

Progress Report on Hazard Mitigation Initiatives

Borough of Stone Harbor

Hazard Mitigation Plan

Adopted: By Resolution 2016 S-125

3 Year CRS Expiration Date:

A copy of the adopted plan can be found on the Borough website at:

<http://stoneharbornj.org/wp-content/uploads/2016/08/Hazard-Mitigation-Plan-2016-Borough-of-Stone-harbor.pdf>

This Progress Report has been submitted to the Borough Council via direct email as well as through the Borough Clerk as an official record. Acknowledgment of this report was reported at the work session meeting of the Borough Council on October 16, 2018. A copy of this report has been posted on the Borough Website and emailed to all media outlets and the State NFIP Coordinating Office.

Hazard Mitigation Initiatives for the Plan Update

Table A summarizes the comprehensive-range of specific mitigation initiatives the Borough has chosen 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.

Table B provides a summary of each action and the progress of all proposed mitigation initiatives for the Plan update.

Hazard Mitigation Initiatives Table A

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (1)	Hazard(s) Mitigated (2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
SH-1a (former SH-1a)	<p>Property Mitigation Support – Retrofit: Where appropriate, support retrofitting (e.g. elevation) of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.</p> <p>The City has done extensive public education and outreach regarding available mitigation opportunities, including informing Stone Harbor RL/SRL property owners of workshops on April 9, 2016 (in Ocean City) and again on April 16, 2016 (in Wildwood) to learn more about current and future opportunities to mitigate their flood-prone properties. The City has formally been an active participant in the “Enhanced RL/SRL Initiative” within this plan update process, as described further in Section 6.</p> <p>On annual basis supply property owners with information on possible grant funding to initiate flood proofing initiatives including but not limited to elevating structure. Continue to seek out possible grant funding sources for this initiative. See also SH-14: Elevate “The Market” (Commercial Property).</p> <p>Funding sources: FEMA Mitigation Grant Programs (primarily HMGP and FMA); local property owner for match as supported by ICC and other non-Federal match sources as available.</p>											
	See above.	Existing	Coastal Storm, Flood, Severe Weather	1, 2, 4, 6	Borough (likely through NFIP Floodplain Administrator)	High	High	See above.	Long-term DOF	Medium-High*	EAP, SIP	PI, PP
SH-1b (former SH-1b)	<p>Property Mitigation Support – Acquisition/Relocation: Where appropriate, support acquisition and/or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for acquisition/relocation based on cost-effectiveness versus retrofitting. Where acquisition/relocation is determined to be a viable option, consider implementation of that action based on available funding.</p> <p>While the Borough has found that this initiative is not cost-effective, they will continue to support into the future in the case circumstances change and this becomes a more viable solution.</p> <p>The City has done extensive public education and outreach regarding available mitigation opportunities, including informing Stone Harbor RL/SRL property owners of workshops on April 9, 2016 (in Ocean City) and again on April 16, 2016 (in Wildwood) to learn more about current and future opportunities to mitigate their flood-prone properties. The City has formally been an active participant in the “Enhanced RL/SRL Initiative” within this plan update process, as described further in Section 6.</p> <p>Funding sources: FEMA Mitigation Grant Programs (primarily HMGP and FMA); local property owner for match as supported by ICC and other non-Federal match sources as available.</p>											
	See above.	Existing	Coastal Storm, Flood, Severe Weather	1, 2, 4, 6	Borough (likely through NFIP Floodplain Administrator)	High	High	See above.	Long-term DOF	Medium-High*	EAP, SIP	PI, PP

Hazard Mitigation Initiatives Table A

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (1)	Hazard(s) Mitigated (2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
SH-1c	Retrofit or relocate critical facilities in the 100-year floodplain	Existing	Coastal Storm, Flood, Severe Weather	1, 2, 4, 6	Borough (likely through NFIP Floodplain Administrator) ; working with facility manager/operator	High	High	See SH-1b above.	Long-term DOF	High	SIP	PP
SH-2 (former SH-2, -4)	Strive to maintain compliance with, and good-standing in the National Flood Insurance program, including continued active participation in incentive-based program.	New & Existing	Coastal Storm, Flood, Severe Weather	1, 2, 6	Borough (primarily through NFIP Floodplain Administrator)	Medium - High	Low - Medium	Local Budget	Ongoing	High	All	All
SH-3 (former SH-3)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	New & Existing	All Hazards	1 through 6	Borough (through mitigation planning point of contacts)	Medium - High	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Ongoing	Medium	LPR, EAP	PR, PI
SH-4	Train staff or acquire contract support for benefit-cost analysis	N/A	All Hazards	1	Borough (primarily through NFIP Floodplain Administrator and Engineering)	Medium	Low	Local Budget	As training sessions are available locally	Medium - High	EAP	PI
SH-5 (former SH-5)	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3, 4, 6	Municipal Emergency Manager with support from County OEM and NJ OEM	Low - Medium	Low - Medium	Local Budget	Ongoing	Medium	LPR, EM	PR, EM
SH-6 (former SH-6)	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	1, 3, 4, 6	Borough	Low - Medium	Low - Medium	Local Budget	Ongoing	Medium	LPR, EM	PR, EM

Hazard Mitigation Initiatives Table A

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (1)	Hazard(s) Mitigated (2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
SH-7 (former SH-7)	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	1 through 6	Local departments (as applicable for specific initiative)	Medium	Low - High	Existing programs and grant funding where applicable	Ongoing – Long-term depending on initiative	M-H (dependent)	All	All
SH-8 (former SH-8 and SH-22)	Continue to support beach replenishment activities from 98 th to 111 th Streets. This is an ongoing yearly initiative	Existing	Coastal Storms, Coastal Erosion, Flooding, Severe Weather, Tsunami	1, 3, 5	NJDEP with Borough support	High	High	NJDEP – 75%; Borough – 25%	Borough received a USACE Beach Replenishment in 2013 and is scheduled to receive another in fall of 2016.	High	NSP, SIP	NR, PP
SH-9 (former SH-9)	Continue stormwater drainage improvements throughout the Borough to increase capacity.	Existing	Coastal Storm, Flood, Severe Weather	1, 4	Borough	High	High	This is a yearly initiative through our annual infrastructure upgrades, included in our yearly and long range capital plan.		High	SIP	PP
SH-10 (former SH-10a (CMC-26, BA-8)	Upgrade stormwater system on CR-619 through Stone Harbor and Avalon. Seven stormwater pump stations were installed along CR-619 from Avalon Boulevard to 19 th Street (Avalon business district) to address flooding in this area.	Existing	Coastal Storms, Severe Weather, Flooding	1, 3, 4, 6	County Engineering with municipalities	High	High	FEMA HMA grant programs, local match	Long-term DOF	Medium	SIP	PP
SH-11 (former SH-11)	Support installation of back-up generator at SH School. Assist in obtaining grants when available.	Existing	All Hazards, except wildfire and coastal erosion	1, 3, 4	School Board; with Borough support as appropriate	High	High	FEMA HMA grant programs, local match	Long-term DOF	M-H (DOF)	SIP, EM	PP, ES
SH-12 (former SH-12)	Remote tide-gages with cameras, using tide gauges at CMC Bridge Comm. and 80 th Street Marina.	N/A	Coastal Storms, Flooding	1, 4	Borough	Medium	Medium	Local, Grant funding	Need to tie camera into system - 50% complete	Medium	EAP, EM	ES, PI

Hazard Mitigation Initiatives Table A

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures (1)	Hazard(s) Mitigated (2)	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
SH-13 (former SH-14)	Support private property owner with elevation of The Market (commercial property).	Existing	Coastal Storms, Severe Weather, Flooding	1, 3	Borough	High	High	FEMA HMA grant programs, local match	Long-term DOF	Medium	SIP	PP
SH-14 (CMC-14)	Elevate Stone Harbor Boulevard (CR-657) from the Parkway into Stone Harbor proper. This will require elevating one residential property on 96th Street (part of CR-657) and potentially others. 96th Street was elevated in 2008 to the extent possible in consideration of existing home elevations.											
	See above.	Existing	Coastal Storms, Flooding	1, 4	1-1, 1-9, 4-1, 4-2, 4-11	County Engineering, with local support	High	TBD	Longterm DOF	Medium	SIP	PP
SH-15	Maintain relationship with Army Corps and NJDEP for dune maintenance along the oceanfront via planting dune grass and installing sand fencing.	N/A	Coastal Erosion, Coastal Storm, Severe Weather	3, 5, 6	Borough	Borough; working with NJDEP and USACE	Low	Local	Short-term	High	NSP	NR, PP
SH-16	Continue annual review of ordinances and appropriate laws with regard to planning, zoning and code enforcement within the Borough.	N/A	Coastal Storm, Flood, Severe Weather	1, 4	Borough	Medium - High	Low	Local	Short-term	High	LPR	PR
SH-17	Maintain the 12 outfall pipes along the beachfront of the Borough by regularly cleaning and adding replacement sands to the area for Emergency Access.	Existing	Coastal Storm, Flood, Severe Weather	1, 3, 4	Borough	High	Medium	80% complete. Working on removing final 2 pipes in future capital plans.		Medium	SIP	PP
SH-18	Continue to work with property owners to bring all applicable properties within the Borough up to code within the NFIP.	Existing	Flood	1, 2, 4	Borough	Medium - High	Low	Local	Short-term	High	EAP, SIP	PI, PP
SH-19	Maintain flood siren warning systems throughout the Borough to alert residents in the event of an emergency.	N/A	Coastal Storm, Flood, Severe Weather	1, 3, 4	Borough	Medium - High	Low	Local	Short-term	High	EM, EAP	ES, PI

Hazard Mitigation Initiatives Table B

Mitigation Action / Project Number	Mitigation Action/Initiative	Implementation Update	Explanation why not reached or behind schedule
SH-1a (former SH-1a)	Property Mitigation Support – Retrofit	The Borough continues to do extensive public education and outreach regarding available mitigation opportunities. As grants become available we advise property owners especially RL/SRL properties of the various workshops We will continue to seek out possible grant funding sources for this initiative	This is an ongoing action.
SH-1b (former SH-1b)	Property Mitigation Support – Acquisition/Relocation	While the Borough has found that this initiative is not cost-effective, we continue to support into the future in case circumstances change and this becomes a more viable solution.	This is an ongoing action.
SH-1c	Retrofit or relocate critical facilities in the 100-year floodplain	The Borough is retrofitting and building a new addition to our Police Department in total compliance with our Flood Ordinance. We are also in the process of building a Sewer Pump station and retrofitting a sewer pump station into a stormsewer pump station all in compliance with current Flood regulations.	This is an active action and is anticipated to have a competition date in 2020 for current projects. This action is ongoing.
SH-2 (former SH-2,-4)	Strive to maintain compliance with, and good-standing in the National Flood Insurance program, including continued active participation in incentive-based program.	The Borough continues to maintain compliance with and in good-standing in the NFIP program with a constant goal of obtaining a Level 4 rating at our next renewal cycle.	This is an ongoing action.
SH-3 (former SH-3)	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	The Borough continues to support the implementation, monitoring, maintenance, and updating of this Plan and in anticipation of the next 5 year update.	This is an ongoing action.
SH-4	Train staff or acquire contract support for benefit-cost analysis	As specific training is made available the Borough continues to support this action.	This is an ongoing action.
SH-5 (former SH-5)	Continue to develop, enhance, and implement existing emergency plans.	Staff continue to review and update our existing emergency plans through internal reviews as well as through countywide meetings and training.	This is an ongoing action.
SH-6 (former SH-6)	Create/enhance/ maintain mutual aid agreements with neighboring communities.	The Borough continues to maintain mutual aid agreements with neighboring communities.	This is an ongoing action.
SH-7 (former SH-7)	Support County-wide initiatives identified in Section 9.1 of the County Annex.	The Borough continues its support of County-wide initiatives identified in Section 9.1 of the County Annex.	This is a long-term ongoing action.
SH-8 (former SH-8 and SH-22)	Continue to support beach replenishment activities from 98 th to 111 th Streets. This is an ongoing yearly initiative	The Borough continues its support of beach replenishment activities and has established a long-term financial plan to insure adequate funding to maintain this action.	This is a long-term ongoing action.
SH-9 (former SH-9)	Continue stormwater drainage improvements throughout the Borough to increase capacity.	The Borough continues yearly through our annual infrastructure upgrades and long-range capital plan. The Borough received a resiliency Infrastructure Grant	This is a long-term action. The resiliency grant project is expected to take 2 years till competition.

Mitigation Action / Project Number	Mitigation Action/Initiative	Implementation Update	Explanation why not reached or behind schedule
		Hwhich includes a new stormwater pump station and major upgrades to reduce flooding in specific areas of the Borough.	
SH-10 (former SH-10a (CMC-26, BA-8)	Upgrade stormwater system on CR-619 through Stone Harbor and Avalon. Seven stormwater pump stations were installed along CR-619 from Avalon Boulevard to 19 th Street (Avalon business district) to address flooding in this area.	The Borough continues to encourage improvements to be done by the County. The Borough is currently working with the County to coordinate county upgrades in conjuncture with our Resiliency Grant work.	Long term action dependent on funding.
SH-11 (former SH-11)	Support installation of back-up generator at SH School. Assist in obtaining grants when available.	The Borough continues to support this action.	Long term action dependent on funding.
SH-12 (former SH-12)	Remote tide-gages with cameras, using tide gauges at CMC Bridge Comm. and 80 th Street Marina.	The Borough is budgeting for the purchase of the necessary cameras in the 2019 Budget	Project should be completed no later than 2020.
SH-13 (former SH-14)	Support private property owner with elevation of The Market (commercial property).	The Borough continues to support this action and continues to look for potential grants to assist property owner.	Long term action dependent upon funding.
SH-14 (CMC-14)	Elevate Stone Harbor Boulevard (CR-657) from the Parkway into Stone Harbor proper	The Borough supports this action however, acknowledges the difficult involved.	Long Term County action dependent upon funding.
SH-15	Maintain relationship with Army Corps and NJDEP for dune maintenance along the oceanfront via planting dune grass and installing sand fencing.	The Borough continues maintain its relationship with the Army Corp and NJ DEP for dune maintenance along the oceanfront via planting dune grass and installing sand fencing.	This is a continuous action.
SH-16	Continue annual review of ordinances and appropriate laws with regard to planning, zoning and code enforcement within the Borough.	The Borough is currently updating its Master Plan and is reviewing all aspects of ordinances within the Borough. In addition we have a Flood Mitigation Committee which includes Borough Officials, Planner and Engineer. The Borough has passed several ordinances over the last year to assist in flood reduction. We passed a new Flood Prevention Ordinance with higher regulatory standards and a new Bulkhead ordinance requiring bulkheads to be waterproof and be built to 8ft NAVD88 by 2050. In addition the Planning Board is currently preparing a lot grading ordinance to deal with flooding also.	This is a continuous long-term action.
SH-17	Maintain the 12 outfall pipes along the beachfront of the Borough by regularly cleaning and adding replacement sands to the area for Emergency Access.	This action is 80% complete with only two pipes left to remove. It is in our 10 year capital plan.	This project will be completed once our flood Resiliency Grant work is complete.
SH-18	Continue to work with property owners to bring all applicable properties within the Borough up to code within the NFIP.	This is a continuous action through education and enforcement.	This action is completed each year.
SH-19	Maintain flood siren warning systems throughout the Borough to alert residents in the event of an emergency.	The Borough continues to maintain their existing flood siren warning system throughout the Borough and in	This action is completed each year.

Mitigation Action / Project Number	Mitigation Action/Initiative	Implementation Update	Explanation why not reached or behind schedule
		addition actively encourages property owners and visitors to sign up for notification through our Code Red system.	
