in the Next Five (5) Years</b>					
Former School	Public	1	2434 Route 563	Coordinates outside county.	Property Development by SNJ Wildlife
Former Belhaven Marina	Public	1	1216 Route 542	Flood: 1% Event: A-Zone; Wildfire: High; SLOSH: Category 2	Property Development by SNJ Parks
Emergency Shelter	Public	N/A	Pending	None	Establishment of New Shelter Facility
WUI Fuel break	Residential	6	Mm 15 Route 542	Wildfire: Extreme; SLOSH: Category 3	Proposal Development for Grant Application

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

### 9.37.3 Natural Hazard Event History Specific to the Municipality

Burlington County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2013 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

**Table 9.37-2. Hazard Event History**

Dates of Event	Event Type (Disaster Declaration if applicable)	Burlington County Designated?	Summary of Damages/Losses
April 30-May 1, 2014	Heavy Rain and Flooding	No	Downed trees and wires, power outages, road closures
June 23, 2015	Severe Storm (DR-4231)	Yes	Downed trees and wires, power outages, road closures
January 22-24, 2016	Severe Winter Storm (DR-4264)	Yes	Downed trees and wires, power outages, road closures
JULY 21, 2017	Forest Fire	NO	3,500 Acre Forest Fire with Risks To Property (Historic Site, Rural Community) And Safety (Recreational Area/Visitors, Community Residents)

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)





N/A Not applicable

### 9.37.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Township of Washington. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

#### Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Washington.

**Table 9.37-3. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Coastal Erosion	RCV Exposed to CE Hazard Area: \$16,072,839	Occasional	12	Low
Drought	Damage estimate not available.	Frequent	30	Medium
Earthquake	100-Year GBS: \$0 500-Year GBS: \$1,492,383 2,500-Year GBS: \$21,157,418	Occasional	28	Medium
Flood	1% Annual Chance: \$248,684,908	Frequent	54	High
Landslide	RCV Exposed to Landslide Hazard Area \$0	Rare	6	Low
Severe Storm	100-year MRP: \$743,863 500-year MRP: \$823,158 Annualized: \$40,123	Frequent	48	High
Severe Winter Weather	1% GBS: \$3,573,330 5% GBS: \$17,866,651	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$44,640,482	Occasional	28	Medium

Notes:

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
- b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.  
High = Total hazard priority risk ranking score of 31 and above  
Medium = Total hazard priority risk ranking of 20-30+  
Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- e. The HAZUS-MH earthquake model results are reported by Census Tract.

#### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Washington.





**Table 9.37-4. NFIP Summary**

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Township of Washington	38	24	\$1,136,241.46	1	0	2

Source: FEMA Region 2 2017, 2018

(1) Repetitive loss and severe repetitive loss statistics provided by FEMA Region 2 and are current as of 10/31/2017. Policy and claims statistics current as of 9/30/2018

Please note the total number of repetitive loss properties does not include the severe repetitive loss properties. The number of claims represents claims closed by 9/30/2018.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) The policies inside and outside of the flood zones are based on the addresses geocoded from the FEMA Region 2 policy file – 10/31/2017.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

### Critical Facilities

The table below presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities in the community as a result of a 1-percent annual chance flood event.

**Table 9.37-5. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
Cavalier Yachts	Business/Industry	X	X	12.5	20.1
NJ State Park Service - Southern Region	Police		X	-	-
Pacemaker Heliport	Airport	X	X	-	-

Source: FEMA 2017, Burlington County

Note: - = Damages not calculated by HAZUS-MH v4.0

### Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- The Mullica River is the primary cause of flooding in the Township, typically associated with hurricanes and tropical storms. Downstream of the Pleasant Mills Bridge, flooding on the River is tidally influenced. Tributaries to the River have also experienced flooding, like the Batsto River. (HMP,2014)

### 9.37.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of mitigation planning into existing and future planning mechanisms



**Planning and Regulatory Capability**

The table below summarizes the regulatory tools that are available to the Township of Washington.

**Table 9.37-7. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
<b>Planning Capability</b>				
Master Plan	Yes 2017	Local	Planning	
Capital Improvements Plan	Yes	Local	Twp Committee	
Floodplain Management / Basin Plan	Yes	Local	Twp Engineer	Flood Damage Prevention Ordinance
Stormwater Management Plan	Yes	State	DEP	Land Development Ordinance
Open Space Plan	No	State	DEP	
Stream Corridor Management Plan	No	State	DEP	
Watershed Management or Protection Plan	No	State	DEP	
Economic Development Plan	No	County	Planning	
Comprehensive Emergency Management Plan	Yes 2014	Local	OEM	E.O.P.
Emergency Operation Plan	Yes 2014	Local	OEM	
Post-Disaster Recovery Plan	No	County	OEM	
Transportation Plan	No	County	Engineer	
Strategic Recovery Planning Report	No	County	OEM	
Other Plans:	Yes 2017	Local	OEM	Community Forest Management Plan
	Yes 2012	Local	OEM	Community Wildfire Protection Plan
<b>Regulatory Capability</b>				
Building Code	Yes	State	NJDCA	State Uniform Construction Code Act (N.J.S. 52:27D-119 Et Seq.)
Zoning Ordinance	Yes 2012	Local	Twp Committee	Land Development Ordinance as Amended Chapter 275
Subdivision Ordinance	Yes 1983	Local	Planning Board	Land Development Ordinance as Amended
NFIP Flood Damage Prevention Ordinance				Chapter 275
NFIP: Cumulative Substantial Damages	Yes	Federal, State, Local	Twp Engineer	Flood Damage Prevention Ordinance Chapter 236
NFIP: Freeboard	No	County	OEM	
Growth Management Ordinances	Yes	State, Local	Twp Ordinance	Flood Damage Prevention Ordinance Chapter 236
Site Plan Review Requirements	Yes	Local	Planning Board	Master Plan As Re-Examined
Stormwater Management Ordinance				Land Development Ordinance



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Municipal Separate Storm Sewer System (MS4)	Yes 1983	Local	Planning Board	Land Development Ordinance As Amended
Natural Hazard Ordinance	Yes 1983	Local	Twp Engineer	Land Development Ordinance As Amended
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	No			
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No			

### Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Washington.

**Table 9.37-8. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Engineer
Mitigation Planning Committee	Yes	OEM / Local Fire Safety Council
Environmental Board/Commission	Yes	OEM / Community Forestry Committee
Open Space Board/Committee	No	
Economic Development Commission/Committee	No	
Maintenance programs to reduce risk	Yes	Local Emergency Planning Council
Mutual aid agreements	Yes	Twp Interlocal Agreements
<b>Technical/Staffing Capability</b>		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Township/Planning Engineer
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure		Special Planner
Planners or engineers with an understanding of natural hazards	Yes	Construction Code Officials
NFIP Floodplain Administrator (FPA)	Yes	OEM/LEPC
Surveyor(s)		Community Forestry
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications		Fire Safety Council
Scientist familiar with natural hazards	Yes*	Twp Engineer
Emergency Manager	Yes	Twp Engineer
Grant writer(s)	Yes	OEM/LEPC
Staff with expertise or training in benefit/cost analysis		Twp Engineer
Professionals trained in conducting damage assessments	Yes	OEM/LEPC Community Forestry Consultant



### Fiscal Capability

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

**Table 9.37-9. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Twp Engineer
Capital improvements project funding	Chief Financial Officer Twp Engineer
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	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	Yes
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes Through NJDEP
Other	

### Community Classifications

The table below summarizes classifications for community program available to the Township of Washington.

**Table 9.37-10. Community Classifications**

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No		
Public Protection (ISO Fire Protection Classes 1 to 10)	No		
Storm Ready Certification	No	N/A	N/A
Firewise Communities classification	Yes	Firewise U.S.A.	2017
Natural disaster/safety programs in/for schools	Yes		
Organizations with mitigation focus (advocacy group, non-government)	Yes	Fire Adapted Community	2017
Public education program/outreach (through website, social media)	Yes		
Public-private partnership initiatives addressing disaster-related issues	Yes		

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s







capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <https://www.isomitigation.com/ppc/>
- The National Weather Service Storm Ready website at <http://www.stormready.noaa.gov/index.html>
- The National Firewise Communities website at <http://firewise.org/>

### Self-Assessment of Capability

The table below provides an approximate measure of the Township of Washington’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

**Table 9.37-11. Self-Assessment Capability for the Municipality**

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and regulatory capability	X - Lack of Financial Resources and Staffing		
Administrative and technical capability	X - Lack of Financial Resources and Staffing		
Fiscal capability	X - Increasingly Reduced Tax Base Due to State/Non-Profit Land Ownership		
Community political capability	X - Reduced Population/Political Base		
Community resiliency capability	X - Lack of Financial Resources and Staffing		
Capability to integrate mitigation into municipal processes and activities	X - Lack of Financial Resources and Staffing		

### National Flood Insurance Program

#### NFIP Floodplain Administrator (FPA)

Scott Jones, Engineer/Floodplain Manager

#### Flood Vulnerability Summary

Washington Township does maintain lists or inventories of properties that have been flood damaged but the list does not identify property owners who are interested in mitigation. During Hurricane Sandy other recent tidal flooding events there were approximately 12 residential and 1 business property damaged. Detailed information





about this damage can be found in the disaster report filed with county Office of Emergency Management (OEM) and FEMA. The FPA indicated that Substantial Damage estimates are made as necessary in consultation with the Township Engineer and Construction Code Officials, and this information is also available in the disaster report filed with county OEM and FEMA. There are 4 Substantially Damaged residences that have been reconstructed/elevated and there is 1 additional residence that is attempting to mitigate with reconstruction/elevation pending funding assistance. The funding source for mitigation projects comes from flood insurance and property owners.

### Resources

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The Township Engineer assume the responsibilities of floodplain administration and is assisted by the staff of Guzzi Engineering LLC. NFIP administration is through the Township ordinance for flood damage prevention, including application reviews for flood damage prevention, flood level certifications, inspections, damage assessments, information to property owners, cooperation with other municipal agencies (planning, zoning, and tax office) and related documentation. At this time, education and outreach programs regarding flood hazards/risk or flood risk reduction is provided as public information by the OEM office through the Emergency Operations Center (EOC)/municipal building. The FPA stated that barriers to running an effective floodplain management program in the Township include: bureaucratic complexity of the various programs/procedures for flood damage prevention assistance and funding to property owners; failure of SNJ to respond to local concerns for emergency action planning for 3 primary dams on state park lands; need for county engineer/highway department to address flood-prone sections of regional and local highways (Routes 542, 563, and 652) which serve as community access streets and evacuation routes.

### Compliance History

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The Township is currently in good standing with the NFIP; however, the date of the most recent compliance audit is unknown.

### Regulatory

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Washington Township's floodplain ordinance meets the minimum set by FEMA and the State of New Jersey. There are no additional ordinances that support floodplain management in the township; however, flood damage prevention is a required component of local development review and zoning certification.

### Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

### Planning

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**Pinelands Comprehensive Management Plan:** The New Jersey Pinelands Commission protects the Pinelands through its implementation of the Comprehensive Management Plan (CMP). The CMP contains the rules that guide land-use, development and natural resource protection programs in the state Pinelands Area. The regulations and standards contained in the CMP are designed to promote orderly development by channeling growth toward appropriate areas while safeguarding the region's unique natural, ecological, agricultural, archaeological, historical, scenic, cultural and recreational resources.



The Pinelands Comprehensive Management Plan provides general provisions, interpretations and definitions, certification of County, Municipal and Federal Installation Plans, development review, minimum standards for land uses and intensities, management programs and minimum standards, amendments to the comprehensive management plan, enforcement, acquisition of properties with limited practical use, and pilot programs.

**Master Plan:** The 2007 Washington Township Master Plan updates the previous Master Plan from 1982. For the most part the findings and recommendations from the 1982 plan remain current. The current (2007) Master Plan does not contain a written natural resources inventory, although mapping certainly addresses the topic. To the extent that it may be of interest, a reader may want to examine the prior Master Plan for a detailed written analysis.

The Pinelands Protection Act (NJSA 13:18-1 et seq.) requires the Township Master Plan and Land Use Ordinance to conform to the Pinelands Comprehensive Management Plan (CMP). The CMP renders the Township virtually powerless with regard to land use control for most of the Township. Washington Township is largely comprised of the Preservation Area, having 58,200 acres or 86 % of the land area in this recreation and conservation district. A second management area is the Special Agricultural Production comprising 8,185 acres or 12 % of the Township. The final management area is Pinelands Village which is made up of Green Bank, Lower Bank and Jenkins and includes 1,150 acres or 2 % of the total land area. The Township maintains some land use control in the Pinelands Villages.

### Regulatory and Enforcement (Ordinances)

**NJDEP Municipal Stormwater Regulation Program:** New Jersey Department of Environmental Protection issued the statewide municipal stormwater permits that became effective January 1, 2018 and authorizes stormwater discharges from municipal separate storm sewer systems (MS4s) to the waters of the state. Municipalities that have been issued a Notice of Authorization (NOA) to discharge under the Tier A (urban and coastal municipalities) or Tier B (more rural municipalities) master general permit must develop and implement a stormwater program. The first New Jersey Pollutant Discharge Elimination System (NJPDES) permit authorizing discharges from MS4 municipalities became effective in 2004 (subsequently renewed in 2009 and now in 2018), so most municipalities have developed stormwater programs; however, the 2018 permit requires the municipalities to maintain a stormwater management plan and enforce stormwater ordinances to address development and redevelopment consistent with the Stormwater Management rules at N.J.A.C 7:8, as well as implementation of additional requirements. For more information on the municipal stormwater regulation program, see [www.nj.gov/dep/dwq/msrp\\_home.htm](http://www.nj.gov/dep/dwq/msrp_home.htm). Washington Township is Tier B municipality.

**Stormwater Management:** Chapter 407 of the municipal code discusses stormwater control. The purpose of this chapter is to establish minimum stormwater management requirements and controls for major development, consistent with the statewide stormwater requirements, the regulations and standards contained in the Pinelands CMP, and the provisions of the adopted Master Plan and land use ordinances of Washington Township. Through this chapter, Washington Township has established the following goals for stormwater control:

- To reduce flood damage, including damage to life and property;
- To minimize any increase in stormwater runoff from new development;
- To reduce soil erosion from any development or construction project;
- To assure the adequacy of existing and proposed culverts and bridges and other instream structures;
- To maintain groundwater recharge;
- To minimize any increase in nonpoint pollution;
- To maintain the integrity of stream channels for their biological functions, as well as for drainage;



- To restore, protect, maintain and enhance the quality of the streams and water resources of Washington Township and the ecological character and quality of the Pinelands Area;
- To minimize pollutants in stormwater runoff from new and existing development in order to restore, protect, enhance and maintain the chemical, physical and biological integrity of the surface water and groundwater of Washington Township, to protect public health and to enhance the domestic, municipal, recreational, industrial and other uses of water; and
- To protect public safety through the proper design and operation of stormwater management basins.

**Flood Damage Prevention:** The purpose of the flood damage prevention ordinance (chapter 236 of the municipal code) is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- Protect human life and health;
- Minimize expenditure of public money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;
- Help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood-blight areas;
- Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

### Operational and Administration

Washington Township has the following boards and councils:

- Planning and Zoning Board
- Board of Health
- Local Emergency Planning Council

### Funding

Washington Township has mutual aid agreements that include Township interlocal agreements and OEM/LEPC. The Township OEM/LEPC and Township Engineer have grant writing capability. Financial resources the Township has access to or are eligible to use include community development block grants, capital improvements project funding, the authority to levy taxes for specific purposes, the ability to incur debt through general obligation bonds, the ability to incur debt through special tax bonds, the ability to withhold public expenditures in hazard-prone areas, other Federal or State funding programs, and open space acquisition funding programs.

### Education and Outreach

The Township has a website where one can access information about residents, government, departments, media, the Township calendar, meeting minutes, explore the Township, and see news and announcements. On the



Township’s OEM page there are links to FEMA flood maps, the county OEM, NJ Forest Fire Service; as well as access public safety bulletins, 9-1-1 addressing, the community wildlife protection plan, and the emergency management map.

### **9.37.6 Mitigation Strategy and Prioritization**

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

#### **Past Mitigation Initiative Status**

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The following table indicates progress on the community’s mitigation strategy identified in the 2013 Plan. 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 9.37-12. Status of Previous Mitigation Actions

Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WA-1	Install auxiliary electrical generator for emergency power at Municipal Building/EOC	Lead: Twp. Committee Support: Twp. OEM	Complete.	Installed	1. Discontinue 2. Complete
WA-2	Update telephone system to the municipal building, including facilities for the EOC and emergency back-up during utility outages (either electrical or phone)	Lead: Twp. Committee Support: Twp. OEM	Complete.	Updated	1. Discontinue 2. Complete
WA-3	Acquire 4WD pickup as a utility vehicle for municipal ground support and emergency services.	Lead: Twp. Committee Support: Twp. OEM	Complete.	Vehicle purchased	1. Discontinue 2. Complete
WA-4	Acquire map filing cabinet for storage, organization, and protection of OEM mapping	Lead: Twp OEM Support: Twp Committee	Complete.	Cabinet purchased	1. Discontinue 2. Complete
WA-5	Acquire GIS mapping program for installation on laptops of OEM and local response agencies, including USGS topography and aerial imagery.	Lead: Twp. OEM Support: Twp. Committee	In Progress.	50% WITH AVAILABLE SOFTWARE PROGRAMS	1. Include in 2019 HMP 2. Determine feasibility and acquire additional suitable program if possible
WA-6	Cooperate with BC Central Communications, OEM-GIS and State Park Service in GIS mapping for waterway access points for emergency dispatching and response to recreational inland streams and tidal waterways.	Lead: BC Central, State Park Service Support: Twp& BC OEM, local Fire Companies	Complete.	Complete	1. Discontinue 2. Complete
WA-7	Incorporate cross-references to available State Forestry fuel-cover hazard classification and updated FEMA flood-hazard mapping (when available) into	Lead: Planning and Zoning Board Support: Twp. OEM and Twp. Engineer	Complete.	Complete	1. Discontinue 2. Complete





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	municipal zoning/land capability mapping as reference document for land development ordinances				
WA-8	Incorporate emergency contact numbers into the Global Connect system of County OEM for reverse 911 warning for high-hazard community areas	Lead: Twp. OEM and Clerk Support: BCOEM	No Progress.	Lack of Functional County System and Addressing/Contact Database	1. Discontinue 2. Pending re-evaluation by County OEM
WA-9	Develop Global Connect sub-system for reverse 911 alerting to local emergency personnel	Lead: Twp. OEM Support: Local Fire Companies, Ambulance squads, County OEM, and County Central Communications	No Progress.	Lack of Functional County System and Addressing/Contact Database	1. Discontinue 2. Pending re-evaluation by County OEM
WA-10	Update the standard operating guidelines/school safety plan for Green Bank School during emergency situations and as the residential public shelter within the municipality	Lead: Board of Education Support: Twp OEM	Cancelled.	School Closed, Transferred from B.O.E. To Township and Sale to SNJ Pending	1. Discontinue
WA-11	Inspect and review the impacts of rising sea levels/shoreline erosion and flood risk on River Road-Lower Bank bridge and between western landing and eastern cul-de-sac, either directly or indirectly through effects on privately-owned riverside lots	Lead: Twp. OEM, Twp. Engineer, County Engineer/Highway Support: Twp. Committee, Twp. Road Dept.	Completed.	Complete	1. Discontinue 2. Complete
WA-12	Amend Twp. Code Ordinance chapter 236 – Flood Damage Prevention and adopt updated flood-hazard maps (pending FEMA issuance) based upon	Lead: Twp. Committee, Twp. Engineer/Floodplain Administrator Support: Planning and Zoning Board	In-Progress	Ordinance and Maps Adopted, But Now Pending Further Amendment Per FEMA	1. 2019 HMP 2. ADOPT AMENDED ORDINANCE AND MAPPING





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	updated requirements and guidelines of FEMA and NJDEP				
WA-13	Participate in the Installation Complex Encroachment Management Action Plan (ICEMAP) of the US Air Force/NJ Air National Guard/177 <sup>th</sup> for the Warren Grove Target Range and Coyle Field Drop Zone	Lead: USAF and Twp. OEM Support: Local fire companies and ambulance squad, NJ Forest Fire Service	No Progress.	USAF did not continue the program	1. Discontinue 2. No longer applicable
WA-14	Provide planning and zoning, engineering and construction code support to local residents, businesses and improved property owners for mitigation in flood hazard areas, including structural modification, elevation, flood-proofing and/or relocation	Lead: Twp. Engineer/Floodplain Administrator, Zoning Official, Construction Code Official	In Progress.	1. Public information and assistance provided	1. Discontinue 2. Ongoing capability
WA-15	Update Community Forest Management Plan	Lead: Twp. OEM/Community Forestry Committee Support: Twp. Road Dept./Public Works, Green Bank School District, Twp. Fire companies and ambulance squad, NJ Forest Fire Service, State Park Service, State Forestry Service	Completed	Plan Amended and Extended For 4 Years	1. Discontinue 2. Complete
WA-16	Update Community Wildfire Protection Plan	Lead: Twp. OEM/Local Emergency Planning Council	Initiated	Review 2011 Plan to Identify Upgrades and Revisions When Recertification Is Due In 2021	1. 2019 HMP 2. CONTINUE REVIEW







Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
		Support: Twp. Fire companies, NJ Forest Fire Service, Community Forestry Committee			
WA-17	Remove hazardous trees from the facilities and roads around the Green Bank Municipal Complex and Bulltown Road	Lead: Twp. OEM/Community Forestry Committee Support: Green Bank School District, Green Bank Fire Co 451, Green Bank Ambulance Squad 459, NJ State Forestry Service, NJ Forest Fire Service, State Park Service	Completed.	Forestry Grant for Community Stewardship Incentive Received In 2016, And Completed In 2017	1. Discontinue SEEK ADDITIONAL ASSISTANCE WHEN/IF STATE FORESTRY OFFERS ADDITIONAL ASSISTANCE
WA-18	Perform maintenance of Godfrey Bridge Road Cul-de-sac turn-around	Lead: Twp. Twp. Engineer, OEM Support: NJ Forest Fire Service	Completed.	Maintenance by Road Dept	1. Discontinue 2. Complete
WA-19	Conduct Firewise/ICS Training Exercise – “Great Swamp WUI” Incident Simulation	Lead: Twp. OEM, local fire companies and NJ Forest Fire Service Support: NJ State Police, State Park Police, BCOEM, Bass River Twp. OEM	Completed.	Training Exercise Conducted	1. Discontinue 2. Ongoing capability; develop and conduct additional interagency training with stakeholders for multiple hazards and risks
WA-20	Develop flood response at inter-county bridges and approaches over Mullica River at Lower Bank and Green Bank	Lead: Washington Twp. OEM, BCOEM and Hwy Support: ACOEM, NJSP	In Progress	Situation and Possible Strategies Identified	1. 2019 HMP. 2. LIAISON WITH COUNTY ENGINEER/HIGHWAY



Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
WA-21	Develop flood response involving Bass River Twp the inter-municipal bridge over Wading River at Wading River and approach bridge over Merrygold Creek in Bass River Township	Lead: Washington Twp. OEM, BCOEM and Hwy Support: Bass River Twp. OEM, NJSP	In Progress	Situation and Possible Strategies Identified	1. 2019 HMP 2. LIAISON WITH COUNTY ENGINEER/HIGHWAY AND BASS RIVER TWP.
WA-22	Address flood hazard and drainage situation on Route 652/River Road in the vicinity of the Lower Bank landing involving the adjacent ditching/culvert/former tide gate in the County right-of-way	Lead: Washington Twp. OEM and Road Dept, BC Hwy Support: BCOEM Department	In Progress	50% Completion of Drainage Problem at Old Church Road/Firehouse Lane Intersection	1. 2019 HMP 2. LIAISON WITH COUNTY ENGINEER/HIGHWAY RE SITUATION AT RIVER LANDING
WA-23	Address flood hazard on Route 542/Crowleys Landing at MM 10 and develop alternate detour for evacuation of Bulltown Road/Batsto Road.	Lead: BC Hwy Dept and Washington Twp. OEM, BCOEM Support: NJSP	In Progress	Work Performed and Funded by Burlington County	1. 2019 HMP 2. LIAISON WITH COUNTY ENGINEER RE MITIGATION DURING FUTURE RE-PAVING AND RENOVATION
WA-24	Continue enhancement of Bulltown Road as a strategic fuel break for WUI protection and as an alternate evacuation route detour	Lead: Washington Twp. OEM, and Road Dept, BCOEM Support: State Park Service, NJ Forest Fire 2Service, Atlantic Electric	In Progress	Situation and Possible Strategies Identified	1. 2019 HMP 2. SEEK ADDITIONAL STATE FORESTRY ASSISTANCE IF GRANTS BECOME AVAILABLE
WA-25	Coordinate and plan for flooding response/water release for dams – Batsto River and Oswego River	Lead: NJDEP, State Park Service Support: Washington OEM, BCOEM	No Progress.	Tree Hazards Selectively Removed Using 2016/2017 Forestry Grant for CSIP	1. 2019 HMP 2. MAINTAIN LIAISON WITH NJDEP RE SITUATION AND PLANNING UPGRADES
WA-26	Develop management plan for maintenance of key access roads – Wharton and Penn State	Lead: State Parks, Wildlife and Forest Fire Services Support:	In Progress	Lack of Emergency Action Planning By NJDEP	1. CONTINUE TO PROVIDE LIAISON TO PARKS AND WILDLIFE SERVICES TO DEFINE JURISDICTIONAL





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Forests, and Swan Bay Wildlife management area	Washington OEM, BCOEM			RESPONSIBILITIES AND PROVIDE FOR PUBLIC SAFETY AND ACCESS
WA-27	Cooperate in RISK mapping for Burlington County	Lead: FEMA and BCOEM Support: Twp OEM	No Progress.	2014 M.A.P. By Park Service Did Not Proceed	1. 2019 HMP
WA-28	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: Disaster preparedness Hazard mitigation	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Complete	Pending BCOEM Initiative	1. Discontinue 2. Ongoing capability
WA-29	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations * EXPAND TO STATE LAW ENFORCEMENT AGENCIES	Municipality with support from County, NJOEM, FEMA and surrounding communities	Complete	Public Information Made Available at Municipal Building and Via Website	1. Discontinue ONGOING CAPABILITY; IN COOPERATION WITH LOCAL FIRE COMPANIES AND AMBULANCE SQUAD CONSULT WITH NJSP AND STATE PARK POLICE TO ENHANCE LAW ENFORCEMENT COOPERATION, COMMUNITY SERVICES AND INTERAGENCY COORDINATION WITH COMMUNITY EMERGENCY RESPONDERS
WA-30	Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5-year Plan Update	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Complete	Complete	1. Discontinue 2. Participating in plan update
WA-31	Promote the participation of Floodplain Administrators within	Township Engineer with support from	Complete	Complete	1. Discontinue 2. Ongoing capability





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	the planning process and other activities.	County, NJOEM and FEMA			
WA-32	Enhance the County/community resilience to severe storms (incl. coastal/winter storms) by joining the NOAA "Storm Ready" program	Municipality with support from County, NJOEM and FEMA	No Progress.	OEM and Planning Assistance to Twp Engineer as the Designated Floodplain Administrator	<ol style="list-style-type: none"> <li>2019 HMP</li> <li>Awaiting BCOEM initiative</li> </ol>
WA-33	Provide public education and outreach on proper installation and/or use of backup power	Township OEM, NJDCA Construction Official	Complete	Pending BCOEM Initiative	<ol style="list-style-type: none"> <li>Discontinue</li> <li>Ongoing capability; Amendment to zoning ordinance for energy conservation and alternate technologies.</li> </ol>
WA-34	Support the mitigation of vulnerable structures via elevation to protect structures from future damage with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates based on cost-effectiveness and repetitive loss. Phase 2: Work with the property owners to implement action based on available funding from the State and FEMA and local match availability.	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from County Planning, NJOEM, FEMA	In Progress	Public Information and Outreach	<ol style="list-style-type: none"> <li>2019 HMP</li> <li>MONITOR THE AVAILABILITY OF GRANT ASSISTANCE</li> </ol>



### Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The Township of Washington has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- In the last five years, Township OEM/LEPC and NJ Forest Service has completed the action “Community Forest Hazard Mitigation” through a State Forestry CSIP Grant.
- The Township with OEM/LEPC has supported the State Forestry Services with the Washington Turnpike Fuelbreak. This project is being funded by a State/Federal Grant and is 50% complete.

### Proposed Hazard Mitigation Initiatives for the Plan Update

The municipality participated in a mitigation action workshop in March 2018 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.37-13 summarizes the comprehensive-range of specific mitigation initiatives the Township of Washington would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

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

Table 9.37-14 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.37-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
WA-1 (Former WA-5)	Acquire GIS mapping program for installation on laptops of OEM and local response agencies, including USGS topography and aerial imagery.	No	All	5, 6	Lead: Twp. OEM Support: Twp. Committee	Medium	Low	NJ Forest Fire Service grant funding with local match	Short	Low	LPR	ES
WA-2 (Former WA-12)	Amend Twp. Code Ordinance chapter 236 – Flood Damage Prevention and adopt updated flood-hazard maps (pending FEMA issuance) based upon updated requirements and guidelines of FEMA and NJDEP	No	Flood	All	Lead: Twp. Committee, Twp. Engineer/ Floodplain Administrator or Support: Planning and Zoning Board	High	Low	Municipal Budget	Short	High	LPR	PR
WA-3 (Former WA-16)	Update Community Wildfire Protection Plan	No	Fire	All	Lead: Twp. OEM/Local Emergency Planning Council Support: Twp. Fire companies, NJ Forest Fire Service, Community Forestry Committee	Medium	Low	State Forestry Service grant funding with local match	Long	Low	LPR	PR
WA-4 (Former WA-20)	Develop flood response at inter-county bridges and approaches over Mullica River at Lower Bank and Green Bank	No	Flood	All	Lead: Washington Twp. OEM, BCOEM and Hwy Support: ACOEM, NJSP	High	Low	Municipal Budget and County Highway	Short	High	LPR	PR





Table 9.37-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
WA-5 (Former WA-21)	Develop flood response involving Bass River Twp the inter-municipal bridge over Wading River at Wading River and approach bridge over Merrygold Creek in Bass River Township	No	Flood	All	Lead: Washington Twp. OEM, BCOEM and Hwy Support: Bass River Twp. OEM, NJSP	High	Low	Municipal Budget and County Highway	Short	High	LPR	PR
WA-6 (Former WA-22)	Address flood hazard and drainage situation on Route 652/River Road in the vicinity of the Lower Bank landing involving the adjacent ditching/culvert/former tide gate in the County right-of-way	No	Flood	1, 2, 6	Lead: Washington Twp. OEM and Road Dept, BC Hwy Support: BCOEM Department	High	Low	Municipal Budget and County Highway	Short	High	SIP	PP
WA-7 (Former WA-23)	Address flood hazard on Route 542/Crowleys Landing at MM 10 and develop alternate detour for evacuation of Bulltown Road/Batsto Road.	No	Flood	1, 2, 6	Lead: BC Hwy Dept and Washington Twp. OEM, BCOEM Support: NJSP	High	Low	Municipal Budget and County Highway	Short	High	SIP	PP
WA-8 (Former WA-24)	Continue enhancement of Bulltown Road as a strategic fuel break for WUI protection and as an alternate evacuation route detour	No	Fire	1, 2, 6	Lead: Washington Twp. OEM, and Road Dept BCOEM; Support: State Park Service, NJ Forest Fire	High	Low	NJ Forestry Services grant and local match	Long	High	SIP	SP, LPR







Table 9.37-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
					2Service, Atlantic Electric							
WA-9 (Former WA-25)	Coordinate and plan for flooding response/water release for dams – Batsto River and Oswego River	No	Flood	All	Lead: NJDEP, State Park Service; Support: Washington OEM, BCOEM	Medium	Low	NJDEP	Short	Medium	LPR	PR
WA-10 (Former WA-26)	Develop management plan for maintenance of key access roads – Wharton and Penn State Forests, and Swan Bay Wildlife management area	No	Flood	All	Lead: State Parks, Wildlife and Forest Fire Services Support: Washington OEM, BCOEM	Medium	Medium	NJDEP	Long	Medium	LPR	PR
WA-11 (Former WA-27)	Cooperate in RISK mapping for Burlington County	No	Flood	5, 6	Lead: FEMA and BCOEM; Support: Twp OEM	Medium	Low	BCOEM	Short	Low	LPR	PR
WA-12 (Former WA-32)	Enhance the County/community resilience to severe storms (incl. coastal/winter storms) by joining the NOAA “Storm Ready” program	No	Severe Storm	All	Municipality with support from County,	Medium	Low	Municipal Budget	Short	Medium	EAP	PI





Table 9.37-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
					NJOEM and FEMA							
WA-13 (Former WA-34)	Support the mitigation of vulnerable structures via elevation to protect structures from future damage with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates based on cost-effectiveness and repetitive loss. Phase 2: Work with the property owners to implement action based on available funding from the State and FEMA and local match availability.	No	Flood	1, 2	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from County Planning, NJOEM, FEMA	High	High	Grant funding	Short	High	SIP	PP
WA-14	Coordinate with the facility managers at Cavalier Yachts in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Yes	Flood, Severe Storm	1, 2, 6	Municipality with support from County	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP





Table 9.37-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
WA-15	Coordinate with the facility managers at NJ State Park Service – Southern Region in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Yes	Flood, Severe Storm	1, 2, 6	Municipality with support from County	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP
WA-16	Coordinate with the facility managers at Pacemaker Heliport in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Yes	Flood, Severe Storm	1, 2, 6	Municipality with support from County	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP
WA-17	During future updates of the Master Plan, Floodplain Management Plan, Stream Corridor Management Plan, Watershed Management Plan, or other plans, work	No	All Hazards	All	Municipality	High	Low	Municipal Budget	Short Term, Depending on update schedule	High	LPR	PR, PI





**Table 9.37-13. Proposed Hazard Mitigation Initiatives**

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	to integrate hazard mitigation principles and recommendations into the plans. Additionally, use these hazard mitigation principles and plan recommendations to update local building and zoning codes to create a more resilient community.											
WA-18	The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL). At risk areas include: <ul style="list-style-type: none"> <li>River Road</li> </ul> Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.	No	Flood	1, 2	Municipality with support from County	High	High	Grant funding; Municipal budget	Short	High	SIP	PP

*Notes:*

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

\*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

CAV Community Assistance Visit  
 CRS Community Rating System

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program  
 HMGP Hazard Mitigation Grant Program

Timeline:

Short 1 to 5 years  
 Long Term 5 years or greater





DPW	Department of Public Works	PDM	Pre-Disaster Mitigation Grant Program	OG	On-going program
FEMA	Federal Emergency Management Agency	RFC	Repetitive Flood Claims Grant Program (discontinued in 2015)	DOF	Depending on funding
FPA	Floodplain Administrator				
HMA	Hazard Mitigation Assistance	SRL	Severe Repetitive Loss Grant Program (discontinued in 2015)		
N/A	Not applicable				
NFIP	National Flood Insurance Program				
OEM	Office of Emergency Management				

Costs:

Where actual project costs have been reasonably estimated:

Low	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where actual project costs cannot reasonably be established at this time:

Low	Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
Medium	Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
High	Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA’s benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low=	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low	Long-term benefits of the project are difficult to quantify in the short term.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
High	Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:

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

CRS Category:

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





- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities*



Table 9.37-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	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
WA-1 (Former WA-5)	Acquire GIS mapping program for installation on laptops of OEM and local response agencies, including USGS topography and aerial imagery.	0	0	1	1	1	1	1	0	0	1	1	1	1	0	9	Low
WA-2 (Former WA-12)	Amend Twp. Code Ordinance chapter 236 – Flood Damage Prevention and adopt updated flood-hazard maps (pending FEMA issuance) based upon updated requirements and guidelines of FEMA and NJDEP	1	1	1	1	1	1	0	0	0	1	0	1	1	0	9	High
WA-3 (Former WA-16)	Update Community Wildfire Protection Plan	1	1	1	1	0	0	0	0	0	1	0	0	1	0	6	Low
WA-4 (Former WA-20)	Develop flood response at inter-county bridges and approaches over Mullica River at Lower Bank and Green Bank	0	0	1	1	1	1	0	0	0	1	0	1	1	0	7	High
WA-5 (Former WA-21)	Develop flood response involving Bass River Twp the inter-municipal bridge over Wading River at Wading River and approach bridge over Merrygold Creek in Bass River Township	0	0	1	1	1	1	0	0	0	1	0	1	1	0	7	High







Table 9.37-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	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
WA-6 (Former WA-22)	Address flood hazard and drainage situation on Route 652/River Road in the vicinity of the Lower Bank landing involving the adjacent ditching/culvert/former tide gate in the County right-of-way	1	1	0	1	1	1	1	0	0	1	0	1	1	0	9	High
WA-7 (Former WA-23)	Address flood hazard on Route 542/Crowleys Landing at MM 10 and develop alternate detour for evacuation of Bulltown Road/Batsto Road.	1	1	0	1	1	1	1	0	0	1	0	1	1	0	9	High
WA-8 (Former WA-24)	Continue enhancement of Bulltown Road as a strategic fuel break for WUI protection and as an alternate evacuation route detour	1	1	1	1	1	1	-1	1	0	1	0	1	1	0	9	High
WA-9 (Former WA-25)	Coordinate and plan for flooding response/water release for dams – Batsto River and Oswego River	1	1	1	0	1	0	0	0	0	1	0	1	1	0	7	Medium
WA-10 (Former WA-26)	Develop management plan for maintenance of key access roads – Wharton and Penn State Forests, and Swan Bay Wildlife management area	1	1	0	0	1	0	-1	1	0	1	0	1	1	0	7	Medium





Table 9.37-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	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
WA-11 (Former WA-27)	Cooperate in RISK mapping for Burlington County	0	0	0	1	1	1	0	0	0	1	0	1	1	0	6	Low
WA-12 (Former WA-32)	Enhance the County/community resilience to severe storms (incl. coastal/winter storms) by joining the NOAA "Storm Ready" program	1	0	0	1	1	1	0	0	1	1	1	0	1	0	8	Medium
WA-13 (Former WA-34)	Support the mitigation of vulnerable structures via elevation to protect structures from future damage with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates based on cost-effectiveness and repetitive loss. Phase 2: Work with the property owners to implement action based on available funding from the State and FEMA and local match availability.	1	1	1	1	1	1	-1	0	0	1	0	1	1	0	8	High
WA-14	Coordinate with the facility managers at Cavalier Yachts in the Township to support the mitigation of vulnerable	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium





Table 9.37-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	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
	structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.																
WA-15	Coordinate with the facility managers at NJ State Park Service – Southern Region in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium
WA-16	Coordinate with the facility managers at Pacemaker Heliport in the Township to support the mitigation of vulnerable structures via	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium





Table 9.37-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	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
	retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.																
WA-17	During future updates of the Master Plan, Floodplain Management Plan, Stream Corridor Management Plan, Watershed Management Plan, or other plans, work to integrate hazard mitigation principles and recommendations into the plans. Additionally, use these hazard mitigation principles and plan recommendations to update local building and zoning codes to create a more resilient community.	1	1	1	1	1	1	1	0	0	1	1	0	1	0	10	High
WA-18	The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically	1	1	0	1	1	1	-1	0	0	1	0	1	1	0	8	High





Table 9.37-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	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
	<p>those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL). At risk areas include:</p> <ul style="list-style-type: none"> <li>River Road</li> </ul> <p>Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.</p>																

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions.



### **9.37.7 Future Needs To Better Understand Risk/Vulnerability**

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None at this time.

### **9.37.8 Hazard Area Extent and Location**

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Hazard area extent and location maps have been generated for the Township of Washington that illustrate the probable areas impacted within the municipality. 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. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of Washington has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

### **9.37.9 Additional Comments**

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None at this time.



Figure 9.37-1. Township of Washington Hazard Area Extent and Location Map 1

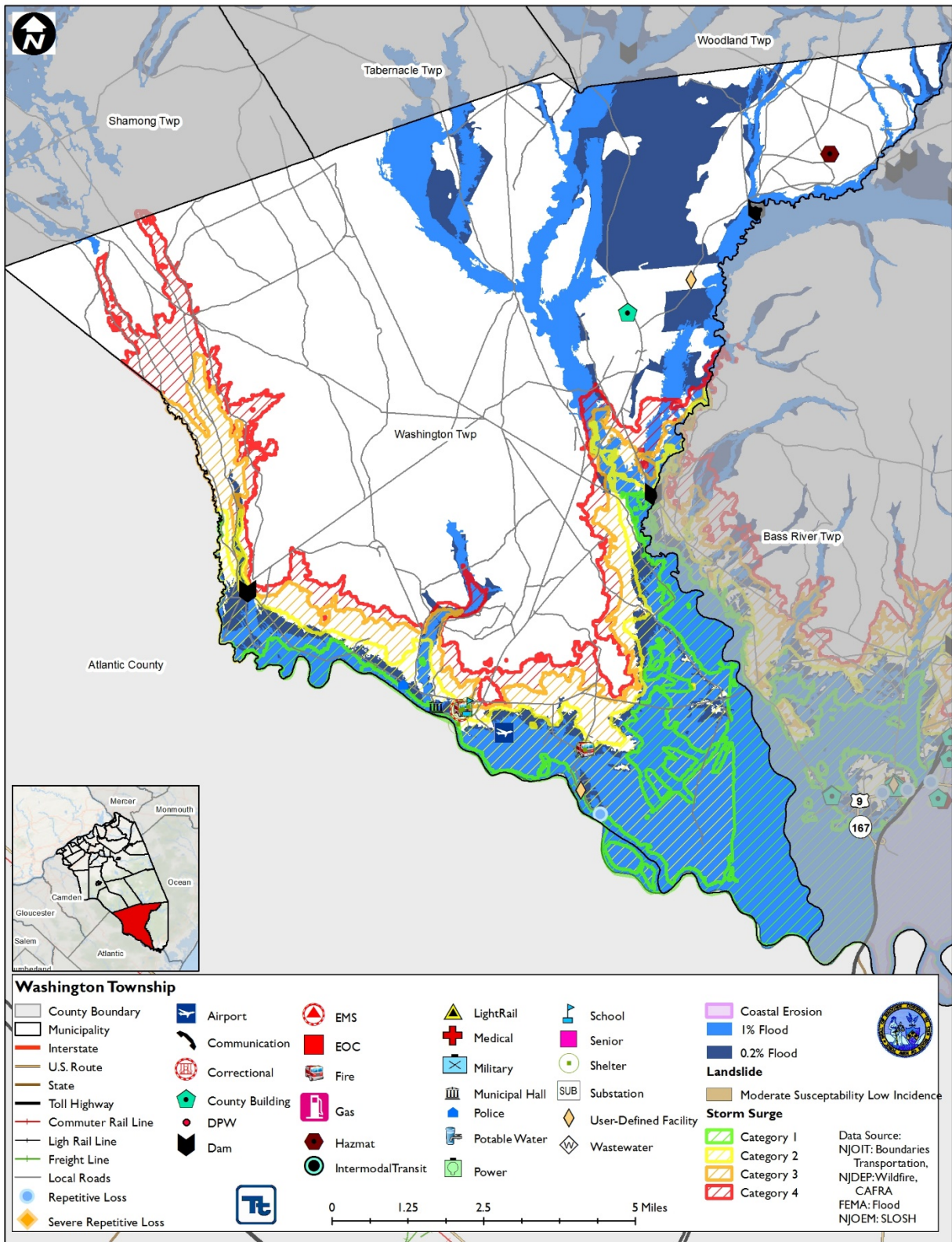
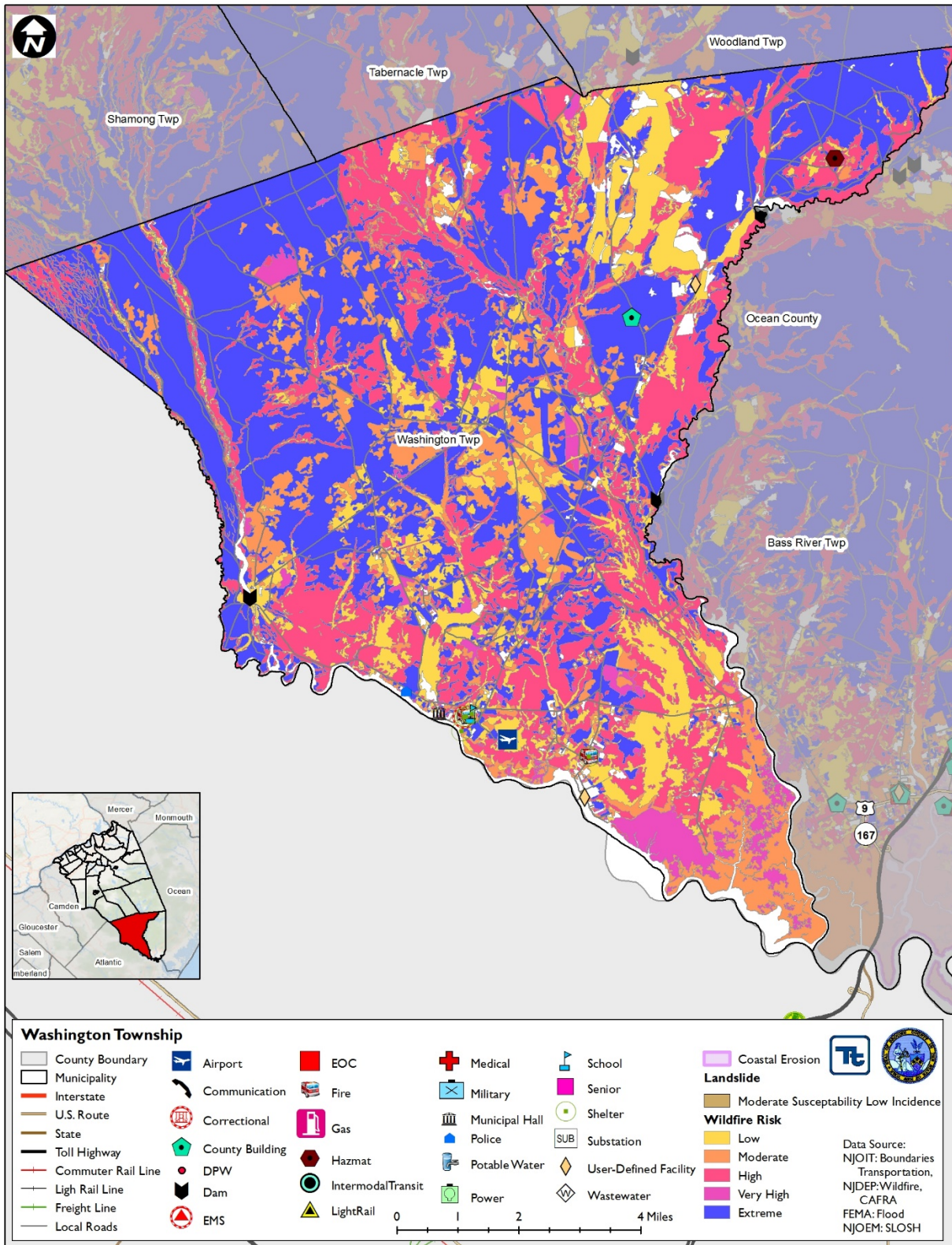






Figure 9.37-2. Township of Washington Hazard Area Extent and Location Map 2





**Action Number:**

WA-6 (Former WA-22)

**Mitigation Action Name:**

Address flood hazard and drainage situation on Route 652/River Road in the vicinity of the Lower Bank landing involving the adjacent ditching/culvert/former tide gate in the County right-of-way

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood
<b>Specific problem being mitigated:</b>	Poor drainage and stormwater management in the area is causing excessive flooding.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Acquire/elevation surrounding structures impacted by flooding – May be a cost-prohibitive action. Remove all drainage infrastructure and install new infrastructure with increased storage/flow capacity - May be a cost-prohibitive action.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Work with the County to address flood hazard and drainage for remaining areas in the intended study area.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2, 6
<b>Critical Facility (Y/N)</b>	No
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Low
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Lead: Washington Twp. OEM and Road Dept, BC Hwy Support: BCOEM Department
<b>Local Planning Mechanism</b>	Public works, hazard mitigation
<b>Potential Funding Sources</b>	Municipal Budget and County Highway
<b>Timeline for Completion</b>	Short
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 1/31/18 Status: 50% completion of drainage problem at Old Church Road/Firehouse Lane Intersection work performed and funded by Burlington County



**Action Number:**

WA-6 (Former WA-22)

**Mitigation Action Name:**

Address flood hazard and drainage situation on Route 652/River Road in the vicinity of the Lower Bank landing involving the adjacent ditching/culvert/former tide gate in the County right-of-way

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	9	
<b>Priority (H/M/L)</b>	High	



**Action Number:**

WA-7 (Former WA-23)

**Mitigation Action Name:**

Address flood hazard on Route 542/Crowleys Landing at MM 10 and develop alternate detour for evacuation of Bulltown Road/Batsto Road.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood
<b>Specific problem being mitigated:</b>	Flooding closes off a segment of this major roadway, and makes evacuation along the current route difficult for these areas.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Acquire/elevation surrounding structures impacted by flooding – May be a cost-prohibitive action. Remove all drainage infrastructure and install new infrastructure with increased storage/flow capacity - May be a cost-prohibitive action.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Now that the situation and strategies have been identified, work with the County to determine the best course of action.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2, 6
<b>Critical Facility (Y/N)</b>	No
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Low
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Lead: BC Hwy Dept and Washington Twp. OEM, BCOEM Support: NJSP
<b>Local Planning Mechanism</b>	Public works, hazard mitigation
<b>Potential Funding Sources</b>	Municipal Budget and County Highway
<b>Timeline for Completion</b>	Short
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 1/31/18 Status: Situation and possible strategies identified



**Action Number:**

WA-7 (Former WA-23)

**Mitigation Action Name:**

Address flood hazard on Route 542/Crowleys Landing at MM 10 and develop alternate detour for evacuation of Bulltown Road/Batsto Road.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	9	
<b>Priority (H/M/L)</b>	High	



**Action Number:**

WA-8 (Former WA-24)

**Mitigation Action Name:**

Continue enhancement of Bulltown Road as a strategic fuel break for WUI protection and as an alternate evacuation route detour

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Fire
<b>Specific problem being mitigated:</b>	Contiguous forest areas allow for potential wildfires to easily spread.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Clear cut additional trees from high risk areas in vicinity – May have adverse effects on the ecosystem. Construct new roadway to be used for evacuation – May have adverse effects on the ecosystem; may be cost-prohibitive
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Now that tree hazards have been removed, continue to enhance the road and clear additional hazards that may make conditions difficult in the event of a wildfire.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2, 6
<b>Critical Facility (Y/N)</b>	No
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Low
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Lead: Washington Twp. OEM, and Road Dept BCOEM; Support: State Park Service, NJ Forest Fire 2Service, Atlantic Electric
<b>Local Planning Mechanism</b>	Hazard mitigation, emergency management
<b>Potential Funding Sources</b>	NJ Forestry Services grant and local match
<b>Timeline for Completion</b>	Long
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 1/31/18 Status: Tree hazards selectively removed using 2016/2017 Forestry Grant for CSIP





**Action Number:**

WA-8 (Former WA-24)

**Mitigation Action Name:**

Continue enhancement of Bulltown Road as a strategic fuel break for WUI protection and as an alternate evacuation route detour

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	9	
<b>Priority (H/M/L)</b>	High	



**Action Number:**

WA-13 (Former WA-34)

**Mitigation Action Name:**

Support the mitigation of vulnerable structures via elevation to protect structures from future damage with repetitive loss and severe repetitive loss properties as a priority when applicable.  
 Phase 1: Identify appropriate candidates based on cost-effectiveness and repetitive loss.  
 Phase 2: Work with the property owners to implement action based on available funding from the State and FEMA and local match availability.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood
<b>Specific problem being mitigated:</b>	Repetitively flooded properties place an undue stress on the property owner and Township and efforts should be made to mitigate them.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Construct flood walls/barriers around vulnerable areas – costly and can divert floodwaters to other areas Deployable flood barriers for vulnerable areas – Requires a great deal of work to implement prior to each event
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Work with owners to explore mitigation opportunities for repetitively flooded properties, and if appropriate and feasible, carry out acquisition, relocation, elevation and floodproofing measures to protect these properties.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2
<b>Critical Facility (Y/N)</b>	No
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from County Planning, NJOEM, FEMA
<b>Local Planning Mechanism</b>	Hazard mitigation, emergency management
<b>Potential Funding Sources</b>	Grant funding
<b>Timeline for Completion</b>	Short
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 1/31/18 Status: Floodprone properties identified





**Action Number:**  
**Mitigation Action Name:**

WA-13 (Former WA-34)

Support the mitigation of vulnerable structures via elevation to protect structures from future damage with repetitive loss and severe repetitive loss properties as a priority when applicable.

Phase 1: Identify appropriate candidates based on cost-effectiveness and repetitive loss.  
 Phase 2: Work with the property owners to implement action based on available funding from the State and FEMA and local match availability.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	8	
<b>Priority (H/M/L)</b>	High	



**Action Number:**

WA-14

**Mitigation Action Name:**

Coordinate with the facility managers at Cavalier Yachts in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.  
 Phase 1: Identify most cost-effective mitigation option  
 Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Storm
<b>Specific problem being mitigated:</b>	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Floodproof existing structures – May not necessarily reduce risk. Construct floodwalls to stop flood issues. – Will most likely interrupt natural floodplain function.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Mitigation of critical facilities.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2, 6
<b>Critical Facility (Y/N)</b>	Yes
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	Medium
Plan for Implementation	
<b>Responsible Organization</b>	Municipality with support from County
<b>Local Planning Mechanism</b>	Hazard mitigation, emergency management
<b>Potential Funding Sources</b>	HMA Grants, Municipal Budget
<b>Timeline for Completion</b>	Short Term, DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 5/31/18 Status: New Action



**Action Number:**  
**Mitigation Action Name:**

WA-14

Coordinate with the facility managers at Cavalier Yachts in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.  
 Phase 1: Identify most cost-effective mitigation option  
 Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	7	
<b>Priority (H/M/L)</b>	Medium	



**Action Number:**

WA-15

**Mitigation Action Name:**

Coordinate with the facility managers at NJ State Park Service – Southern Region in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.  
 Phase 1: Identify most cost-effective mitigation option  
 Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Storm
<b>Specific problem being mitigated:</b>	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Floodproof existing structures – May not necessarily reduce risk. Construct floodwalls to stop flood issues. – Will most likely interrupt natural floodplain function.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Mitigation of critical facilities.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2, 6
<b>Critical Facility (Y/N)</b>	Yes
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	Medium
Plan for Implementation	
<b>Responsible Organization</b>	Municipality with support from County
<b>Local Planning Mechanism</b>	Hazard mitigation, emergency management
<b>Potential Funding Sources</b>	HMA Grants, Municipal Budget
<b>Timeline for Completion</b>	Short Term, DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 5/31/18 Status: New Action



**Action Number:**  
**Mitigation Action Name:**

WA-15

Coordinate with the facility managers at NJ State Park Service – Southern Region in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.  
 Phase 1: Identify most cost-effective mitigation option  
 Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	7	
<b>Priority (H/M/L)</b>	Medium	



**Action Number:**

WA-16

**Mitigation Action Name:**

Coordinate with the facility managers at Pacemaker Heliport in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.  
 Phase 1: Identify most cost-effective mitigation option  
 Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Storm
<b>Specific problem being mitigated:</b>	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Floodproof existing structures – May not necessarily reduce risk. Construct floodwalls to stop flood issues. – Will most likely interrupt natural floodplain function.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Mitigation of critical facilities.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2, 6
<b>Critical Facility (Y/N)</b>	Yes
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	Medium
Plan for Implementation	
<b>Responsible Organization</b>	Municipality with support from County
<b>Local Planning Mechanism</b>	Hazard mitigation, emergency management
<b>Potential Funding Sources</b>	HMA Grants, Municipal Budget
<b>Timeline for Completion</b>	Short Term, DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 5/31/18 Status: New Action



**Action Number:**  
**Mitigation Action Name:**

WA-16

Coordinate with the facility managers at Pacemaker Heliport in the Township to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.  
 Phase 1: Identify most cost-effective mitigation option  
 Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	7	
<b>Priority (H/M/L)</b>	Medium	



**Action Number:** WA-18

**Mitigation Action Name:** The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL). At risk areas include:

- River Road

Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood
<b>Specific problem being mitigated:</b>	Repetitively flooded properties place an undue stress on the property owner and Township and efforts should be made to mitigate them.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No Action - current problem continues Construct flood walls/barriers around vulnerable areas – costly and can divert floodwaters to other areas Deployable flood barriers for vulnerable areas – Requires a great deal of work to implement prior to each event
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Work with owners to explore mitigation opportunities for repetitively flooded properties, and if appropriate and feasible, carry out acquisition, relocation, elevation and floodproofing measures to protect these properties.
<b>Mitigation Action Type</b>	SIP
<b>Goals Met</b>	1, 2
<b>Critical Facility (Y/N)</b>	No
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Municipality with support from County
<b>Local Planning Mechanism</b>	Hazard mitigation, emergency management
<b>Potential Funding Sources</b>	Grant funding; Municipal budget
<b>Timeline for Completion</b>	Short
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 5/31/18 Status: New Action





**Action Number:**  
**Mitigation Action Name:**

WA-18

The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL). At risk areas include:

- River Road

Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	8	
<b>Priority (H/M/L)</b>	High	