



SOMERSET COUNTY

HAZARD MITIGATION PLAN

SOMERSET COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

FINAL PLAN UPDATE
JULY 2019

www.co.somerset.nj.us/hmp

Section 9.11: Township of Hillsborough Annex

*Prepared by the Somerset County
Mitigation Planning Committee*



9.11 Township of Hillsborough

This section presents the jurisdictional annex for the Township of Hillsborough (hereinafter also referred to as Hillsborough or Hillsborough Township).

9.11.1 HAZARD MITIGATION PLAN POINTS OF CONTACT

Hazard Mitigation Plan Points of Contact					
Primary Point of Contact			Alternate Point of Contact		
Name: John Sheridan, Emergency Management Coordinator Address: 39 South Branch Road Hillsborough, New Jersey 08844 Phone Number: (908) 369-4323 x 652 Fax Number: (908) 369-7334 E-mail Address: jsheridan@hillsboroughhoem.org			Name: Thomas Belanger, Township Engineer Address: 39 South Branch Road Hillsborough, New Jersey 08844 Phone Number: (908) 369-4460 Fax Number: (908) 369-3954 E-mail Address: tbelanger@hillsborough-nj.org		
Municipal HMP Committee Members					
Local Jurisdiction Role/Position	Name	Email	Phone	Date Notified About Mitigation Plan Development	Agreed to participate? (Yes/No)
Land Use/Community Planner	David Maski	dmaski@hillsborough-nj.org	908-369-8382	October 2017	Yes
Emergency Manager	John Sheridan	js Sheridan@hillsboroughhoem.org	908-369-4323	October 2017	Yes
Floodplain Manager/ Floodplain Administrator	Thomas Belanger	tbelanger@hillsborough-nj.org	908-369-4460		Yes
Public Works Director / City Engineer	Rich Resavy/ Thomas Belanger	rresavy@hillsborough-nj.org / tbelanger@hillsborough-nj.org	908-369-3950	October 2017	Yes
Building Code Official	John Fiedler	jfiedler@hillsborough-nj.org	908-369-5882	October 2017	Yes
Fiscal/Budget Officer					Yes
Manager/Administrator	Anthony Ferrera	aferrera@hillsborough-nj.org	908-369-3535	October 2017	Yes
Elected Officials	Mayor Carl Suraci	csuraci@hillsborough-nj.org	908-369-3535	October 2017	Yes
Other 1:	Deputy Mayor Gloria McCauley	gmccauley@hillsborough-nj.org	908-369-3535	October 2017	Yes
Other 2:	Frank Delcore	fdelcore@hillsborough-nj.org	908-369-3535	October 2017	Yes
Other 3:	Doug Tomson	dtomson@hillsborough-nj.org	908-369-3535	October 2017	Yes
Other 4:	Shawn Lipani*	slipani@hillsborough-nj.org	908-369-3535	October 2018	Yes
note: *Greg Burchette served through September 2018 and was replaced by Shawn Lipani in October 2018					

9.11.2 PROFILE

9.11.2.1 Population

The population of Hillsborough is estimated to be 38,303, based on information gathered during the 2010 U.S. Census. Census population estimates as of July 2017 indicated a total population of 40,003.

9.11.2.2 Location

Hillsborough is in the southern portion of Somerset County. Hillsborough is 54 square miles, the largest jurisdiction in Somerset County. Route 206 is the main State highway running north/south through the Township. County Route 514 (Amwell Road) runs east/west through the Township. Hillsborough is bordered by Hunterdon County to the west; Branchburg, Raritan, and Somerville to the north; Manville, Franklin, and Millstone to the east; and Montgomery to the south.

9.11.2.3 Brief History

Hillsborough assumed its own identity in 1771 when it became a Township. Hillsborough and surrounding areas were first explored by the Dutch in the middle of the 17th Century. Hillsborough Road got its name from early landowners. Some believe that Hillsborough was named for Lord Hillsborough.

9.11.2.4 Governing Body Format

Hillsborough's governing body is in the form of a township committee, which consists of the mayor, deputy mayor, and three committeepersons. The Township also contains the following departments: administration/clerk, building, engineering, fire safety, health, municipal court, office of emergency management, parks and recreation, planning, police, public works, social services, tax and finance, tax assessment, and zoning.

9.11.2.5 Growth/Development Trends

Hillsborough did not note any major residential or commercial development, or major infrastructure development planned for the next 5 years in the municipality (updated in 2018).

New Development/Potential Development in Municipality						
Property Name	Type (Residential or Commercial)	No. of Structures	Address	Block and Lot	Known Hazard Zone	Description /Status
N/A	N/A	N/A	N/A	N/A	N/A	N/A

The Township's Flood Damage Prevention Ordinance will work to protect new development from the effects of natural hazards.

9.11.3 NATURAL HAZARD EVENT HISTORY SINCE 2014

Somerset County has a history of natural hazard events as detailed in 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. The table below presents a summary of events that have occurred since the 2014 HMP and indicates the range and impact of natural hazard events in the community. Information regarding specific damages is included if available based on reference material or local sources. For details of events prior to 2014, refer to Section 5.0 of this plan.

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Cold/Wind Chill	N/A	N/A	January 4, 2014	A high pressure system that moved over NJ coupled with fresh snow cover from a winter storm on the 2nd and 3rd gave the area one of its coldest winter mornings in years. A temperature -5°F was reported in Hillsborough.
Strong Wind	N/A	N/A	January 6, 2014	No local damage reported
Flood	N/A	N/A	January 6, 2014	No local damage reported
Cold/Wind Chill	N/A	N/A	January 7, 2014	No local damage reported
Cold/Wind Chill	N/A	N/A	January 22, 2014	No local damage reported
Winter Storm	N/A	N/A	February 12, 2014	No local damage reported
Flood	N/A	N/A	February 22, 2014	No local damage reported
Strong Wind	N/A	N/A	March 12, 2014	No local damage reported
Flood	N/A	N/A	March 30, 2014	Heavy precipitation caused minor to moderate flooding along the Millstone River that lasted through the night of the 31st and into the late afternoon of April 1st. Event precipitation totals included 3.28 inches in Hillsborough Township.
Flood	N/A	N/A	April 1, 2014	No local damage reported
Thunderstorm Wind	N/A	N/A	April 15, 2014	No local damage reported
Flood	N/A	N/A	April 15, 2014	Isolated river flooding due to 1-2 inches of rain. Flooding occurred along the North Branch of the Raritan River at South Branch; it crested at 7.62 feet. Event precipitation totals included 1.31 inches in Hillsborough Township.

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Flood	N/A	N/A	April 30, 2014 to May 1, 2014	Very heavy rain caused considerable poor drainage flooding in Somerset County as well as major river flooding. Major flooding occurred along the Millstone and the main stem of the Raritan River, the worst flooding since Tropical Storm Irene on August 28th and 29th in 2011. Flooding forced the closure of U.S. Route 206 in both directions south of Brooks Boulevard and south of County Route 608 or Dukes Parkway in Hillsborough Township. Many other roadways were flooded and closed in the county. Event precipitation totals included. Two million dollars in damages were reported across the county.
Thunderstorm Wind	N/A	N/A	May 10, 2014	No local damage reported
Earthquake, Magnitude 1.9, 6 km N of Boonton (Montville Twp.)	N/A	N/A	May 31, 2014	No local damage reported
Earthquake, Magnitude 1.0, 13 km SW of Ramblewood, NJ (Laurel Springs Boro.)	N/A	N/A	June 19, 2014	No local damage reported
Thunderstorm Wind	N/A	N/A	July 2, 2014	A severe thunderstorm knocked down large tree limbs and wires along Zion Road in the Neshanic section of Hillsborough Township. Downed wires surrounded a truck on Castle Hill Lane. No injuries were reported.
Heat	N/A	N/A	July 2, 2014	A hot start to July peaked on the 2nd in interior NJ with high temperatures in the lower to mid-90s and afternoon heat index values reaching 100° to 105°F. Highest temperatures included 96°F in Hillsborough.
Thunderstorm Wind	N/A	N/A	July 3, 2014	No local damage reported
Flash Flood	N/A	N/A	July 3, 2014	Thunderstorms with very heavy rain caused flash flooding of roadways and smaller streams in central Somerset County. Event precipitation totals included 1.72 inches in Hillsborough Township.

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Thunderstorm Wind	N/A	N/A	July 8, 2014	No local damage reported
Earthquake, Magnitude 1.6, 3 km W of Jersey City, NJ (Kearny Town)	N/A	N/A	July 8, 2014	No local damage reported
Flood	N/A	N/A	July 16, 2014	No local damage reported
Earthquake, Magnitude 1.2, 4 km SW of Ringwood, NJ (Ringwood Boro.)	N/A	N/A	July 28, 2014	No local damage reported
Flash Flood	N/A	N/A	August 21, 2014	No local damage reported
Earthquake, Magnitude 1.3, 2 km S of Park Ridge, NJ (Woodcliff Lake Boro.)	N/A	N/A	September 3, 2014	No local damage reported
Flood	N/A	N/A	December 9, 2014	The runoff from heavy rain caused minor flooding along some portions of the Millstone River. The Millstone River at nearby Griggstown crested at 11.76 feet. Event precipitation totals included 1.25 inches in Hillsborough Township.
Earthquake, Magnitude 1.9, 13 km SE of Twin Rivers, NJ (Millstone Twp.)	N/A	N/A	December 13, 2014	No local damage reported
Earthquake, Magnitude 1.5, 2 km SW of Clifton, NJ (Bloomfield Twp.)	N/A	N/A	December 28, 2014	No local damage reported
Cold/Wind Chill	N/A	N/A	January 7, 2015	No local damage reported

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Flood	N/A	N/A	January 18, 2015	Heavy rain caused poor drainage flooding as well as flooding along waterways in Somerset County. In Hillsborough Township, high water advisories were in effect on Millstone River Road between Manville and Franklin Drives. Elsewhere in the township, Riverside Drive was closed between Mill Lane and Clawson Avenue along the South Branch of the Raritan River. The Millstone River at nearby Griggstown had moderate flooding and crested at 12.91 feet. The North Branch of the Raritan River at the village of South Branch had minor flooding and crested at 8.18 feet. Event precipitation totals included 1.90 inches in Hillsborough Township.
Strong Wind	N/A	N/A	February 2, 2015	No local damage reported
Cold/Wind Chill	N/A	N/A	February 13, 2015	No local damage reported
Strong Wind	N/A	N/A	February 15, 2015	No local damage reported
Cold/Wind Chill	N/A	N/A	February 15, 2015	No local damage reported
Cold/Wind Chill	N/A	N/A	February 16, 2015	No local damage reported
Cold/Wind Chill	N/A	N/A	February 20, 2015	No local damage reported
Cold/Wind Chill	N/A	N/A	February 24, 2015	Air and wind chill temperatures were nearly the same as the arctic outbreak was not accompanied by strong winds. Morning low temperatures averaged 25-35° colder than normal. Actual low temperatures included -6°F in Hillsborough.
Flood	N/A	N/A	March 11, 2015	No local damage reported
Flood	N/A	N/A	March 14, 2015	No local damage reported
Earthquake, Magnitude 1.2, 2 km SW of Clifton, NJ (Bloomfield Twp.)	N/A	N/A	March 27, 2015	No local damage reported
Strong Wind	N/A	N/A	April 4, 2015	No local damage reported
Flash Flood	N/A	N/A	May 31, 2015	No local damage reported
Earthquake, Magnitude 1.2, 2 km N of Wanaque, NJ (Ringwood Boro.)	N/A	N/A	July 12, 2015	No local damage reported

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Heat	N/A	N/A	July 19, 2015	High temperatures in most areas reached into the lower to mid-90s on the 19th and 20th. The combination of heat and humidity brought afternoon heat index values as high as 100-105°F, some of the highest indexes of the summer. Highest temperatures included 95°F in Hillsborough.
Earthquake, Magnitude 2.7, 3.5 km N of Bernardsville, NJ (Bernardsville Boro.)	N/A	N/A	August 14, 2015	No local damage reported
Flash Flood	N/A	N/A	August 19, 2015	No local damage reported
Flood	N/A	N/A	August 19, 2015	No local damage reported
Earthquake, Magnitude 1.4, 5 km WNW of Fairfield, NJ (Fairfield Twp.)	N/A	N/A	August 22, 2015	No local damage reported
Drought and Excessive Heat	N/A	N/A	April 2015 – September 2015	No local damage reported
Combined effects of freeze, excessive heat, and drought	N/A	N/A	April 2016 – September 2016	No local damage reported
Earthquake, Magnitude 2.1, 2.4 km NW of Ringwood, NJ (Ringwood Boro.)	N/A	N/A	January 2, 2016	No local damage reported
Severe Winter Storm and Snowstorm (Blizzard)	DR-4264	Yes	January 22-24, 2016	All but four of NJ's 21 counties were declared during this event. Over \$73 million of FEMA Public Assistance grant dollars were obligated statewide. Record snowfall occurred across most of the state. In Hillsborough, snowfall totals included 20.7 inches.
Earthquake, Magnitude 1.1, 1.1 km NW of Butler, NJ (Bloomingdale Boro.)	N/A	N/A	February 19, 2016	No local damage reported
Flash Flood	N/A	N/A	February 24, 2016	No local damage reported
Thunderstorm Wind	N/A	N/A	April 2, 2016	No local damage reported

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Earthquake, Magnitude 0.8, 4.4 km N of Butler, NJ (Bloomingdale Boro.)	N/A	N/A	May 27, 2016	No local damage reported
Lightning	N/A	N/A	June 8, 2016	No local damage reported
Thunderstorm Wind	N/A	N/A	June 8, 2016	No local damage reported
Lightning	N/A	N/A	June 28, 2016	Thunderstorms produced strong winds. A house in South Branch (Hillsborough Township) was struck by lightning, causing a reported \$1,000 in damages.
Thunderstorm Wind	N/A	N/A	June 28, 2016	No local damage reported
Earthquake, Magnitude 1.1, 1 km NW of Butler, NJ (Butler Boro.)	N/A	N/A	July 4, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 8, 2016	No local damage reported
Flood	N/A	N/A	July 8, 2016	No local damage reported
Thunderstorm Wind	N/A	N/A	July 18, 2016	No local damage reported
Thunderstorm Wind	N/A	N/A	July 25, 2016	Showers and thunderstorms developed in the afternoon and evening, and became severe in spots producing locally heavy rains and about 40,000 without power across the state. Thunderstorm winds ripped a chimney off a house and moved two cars 100 feet in South Branch (Hillsborough Township).
Thunderstorm Wind	N/A	N/A	July 25, 2016	No local damage reported
Thunderstorm Wind	N/A	N/A	July 25, 2016	No local damage reported
Flood	N/A	N/A	July 25, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 30, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 31, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 31, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 31, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 31, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 31, 2016	No local damage reported
Heavy Rain	N/A	N/A	July 31, 2016	No local damage reported
Flash Flood	N/A	N/A	July 31, 2016	No local damage reported

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Earthquake, Magnitude 0.8, 2.2 km SW of Clifton, NJ (Bloomfield Twp.)	N/A	N/A	July 31, 2016	No local damage reported
Earthquake, Magnitude 1.0, 2 km N of Wanaque, NJ (Wanaque Boro.)	N/A	N/A	August 9, 2016	No local damage reported
Earthquake, Magnitude 0.5, 1 km N of Butler, NJ (Bloomingdale Boro.)	N/A	N/A	August 9, 2016	No local damage reported
Earthquake, Magnitude 0.6, 5 km NE of Wanaque, NJ (Ringwood Boro.)	N/A	N/A	September 20, 2016	No local damage reported
Earthquake, Magnitude 1.5, 2.6 km W of Belmar, NJ (Westville Boro.)	N/A	N/A	November 6, 2016	No local damage reported
Earthquake, Magnitude 2.0, 16.3 km E of Highlands, NJ (Middletown Twp.)	N/A	N/A	November 6, 2016	No local damage reported
Earthquake, Magnitude 1.31, 1.4 km S Morris Plains, NJ (Morris Plains Boro.)	N/A	N/A	March 25, 2017	No local damage reported
Flood	N/A	N/A	March 31, 2017	No local damage reported
Hail	N/A	N/A	May 14, 2017	No local damage reported
Hail	N/A	N/A	May 31, 2017	One thunderstorm became severe tracking northeast from Hunterdon into Somerset and Sussex counties. Numerous hail reports of 0.5 and 0.75 inches were recorded. A couple of the reports met severe criteria. One inch and nickel size hail both were measured at slightly different times in South Branch.
Flood	N/A	N/A	June 24, 2017	No local damage reported
Flood	N/A	N/A	July 22, 2017	No local damage reported
Flood	N/A	N/A	August 22, 2017	No local damage reported
Flood	N/A	N/A	August 22, 2017	No local damage reported

Natural Hazard Event History (2014 to present)				
Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Heavy Rain	N/A	N/A	August 23, 2017	No local damage reported
Earthquake, Magnitude 1.71, 3.7 km SW of Morris Plains, NJ (Morris Twp.)	N/A	N/A	September 25, 2017	No local damage reported
Earthquake, Magnitude 0.98, 2.7 km SW of Morris Plains, NJ (Morris Twp.)	N/A	N/A	September 30, 2017	No local damage reported
Flood	N/A	N/A	October 29, 2017	No local damage reported
Earthquake, Magnitude 1.38, 3.5 km NW of Keansburg, NJ (Keansburg Boro.)	N/A	N/A	November 8, 2017	No local damage reported
Severe Winter Storm and Snowstorm (Blizzard)	DR-4368	Yes	March 6, 2018	Although all portions of the county experienced significant snowfall from this event, the higher amounts (around one and one half feet) occurred in the eastern sections of the county closer to the off shore low pressure system. Thundersnow also occurred in a few locations. Some reported snowfall totals included 19.0 inches in Hillsborough.

Note:

DR = Major Disaster Declaration

EM = Emergency Declaration

N/A = Not applicable

Boro. = Borough

Twp. = Township

9.11.4 NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

The table below summarizes the vulnerability risk rankings of potential hazards affecting Hillsborough (updated in 2018).

Natural Hazard Risk/Vulnerability Risk Ranking				
Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Flood	1% Annual Chance: \$42,500,000 0.2% Annual Chance: \$64,800,000	Frequent	18	High ^g
Severe Storm	100-Year MRP: \$5,098,432 500-Year MRP: \$21,436,989 Annualized Loss: \$219,327	Frequent	39	High
Severe Winter Storm	1% of GBS: \$22,077,850 5% of GBS: \$5,022,009	Frequent	27	Medium
Earthquake	500-Year MRP: \$7,215,823 2,500-Year MRP: \$108,326,621 Annualized Loss: \$109,415	Occasional	12	Low
Drought	Not available	Occasional	16	Medium
Extreme Temperature	Not available	Frequent	18	Medium
Wildfire	Not available	Occasional	28	Medium

Note

- Building damage ratio estimates based on FEMA 386-2 (August 2001)
- The valuation of general building stock and loss estimates was based on custom inventory for Somerset County.
- High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 15-30
Low = Total hazard risk ranking below 15
- Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- Loss estimates for the flood and earthquake hazards represent both structure and contents.
- The HAZUS-MH earthquake model results are reported by Census Tract.
- This rank was adjusted based on qualitative input from county/jurisdictional representatives due to hazard event history and other municipality-specific considerations.

9.11.5 CAPABILITY ASSESSMENT

This section describes the following capabilities of the local jurisdiction:

- Legal and regulatory capability;
- Administrative and technical capability;
- Fiscal capability;
- Community resiliency;
- Community political capability; and
- Community classification.

9.11.5.1 Legal and Regulatory Capability

The table below summarizes the regulatory tools that are available to Hillsborough. The Township reviewed its responses from the 2014 HMP and has updated any information that has changed since that time.

Legal and Regulatory Capability			
Regulatory Tools (Codes, Ordinances, Plans)	Do you have this? (Y or N)	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of Adoption)
1) Building Code	Y	Hillsborough Building Dept.	International Building Code – New Jersey Edition, NJAC 5:24-3.14; 2/20/07
2) Zoning Ordinance	Y	-	Twp. code chapter 188;
3) Subdivision Ordinance	Y	-	Twp. code Chapter 188;
4) NFIP Flood Damage Prevention Ordinance	Y	Hillsborough Engineering Dept.	Flood Damage Prevention Ordinance; 9/12/07
4a) Cumulative Substantial Damages	-	-	-
4b) Freeboard	-	-	-
5) Growth Management	-	-	-
6) Floodplain Management / Basin Plan	-	-	-
7) Stormwater Management Plan/Ordinance	Y	-	-
8) Comprehensive Plan / Master Plan/ General Plan	Y	-	-
9) Capital Improvements Plan	Y	-	Twp. Master Plan

Legal and Regulatory Capability			
Regulatory Tools (Codes, Ordinances, Plans)	Do you have this? (Y or N)	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of Adoption)
10) Site Plan Review Requirements	Y	-	Zoning Ordinance
11) Open Space Plan	-	-	-
12) Stream Corridor Management Plan	-	-	-
13) Watershed Management or Protection Plan	-	-	-
14) Economic Development Plan	-	-	-
15) Comprehensive Emergency Management Plan	Y	OEM	2/2013
16) Emergency Response Plan	Y	OEM	2/2013
17) Post-Disaster Recovery Plan	-	-	-
18) Post-Disaster Recovery Ordinance	-	-	-
19) Real Estate Disclosure Requirement	-	-	-
20) Other (Special Purpose Ordinances such as critical or sensitive areas)	-	-	-

Notes:

- = Available

N = No

Y = Yes

9.11.5.2 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to Hillsborough. The Township reviewed its responses from the 2014 HMP and has updated any information that has changed since that time.

Administrative and Technical Capability		
Staff / Personnel Resources	Available (Y or N)	Department / Agency / Position
1) Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	Contracted/Maser Consulting
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Contracted/Maser Consulting
3) Planners or engineers with an understanding of natural hazards	Y	Contracted/Maser Consulting
4) NFIP Floodplain Administrator	Y	Hillsborough Engineering Department, Assistant Township Engineer
5) Surveyor(s)	Y	Contracted/Maser Consulting
6) Personnel skilled or trained in GIS applications	Y	Contracted/Maser Consulting
7) Scientist familiar with natural hazards	Y	Contracted/Maser Consulting
8) Emergency Manager	Y	OEM
9) Grant Writer(s)	N	-
10) Staff with expertise or training in benefit/cost analysis	N	-

Notes:

- = Available

N = No

Y = Yes

9.11.5.3 Fiscal Capability

The table below summarizes financial resources available to Hillsborough. The Township reviewed its responses from the 2014 HMP and has updated any information that has changed since that time.

Fiscal Capability	
Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)
1) Community Development Block Grants (CDBG)	Y
2) Capital Improvements Project Funding	Y
3) Authority to levy taxes for specific purposes	Y
4) User fees for water, sewer, gas or electric service	Y
5) Impact fees for homebuyers or developers of new development/homes	Y
6) Incur debt through general obligation bonds	Y
7) Incur debt through special tax bonds	Y
8) Incur debt through private activity bonds	-
9) Withhold public expenditures in hazard-prone areas	-
10) State mitigation grant programs	-
11) Other	-

Notes:

- = Available

N = No

Y = Yes

9.11.5.4 Overall Capabilities

The Township of Hillsborough’s 2018 assessment of its overall capabilities to implement hazard mitigation strategies in each of the above categories, in addition to a local assessment of how these capabilities could be expanded and/or improved to reduce risk, is presented in the table below.

Overall legal and regulatory capability to implement hazard mitigation strategies	Overall technical capability to implement hazard mitigation strategies	Overall fiscal capability to implement hazard mitigation strategies	Overall administrative capability to implement hazard mitigation strategies	Community’s willingness to enact policies and programs that reduce hazard vulnerabilities
High	High	Moderate	High	High
How these capabilities can be expand and/or improved to reduce risk				
None identified; existing capabilities are determined to be sufficient to support municipal hazard mitigation goals and initiatives.				

9.11.5.5 Community Classifications

The table below summarizes classifications for community program available to Hillsborough.

Community Classifications		
Program	Classification	Date Classified
Community Rating System (CRS) *	6	05/01/2007
Building Code Effectiveness Grading Schedule (BCEGS)	NP	
Public Protection	NP	
Storm Ready	NP	
Firewise	NP	

Notes:
 - = Unavailable
 N/A = Not applicable
 NP = Not participating.
 * CRS Ranking as of October 2017

The classifications listed above relate to Hillsborough’s ability to provide effective services to lessen its vulnerability to the natural 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 1,000 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 <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

9.11.6 MITIGATION STRATEGY

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

9.11.6.1 Past Mitigation Actions/Status

The status of all 2014 HMP initiatives was evaluated by the Township of Hillsborough in 2018 and is presented in the following table. The community has indicated that local priorities have not changed since the last version of the plan.

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB1 (HB4)	Install emergency access road to Green Hills Development. All roads leading to the development flood during storm events.	Medium	Flood					X	Lack of funding	X		No changes
HB2 (HB1)	Elevate flood prone structures, targeting those known to have experience repetitive damages.	Medium	Flood	Twp. Committee; Engineering; OEM				X	Lack of funding	x		No changes
HB3 (HB2)	Seek to acquire and/or relocate flood prone properties through voluntary participation, targeting those properties known to have experienced repetitive damages particularly in the Green Hill section of the township.	Medium	Flood	Twp. Committee; Engineering; OEM				X	Lack of funding	x		No changes
HB4 (HB3)	Consider participating in CRS program.	Medium	All	Twp. Committee; Planning				X	Lack of staff availability	x		No changes

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB5 (HB5)	Where appropriate, seek to retrofit critical facilities in hazard prone areas to protect structures from future damage and retrofit with emergency generators for critical facilities including firehouses and shelters.	Medium	All	Twp. Committee			X		Retrofits have been completed in some locations, but opportunities exist for further action during the next five year plan maintenance window	x		No changes

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB6	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction:- Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages.- Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation.- Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures.- Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.	High	All Hazards	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA			X		Education and outreach activities have been completed but opportunities exist for further action during the next five year plan maintenance window	x		No changes

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB7	Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas, specifically as identified in Section 9.11.11.	Medium	All Hazards	Municipality with support from County, NJOEM and FEMA			X		Activities have been completed, but opportunities exist for further action during the next five year plan maintenance window	x		No changes
HB8	Improve communication systems.	Medium	All Hazards	Municipality with support from County, NJOEM and FEMA			X		Activities have been completed, but opportunities exist for further action during the next five year plan maintenance window	x		No changes
HB9	Develop programs/procedures to capture and archive loss data from events. Examples include: Record location and length of roadway closures; Develop a database of residential and commercial property damage, including permit history for such repairs; High water marks, perhaps painting phone poles with high water marks and or regulatory Base Flood Elevations (BFEs).	Medium	All Hazards	Municipality with support from County, NJOEM and FEMA			X		Activities have been completed, but opportunities exist for further action during the next five year plan maintenance window	x		
HB10	Obtain and install backup power sources at critical facilities.	Medium	All Hazards	Municipality with support from County, NJOEM and FEMA	X				Completed		x	Completed

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB11	Participate in local, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including: Support the performance of enhanced risk and vulnerability assessments for hazards of concern. Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types based on FEMA-154 "Rapid Visual Screening of Buildings for Potential Seismic Hazards" methodologies). It is recognized that these programs will need to be initiated and supported at the County and/or State level, and will require training, tools and funding provided at the county, state and/or federal level.	Medium	All Hazards	Hazard Mitigation Plan Coordinator			X		Ongoing	X		Working with departments

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB12	Support ongoing updates of Comprehensive Emergency Management Plans.	High	All Hazards	Municipality with support from County Emergency Management			X		Ongoing	x		No changes
HB13	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations.	High	All Hazards	Municipality with support from County, NJOEM, FEMA and surrounding communities			X		Ongoing	x		No changes
HB14	Identify and develop agreements with entities that can provide support with FEMA/NJOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/NJOEM paperwork compilation, submissions, record-keeping.	Medium	All Hazards	Municipality with support from County, NJOEM and FEMA			X		Ongoing	x		Working with all departments
HB15	Work with regional agencies (i.e. County and NJOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	Medium	All Hazards	Municipality with support from County, NJOEM and FEMA			X		Ongoing	x		Working with all departments

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB16 (HB6)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan (through participating in the 5 year Plan Update), as defined in Section 7.0.	High	All Hazards	Municipality with support from Planning Partners			X		Ongoing	X		No changes
HB17	Purchase, relocate, or elevate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as priority.	Medium	Flood,	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from County Planning, NJOEM, FEMA				X	Lack of funding	X		No changes
HB18 (HB7)	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community.	High	Flood, Severe Storm	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NJOEM, FEMA			X		Completed, but will also be undertaken during the next five year plan maintenance window	X		No changes
HB19	Obtain and archive elevation certificates.	High	Flood, Severe Storm	NFIP Floodplain Administrator			X		Lack of staff availability	X		No changes

2014 HMP Initiative #	Mitigation Initiative Description	2014 HMP Priority	Hazard(s) Mitigated	Lead and Support Agencies	Status				Status Details	Relevance		Relevance Details
					Completed	Initiated but Not Completed	Ongoing Type of Activity	Not Initiated		Still Relevant - Carry Forward to Updated Mitigation Strategy	No Longer Relevant - Omit from Updated Mitigation Strategy	
HB20	Promote the participation of Floodplain Administrators within the planning process and other activities.	Medium	Flood	Municipality with support from County, NJOEM and FEMA			X		Ongoing	X		No changes
HB21	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.	Medium	Severe Storm	Municipality with support from County, NJOEM and FEMA			X		Ongoing	X		No changes
HB22	Adopt regulations for undergrounding utilities in new developments.	H	Severe Storm	Municipal Council		X			Not yet completed	X		No changes completed
HB23	Implement permit fee waivers for installation of backup power for private property.	H	Severe Storm	Municipal Council				X	Not applicable to Hillsborough		X	Not applicable to Hillsborough
HB24	Provide public education and outreach on proper installation and/or use of backup power	H	Severe Storm	Municipal Clerk			X		Completed, but will also be undertaken during the next five year plan maintenance window	X		Construction Department advises
HB25	Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.	H	Severe Storm	Municipal Code Enforcement			X		Completed but will also be undertaken during the next five year plan maintenance window by utility company	X		Ongoing by utility company

9.11.6.2 Hazard Vulnerabilities Identified

The Township has identified the Green Hills Development off of Dukes Parkway East to be an area of concern.

It is estimated that in Hillsborough, 195 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). \$1,946,578,000 (25.3%) of the municipality's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

There are 185 NFIP policies in the community and there are 53 policies located within the 1% annual chance flood area. FEMA has identified 21 Repetitive Loss (RL) properties including 3 Severe Repetitive Loss (SRL) properties in the municipality.

HAZUS-MH estimates that for a 1% annual chance flood, \$42,500,000 (0.55%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 1,082 households may be displaced, 615 people may seek short-term sheltering, and an estimated 1,304 tons of debris could be generated.

Further information regarding the summary of the community's participation in the NFIP is provided in the table below.

NFIP Summary								
Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Boundary (3)	# Policies in 0.2% - Boundary (3)	# Policies Outside the 0.2% Flood Hazard (3)
Hillsborough (T)	185	159	\$6,473,024	21	3	53	48	84

Source:

- (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2 via NJDEP in August 2017 and are current as of March 31, 2017. Please note the total number of repetitive loss properties includes the severe repetitive loss properties.
- (2) Information regarding total building and content losses was gathered from the claims file provided by FEMA Region 2 (current as of Township of Hillsborough).
- (3) The policy locations used are based on the latitude and longitude provided by FEMA Region 2.

HAZUS-MH critical facility damage estimates for Hillsborough are provided below.

Critical Facility Damage Estimate										
Name	Municipality	Type	Exposure		Potential Loss from 1% Flood Event			Potential Loss from 0.2% Flood Event		
			1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	Days to 100-Percent ⁽¹⁾	Percent Structure Damage	Percent Content Damage	Days to 100-Percent ⁽¹⁾
Pump Station	Hillsborough (T)	WW	x	x	-	-	-	-	-	-
Pump Station	Hillsborough (T)	WW	x	x	-	-	-	-	-	-
Riverview/Laidlaw	Hillsborough (T)	Bus Facility		x	-	-	-	30.0	33.4	NP

Source: HAZUS-MH 4.0

Notes:

- = No loss (calculated by HAZUS-MH 4.0)

X = Facility located within the DFIRM boundary.

DFIRM = Digital Flood Insurance Rate Map

NA = Not available

Twp = Township

WW = Wastewater

- (1) HAZUS-MH 4.0 provides a general indication of the maximum restoration time for 100% operations. Clearly, a great deal of effort is needed to quickly restore essential facilities to full functionality; therefore, this will be an indication of the maximum downtime (HAZUS-MH 4.0 User Manual).
- (2) Please note in some cases, a facility may be located in the DFIRM flood hazard boundary; however HAZUS did not calculate potential loss. This may be because the depth of flooding does not amount to any damages to the structure according to the depth damage function used in HAZUS for that facility type.

Please refer to the Hazard Profiles in Section 5 of this plan for additional vulnerability information relevant to this jurisdiction.

9.11.7 PROPOSED HAZARD MITIGATION INITIATIVES

The list below represents a summary of community mitigation initiatives developed in 2018 as part of the most recent plan update. The Township of Hillsborough has identified no changes in local priorities since the last version of the plan in 2014. Detailed Action Worksheets are included only for NEW Mitigation Actions/Projects. Some of the identified mitigation initiatives in the table below 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. Please note that the Township has opted to carry forward legacy initiative numbers from the 2014 and 2009 plans, respectively, for internal municipal tracking purposes, formatted as: “2019# [2014# (2009#)]”.

Proposed Hazard Mitigation Initiatives														
2019 Initiative Number	Initiative Name	Initiative Description	New Initiative or Carried Forward	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2018 Action Status
HB1 [HB1 (HB4)]	Emergency Access Road	Install emergency access road to Green Hills Development. All roads leading to the development flood during storm events.	Carried Forward	New	Flood	1,2,6,8	Engineering; OEM	Medium	Medium	FEMA Hazard Mitigation Grants	Long DOF	Medium	Action/Project, PR ES	Not initiated; lack of funding.
HB2 [HB2 (HB1)]	Elevate Flood Prone Structures	Elevate flood prone structures, targeting those known to have experience repetitive damages.	Carried Forward	Existing	Flood	4	Township Committee; Engineering; OEM	High	High	FEMA Hazard Mitigation Grants	Long DOF	Medium	Action/Project, PR PP	Not initiated; lack of funding.
HB3 [HB3 (HB2)]	Acquire and/or Relocate Flood Prone Properties	Seek to acquire and/or relocate flood prone properties through voluntary participation, targeting those properties known to have experienced repetitive damages particularly in the Green Hill section of the township.	Carried Forward	Both	Flood	4	Township Committee; Engineering; OEM	High	High	FEMA Hazard Mitigation Grants	Long DOF	Medium	Action/Project, PR PP	Not initiated; lack of funding.
HB4 [HB4 (HB3)]	Participating in CRS Program	Consider participating in CRS program.	Carried Forward	Existing	All	12	Township Committee; Planning	Medium	2,500/year	Township /Public	OG	Medium	Action/Project, PR	Not initiated; lack of staff availability.
HB5 [HB5 (HB5)]	Retrofit Critical Facilities	Where appropriate, seek to retrofit critical facilities in hazard prone areas to protect structures from future damage and retrofit with emergency generators for critical facilities including firehouses and shelters.	Carried Forward	Existing	All	6,7	Township Committee	High	\$150,000	PDM	Short	Medium	Action/Project, PP ES	Ongoing; retrofits have been completed in some locations, but opportunities exist for further action during the next five year plan maintenance window.

Proposed Hazard Mitigation Initiatives														
2019 Initiative Number	Initiative Name	Initiative Description	New Initiative or Carried Forward	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2018 Action Status
HB6 [(HB6)]	Facilitate Community and Public Education	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: Provide and maintain links to the HMP website, and regularly post notices on the County/municipal homepage(s) referencing the HMP webpages. Prepare and distribute informational letters to flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.	Carried Forward	N/A	All Hazards	5,13	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Medium	Medium	Municipal Budget, HMA programs with local or county match	Short Term	High	Capability, PE	Ongoing; education and outreach activities have been completed but opportunities exist for further action during the next five year plan maintenance window.
HB7 [(HB7)]	Incorporate Ordinances	Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas, specifically as identified in Section 9.11.11.	Carried Forward	N/A	All Hazards	8	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	Capability, PR	Ongoing; activities have been completed, but opportunities exist for further action during the next five year plan maintenance window.
HB8 [(HB8)]	Improve Communication Systems	Improve communication systems.	Carried Forward	N/A	All Hazards	11	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	Capability, ES PR	Ongoing; activities have been completed, but opportunities exist for further action during the next five year plan maintenance window.
HB9 [(HB9)]	Develop Programs	Develop programs/procedures to capture and archive loss data from events. Examples include: Record location and length of roadway closures; Develop a database of residential and commercial property damage, including permit history for such repairs; High water marks, perhaps painting phone poles with high water marks and or regulatory Base Flood Elevations (BFEs).	Carried Forward	N/A	All Hazards	1,8	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	Capability, PR	Ongoing; activities have been completed, but opportunities exist for further action during the next five year plan maintenance window.

Proposed Hazard Mitigation Initiatives														
2019 Initiative Number	Initiative Name	Initiative Description	New Initiative or Carried Forward	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2018 Action Status
HB10 [(HB11)]	Develop Facility Inventories	Participate in local, county and/or state level projects and programs to develop improved structure and facility inventories and hazard datasets to support enhanced risk assessment efforts. Such programs may include developing a detailed inventory of critical facilities based upon FEMA's Comprehensive Data Management System (CDMS) which could be used for various planning and emergency management purposes including: Support the performance of enhanced risk and vulnerability assessments for hazards of concern. Support state, county and local planning efforts including mitigation (including updates to the State HMP), comprehensive emergency management, debris management, and land use. Improved structural and facility inventories could incorporate flood, wind and seismic-specific parameters (e.g. first floor elevations, roof types, structure types based on FEMA-154 "Rapid Visual Screening of Buildings for Potential Seismic Hazards" methodologies). It is recognized that these programs will need to be initiated and supported at the County and/or State level, and will require training, tools and funding provided at the county, state and/or federal level.	Carried Forward	N/A	All Hazards	6,7,13	Hazard Mitigation Plan Coordinator	Medium-High	Medium-High	FEMA Mitigation Grant Programs with local match	Long Term DOF	Medium	Capability, PR	Ongoing.
HB11 [(HB12)]	Support Emergency Management Plans	Support ongoing updates of Comprehensive Emergency Management Plans.	Carried Forward	New and Existing	All Hazards	6,7,13	Municipality with support from County Emergency Management	Low	Low	Municipal Budget	On-going	High	Capability, PR	Ongoing.
HB12 [(HB13)]	Mutual Aid Agreements	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations.	Carried Forward	N/A	All Hazards	3,7	Municipality with support from County, NJOEM, FEMA and surrounding communities	Medium	Low	Municipal Budget	Short Term	High	Capability, PR, ES	Ongoing.
HB13 [(HB14)]	Agreements/support with FEMA/NJOEM Paperwork	Identify and develop agreements with entities that can provide support with FEMA/NJOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/NJOEM paperwork compilation, submissions, record-keeping.	Carried Forward	N/A	All Hazards	3,7	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget	Short Term	Medium	Capability, PR, ES	Ongoing.

Proposed Hazard Mitigation Initiatives														
2019 Initiative Number	Initiative Name	Initiative Description	New Initiative or Carried Forward	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2018 Action Status
HB14 [(HB15)]	Develop Damage Assessment Capabilities	Work with regional agencies (i.e. County and NJOEM) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	Carried Forward	N/A	All Hazards	6,7,13	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget, FEMA HMA and HLS grant programs	Short-Long Term DOF	Medium	Capability, PR	Ongoing.
HB15 [HB16 (HB6)]	Updating of this Plan	Continue to support the implementation, monitoring, maintenance, and updating of this Plan (through participating in the 5 year Plan Update), as defined in Section 7.0	Carried Forward	New and Existing	All Hazards	6,7,13	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	High	Low – High (for 5 year update)	Municipal Budget, FEMA planning grants	On-going	High	Capability, PR	Ongoing.
HB16 [(HB17)]	Relocate/ Elevate Structures	Purchase, relocate, or elevate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as priority. Phase 1: Identify appropriate candidates based on cost-effectiveness. Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability	Carried Forward	Existing	Flood, Severe Storm	4	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from County Planning, NJOEM, FEMA	High	High	FEMA Mitigation Grants	Long Term DOF	Medium	Action/ Project, PP	Not initiated; lack of funding.
HB17 [HB18 (HB7)]	Good-Standing in the NFIP	Maintain compliance with and good-standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP-related continued compliance actions identified as Initiatives below.	Carried Forward	N/A	Flood, Severe Storm	5,8,12,13	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NJOEM, FEMA	High	Low-Medium	Municipal Budget	Ongoing	High	Capability, PR, PE	Ongoing; completed, but will also be undertaken during the next five year plan maintenance window.
HB18 [(HB19)]	Elevation Certificates	Obtain and archive elevation certificates.	Carried Forward	N/A	Flood, Severe Storm	8	NFIP Floodplain Administrator	Medium	Low	Municipal Budget	On-going	High	Capability, PR	Ongoing; lack of staff availability.
HB19 [(HB20)]	Promote Planning Process	Promote the participation of Floodplain Administrators within the planning process and other activities.	Carried Forward	N/A	Flood	All	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget	Short	Medium	Capability, PR	Ongoing.
HB20 [(HB21)]	Enhance County/ Community Resilience	Enhance the County/community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program and supporting communities in joining the program.	Carried Forward	N/A	Severe Storm	12	Municipality with support from County, NJOEM and FEMA	Medium	Low	Municipal Budget	Short Term DOF	Medium	Capability, PE	Ongoing.

Proposed Hazard Mitigation Initiatives														
2019 Initiative Number	Initiative Name	Initiative Description	New Initiative or Carried Forward	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	2018 Action Status
HB21 [(HB22)]	Underground Utilities	Adopt regulations for undergrounding utilities in new developments.	Carried Forward	N/A	Severe Storm	1,2,4,8	Municipal Council	Medium	Low	Municipal Budget	Short	H	Action/Project, PR	Initiated but not yet completed.
HB22 [(HB24)]	Education on Backup Power	Provide public education and outreach on proper installation and/or use of backup power	Carried Forward	N/A	Severe Storm	5,13	Municipal Clerk	Medium	Low	Municipal Budget	Short	H	Capability, PR	Ongoing; completed, but will also be undertaken during the next five year plan maintenance window.
HB23 [(HB25)]	Programs to Prevent Trees from Threatening Lives	Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.	Carried Forward	N/A	Severe Storm	2,3,5,8	Municipal Code Enforcement	Medium	Low	Municipal Budget	Short	H	Capability, PR	Ongoing; completed, but will also be undertaken during the next five year plan maintenance window.

Notes:

* 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:

- ARC American Red Cross
- DPW Department of Public Works
- FEMA Federal Emergency Management Agency
- HMA Hazard Mitigation Assistance
- HMP Hazard Mitigation Proposal
- N/A Not applicable
- NFIP National Flood Insurance Program
- NJOEM New Jersey Office of Emergency Management
- NOAA National Oceanic and Atmospheric Administration
- SCPD Somerset County Planning Department
- USACE U.S Army Corp of Engineers
- USGS U.S. Geological Survey

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

Potential FEMA HMA Funding Sources:

- FMA = Flood Mitigation Assistance Grant Program
- HMGP = Hazard Mitigation Grant Program
- PDM = Pre-Disaster Mitigation Grant Program
- RFC = Repetitive Flood Claims Grant Program
- SRL = Severe Repetitive Loss Grant Program

Timeline:

- Short Term= 1 to 5 years
- Long Term = 5 years or greater
- OG = On-going program
- DOF = Depending on funding

Notes (for Mitigation Type):

1. PR = Prevention: 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.
2. PP = Property Protection: 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

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.

- 3. PE = acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- 4. NR = Public Education and Awareness: 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.
- 5. SP = Natural Resource Protection: 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.
- 6. ES = Structural Projects: 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.
- 7. Initiative= Emergency Services: 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.
- 8. Capability= Initiatives are comprised of EVERYTHING your community wants to do or is doing in order to meet its mitigation goals. Initiatives include Capabilities, Actions and Projects.
- 8. Action/Project= Regulatory, administrative, technical, and fiscal staffing, tools and/or resources. Capabilities can be existing, or in need of further development/expansion.
- 8. Action/Project= Specific activities or projects that your community plans to undertake or is currently completing in order to achieve its long term mitigation goals. Actions/Projects can include, but are not limited to: structural projects, infrastructure projects, natural systems protection projects, or education and awareness programs.

9.11.8 PRIORITIZATION OF MITIGATION INITIATIVES

The table below summarizes the priority levels for each mitigation initiative, listed by number. Please note that the Township has opted to carry forward legacy initiative numbers from the 2014 plan, for internal municipal tracking purposes, formatted as: “2019# [2014# (2009#)]”

Prioritization of Mitigation Initiatives							
Initiative #	# of Objectives Met	Benefits	Costs	Do benefits equal or exceed costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
HB1 [(HB1)]	4	M	M	Y	Y	N	M
HB2 [HB2 (HB1)]	1	H	H	Y	Y	N	M
HB3 [HB3 (HB2)]	1	H	H	Y	Y	N	M
HB4 [HB4 (HB3)]	1	M	L	Y	N	Y	M
HB5 [HB5 (HB5)]	2	H	H	Y	Y	N	M
HB6 [(HB6)]	2	M	M	Y	Y	Y	H
HB7 [(HB7)]	1	M	M	Y	N	Y	M
HB8 [(HB8)]	1	M	M	Y	N	Y	M
HB9 [(HB9)]	2	M	M	Y	N	Y	M
HB10 [(HB11)]	3	M	M	Y	N	Y	M
HB11 [(HB12)]	3	L	L	Y	N	Y	H
HB13 [(HB13)]	2	M	L	Y	N	Y	H
HB13 [(HB14)]	2	M	M	Y	N	Y	M
HB14 [(HB15)]	3	M	M	Y	N	Y	M
HB15 [HB16 (HB6)]	3	M	M	Y	N	Y	H
HB16 [(HB17)]	1	H	H	Y	Y	N	H
HB17 [HB18 (HB7)]	4	H	H	Y	Y	N	M
HB18 [(HB19)]	1	H	L-M	Y	N	Y	H
HB19 [(HB20)]	13	M	M	Y	N	Y	M
HB20 [(HB21)]	1	M	L	Y	N	Y	M
HB21 [(HB22)]	4	M	L	Y	N	Y	H
HB22 [(HB24)]	2	M	L	Y	N	Y	H
HB23 [(HB25)]	4	M	L	Y	N	Y	H

Notes: H = High
L = Low
M = Medium

N = No
Y = Yes

9.11.8.1 Explanation of Priorities

Explanations of priority classifications used to assess the mitigation initiatives described in this annex are presented below:

High Priority = A project that meets multiple objectives (i.e., multiple hazards), where potential benefits exceed the costs. High-priority projects have funding secured or are on-going projects that meet eligibility requirements for the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation (PDM) Grant Program. High-priority projects can be completed in the short term (1 to 5 years).

Medium Priority = A project that meets goals and objectives, where the potential benefits outweigh the costs. Funding for medium-priority projects has not been secured but these projects are eligible for grants under HMGP, PDM, or other grant programs. These projects can be completed in the short term, once funding is completed. Medium-priority projects will become high-priority projects once funding is secured.

Low Priority = A project that will mitigate the risk of a hazard, where the potential benefits do not exceed the costs or have benefits that are difficult to quantify. Funding for low-priority projects has not been secured and these projects are not eligible for HMGP or PDM grant funding. The timeline for completion is considered long term (1 to 10 years). Low-priority projects may be eligible other sources of grant funding from other programs. A low-priority project could become a high-priority project once funding is secured as long as it could be completed in the short term.

Was prioritization of initiatives based on the above definitions? Yes

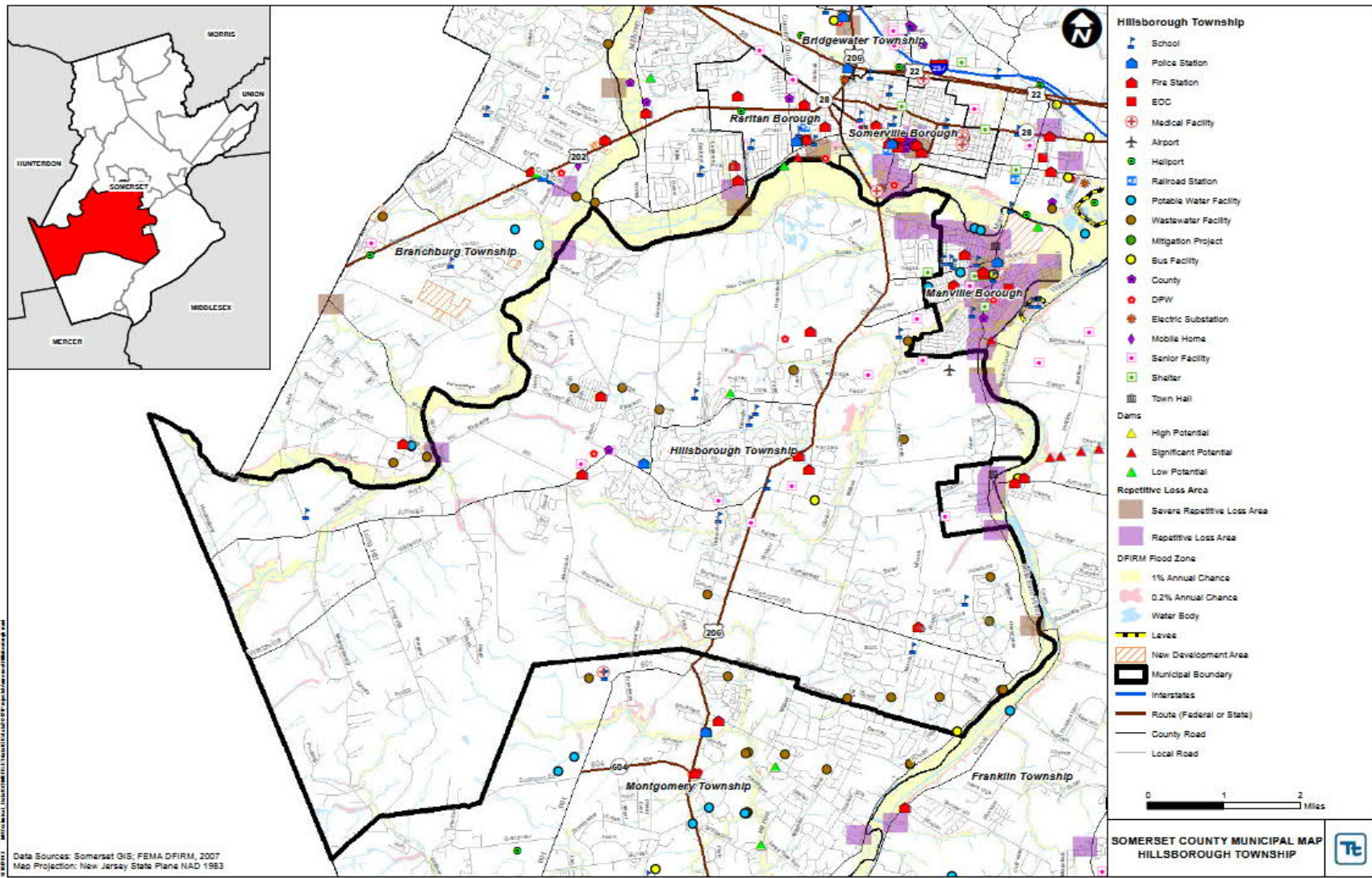
Was prioritization of initiatives based on parameters other than those stated above? Not applicable

9.11.9 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

The Township of Hillsborough has no additional risk vulnerabilities that need to be addressed at this time.

9.11.10 HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map illustrating the probable areas impacted within Hillsborough is provided on the following page. This map is based on the best data available at the time of the preparation of this plan, and is 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 Hillsborough has significant exposure. The planning area maps are provided in the hazard profiles within Section 5.4 of this plan.



9.11.11 STATUS OF INCORPORATION OF MITIGATION PLANNING INTO EXISTING AND FUTURE PLANNING MECHANISMS

It is the intention of Hillsborough to incorporate mitigation planning as an integral component of daily municipal operations. The following table contains a list of planning mechanisms that have been utilized during prior plan maintenance cycles, and those that will be incorporated into municipal procedures during the upcoming plan maintenance cycle (2019-2024).

Status of Incorporation of Mitigation Planning into Existing and Future Planning Mechanisms				
Planning Mechanisms	Reported Utilization (2009-2014)	Planned Utilization (2014-2019)	Reported Utilization (2014-2019)	Planned Utilization (2019-2024)
Operating Budget When constructing upcoming budgets, hazard mitigation actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the hazard mitigation goals and objectives.		X	X	X
Capital Improvement Budget When constructing upcoming budgets, hazard mitigation actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the hazard mitigation goals and objectives.		X	X	X
Human Resource Manual Employee job descriptions may contain hazard mitigation actions.		X	X	X
Building and Zoning Ordinances Prior to land use, zoning changes, or development permitting, the municipality will review the hazard mitigation plan and other hazard analyses to ensure consistent and compatible land use.		X	X	X
Comprehensive Land Use Plan When applicable, the municipality will incorporate hazard mitigation actions in the development and extent of the regulations.		X	X	X
Grant Applications Data and maps will be used as supporting documentation in grant applications.		X	X	X
Municipal Ordinances When updating municipal ordinances, hazard mitigation will be a priority.		X	X	X
Fire Plan The Hazard Mitigation Plan will be used as a resource for the development of future Fire Plans.		X	X	X
Capital Improvement Planning The municipality will establish a protocol to review current and future projects for hazard vulnerability. The municipality will incorporate hazard-resistant construction standards into the design and location of projects.		X	X	X

Status of Incorporation of Mitigation Planning into Existing and Future Planning Mechanisms				
Planning Mechanisms	Reported Utilization (2009-2014)	Planned Utilization (2014-2019)	Reported Utilization (2014-2019)	Planned Utilization (2019-2024)
Day-to-Day Operations The municipality will incorporate hazard mitigation actions in daily operations and all projects.		X	X	X
Local School Service Projects The municipality will work closely with the local school district and assist with community service projects for the service organizations. Several of the municipality's hazard mitigation actions can be implemented as a joint project with the school district.		X	X	X
Municipal Budget Adopted annually, the municipality will look at mitigation actions when allocating funding.		X	X	X
Economic Development The local economic development group will take into account information regarding identified hazard areas when assisting new businesses in finding a location.		X	X	X

9.11.12 ADDITIONAL COMMENTS

There are no additional comments at this time.

9.11.12 NFIP ADMINISTRATOR INPUT

The Township provided the following NFIP Administrator Input in 2018, for inclusion in the 2019 HMP.

Adoption Date of your Current Floodplain Management Ordinance	Date of Entry into NFIP ¹	Position or Title of Your Jurisdiction's Designated Floodplain Manager/Administrator (may also be called NFIP Coordinator)			Is this person Is a Certified Floodplain Manager?	Is floodplain management an auxiliary function?	Is your community in good standing with the NFIP?
2016	3/2/81	Assistant Township Engineer			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Provide an explanation of NFIP administration services (i.e., permit review, GIS, education or outreach, inspections, engineering capability, etc.):							
Permit Review, inspections, emergency capability							
Describe barriers to running an effective NFIP program in the community (if applicable):							
None							
When was most recent FEMA Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?*	Is a CAV or CAC scheduled or needed?	Does the current floodplain management ordinance exceed FEMA or State minimum requirements? If so, describe how.	Is training of staff regarding NFIP issues planned?	Does your community intend to continue to enforce the floodplain management requirements including regulating new construction in Special Flood Hazard Areas (SFHAs)?	Does your community participate in the CRS? If so, state your Class.	Does your community intend to continue its participation in the CRS program?	If your community is not currently participating in the CRS program, are you intending to initiate the process during the next planning cycle?
N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No* Class__	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
*Describe any outstanding compliance issues (i.e., current violations):							
None							

MITIGATION PLAN								
Provide an explanation of your local floodplain permitting process:								
No zoning permits are issued until a flood zone certification is certified by a private flood search company.								
Does your community intend to continue floodplain identification and mapping services including any local requests for map updates?	Does your community intend to initiate/continue the buyouts of repetitive loss properties?	Does your community intend to commit staff or resources to improve local mapping or code administration in the future?	Does your community intend to provide local outreach to promote the sale of flood insurance?	Does your community intend to participate in RiskMAP meetings and planning initiatives?	Does your community intend to continue to implement structural improvements to mitigate against flooding - culverts, drainage basins, etc.?	Does your community intend to continue to implement home improvement programs designed to minimize basement flooding?	Does your community intend to continue to implement roadway improvements to reduce damage from future flooding events?	Does your community intend to implement plans and programs in coordination with a local or regional drainage/sewer authority?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does your community intend to adopt the new FEMA Advisory Base Flood Elevations?	As Floodplain Manager, did you (or your predecessor at the time) actively participate in the development of the initial Hazard Mitigation Plan?		As Floodplain Manager, are you actively participating in the development of this Hazard Mitigation Plan Update?		Have there been any changes to your community's local floodplain management program since the last version of the plan in 2014?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No			
* If you answered "yes", that there have been changes to your local program since 2009, please describe:								
Provide a description of your community assistance and monitoring activities:								
None at this time.								
NFIP participating communities are required to update/revise their floodplain management ordinance to ensure that it complies with the latest FEMA regulations. Will your community continue to commit to this program requirement?				NFIP participating communities are also required to update/revise their floodplain management ordinance to be consistent with the latest FIRMs. Will your community continue to commit to this program requirement?				
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				