

2018 SCRCOG Hazard Mitigation Plan - New Haven Projects Update January 2023

Action #	Action Title	Action Description	Mitigation Goal	Mitigation Category	Hazard(s) Addressed	Estimated Cost	Potential Funding Source	Lead Department	Implementation Schedule	Priority	Current Status	Current Status Description/Explanation	Updated Action Title/Description (if applicable)
1	Long Wharf Flood Protection	Implement flood protection recommendations from Long Wharf Flood Protection study including living shoreline, deployable flood dams at I-95 underpasses, and planning and design of permanent flood wall.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood; Sea Level Rise	>\$5,000,000	FEMA, USACE, and others	Board of Alders with City Plan	7/2019-6/2021	Very High	Partially Completed / In Progress	The implementation projects are described in new mitigation actions below. This recommended alternative from the Long Wharf Flood Study is being implemented in various new projects including Long Wharf Park Living Shoreline and ACOE Long Wharf Project which includes a flood wall, pump station, and deployable gates. These two projects are funded through construction and more information can be found below.	Long Wharf Park Living Shoreline and ACOE Long Wharf Project
2	Downtown Green Infrastructure	Installation of green infrastructure within the downtown drainage area to alleviate pressure on the storm sewer system. Roughly 200 locations have been identified throughout the Downtown drainage area. This is considered Phase 2 of the Tranche 2 funding. Phase 1 is the implementation of the proposed alternative recommended in the Downtown Stormwater Modeling study. Of the \$4 million received in	Flood Hazards	Natural Systems Protection	Urban Flood	\$2,500,000	CDBG - DR (Tranche 2)	Engineering Department	8/2016- 6/2019	Very High	Completed	Construction is complete on bioswales.	
3	Quinnipiac River riprap repairs	Repair of existing riprap and seawall.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood	\$300,000	Capital improvement	Parks Department	7/2018-6/2019	Very High	Partially Completed / In Progress	Preliminary design is complete; currently identifying funding sources for implementation upon completion of the Grand Avenue Bridge rehabilitation project	
4	Lighthouse Point Park Carousel Building Floodproofing.	Floodproof existing Carousel Building to higher elevation in park to eliminate any future flooding of building.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood	\$1-\$2 million	FEMA, CDBG-DR, others	Parks Department	TBD	Low	Delayed	Will be planned after the Lighthouse Point Park Carousel Building Floodproofing Study is completed.	
5	City Point Flood Mitigation Measures Implementation.	Implement recommendations of City Point flood mitigation study.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood	>\$5,000,000	TBD	TBD	TBD	Low	Delayed	Will be planned after the study (see action #20 below)	
6	CSO Clean Water Fund projects	Several projects proposed: 1. Installation of approximately 75 bioswales for CSO reduction within the West River Watershed 2. CSO Closure and Regulator Improvements at Quinnipiac/Clifton Street, George/Temple Street, and Mitchell Drive 3. Union Street and East Street Pump Station Upgrades 4. Yale Campus Trumbull Street Area Sewer Separation Phase 2A 5. West River CSO Improvements at Orange Street, Ella T. Grasso Boulevard, and Whalley Avenue 6. Union Street Downtown Crossing CSO Improvements 2018	Flood Hazards	Structure & Infrastructure Projects	Coastal, Riverine, and Urban Flood	\$145,200,000 (total)	Multiple: CWF/Blended Grant Loans/ Sewer Lining Loans (see note above under estimated costs).	GNHWPCA	All projects to be completed by 2022	Very High	Partially Completed / In Progress	Projects #1, #2, #5, and #6 are completed. Projects #3 & #4 are in final design and moving toward implementation in 2022/23	
7	Mill River	Implement recommendations of the Mill River planning study that forecast storm surge and sea level rise within the Mill River Industrial District and then to assess three coastal zone management approaches: natural attenuation, intensive infrastructure investment and a balance of new infrastructure with attenuation.	Flood Hazards	Structure & Infrastructure Projects	Coastal and Riverine Flood	>\$5,000,000	FEMA, USACE, and others	Board of Alders with Engineering, Public Works, City Plan, and Economic	7/2019-6/2021	Very High	Delayed	Evaluating recommendations and seeking funding	
8	Dam failure drill with Regional Water Authority	Work with Regional Water Authority to complete a drill of potential failures of the West River, Whitney, and Malby Dams which are all located upstream of the City.	Regional Collaboration	Emergency Preparedness	Dam Failure	Less than \$5,000 per year	Operating budget	Emergency Management	8/2017-7/2018 for first year, then annually	Very High	Partially Completed / In Progress	In progress	
9	Implementation of CRS Program for Public Information	The City Plan Department must ensure that the City makes progress in the many action items in the PPI. Emergency Management will coordinate and lead Public Information Meetings at public libraries within Quinnipiac, East Shore and City Point neighborhoods to review the CRS rating system, the city's flood mitigation strategies, and flood preparedness.	Public Education & Preparedness	Education & Awareness Programs	Coastal Flood; Sea Level Rise	Less than \$5,000 per year	Operating budget	City Plan and Emergency Management	7/2016-6/2017 for first year, then annually	Very High	Completed + To Be Continued	Underway	
10	Beach Nourishment South of Pardee Seawall	Beach nourishment in front of private homes on Townsend Avenue for flood prevention.	Flood Hazards	Natural Systems Protection	Coastal Flood; Coastal Erosion; Sea Level Rise	\$1,800,000	CDBG-DR	Engineering Department	10/2017-5/2019	High	Completed	This project was completed in winter 2020	
11	River Street Bulkhead	Shoreline stabilization along city property to prevent further erosion along the Quinnipiac River including sections of steel bulkhead and revetments with public access.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood; Coastal Erosion; Sea Level Rise	Analysis and design budget is \$342,000; Construction budget is	CDBG-DR for analysis and design/TBD for construction	Economic Development Administration	TBD	High	Delayed	Design complete; seeking funding. Ongoing litigation regarding design has stalled the project.	
12	Downtown Stormwater Modeling and Drainage System Improvements Project	Hydraulic study of the Downtown area including Union Avenue and the Route 34 underpasses. The result of this study will inform the sewer system improvements will be implemented. The recommended alternative will be designed to construction-level documents using a portion of a CDBG-DR Tranche 2 grant (roughly \$1.5 million).	Flood Hazards	Structure & Infrastructure Projects	Urban Flood	\$350,000 for study \$1.5 million for design is underway	CDBG-DR (Tranche 1 & 2)	Engineering Department	Study completed March 2017. Design to be completed June 2019	High	Completed + To Be Continued	This project was completed in June 2020. Portions of the recommended alternative from the study will be constructed under new FEMA BRIC and ACOE Long Wharf projects.	
13	Church Street South Residential Planning and Demand Analysis	During Hurricane and other storm surges, excessive flooding occurs along Church Street South making it an extremely vulnerable community for residents and visitors. The scope of the Residential Planning and Demand analysis will determine the most sustainable residential and mixed-use structure(s) to be developed based on the area's need and will leverage existing planning initiatives included in the storm water and flood mitigation studies as well as the Community Plan to determine a viable mix of housing and commercial developments for the redeveloped property.	Community Planning	Local Plans & Regulations	Coastal and Urban Flood	\$500,000	CDBG-DR	Livable Cities Initiative	Uncertain (still TBD)	High	Cancelled	This project is being addressed through the FEMA BRIC Grant.	
14	Morris Cove Drainage Improvement Project	Redirection of existing drainage to improve conveyance of stormwater flow.	Flood Hazards	Structure & Infrastructure Projects	Coastal and Urban Flood	\$400,000	Capital improvement	Engineering Department	7/2018-6/2019	High	Partially Completed / In Progress	Design is underway	Revise timeline to have end date of 12/2024
15	Fort Hale Park drainage outlet rehabilitation	Restoration and silt removal from an existing drainage channel. Requires access to the Armed Forces Reserve Center but would solve a drainage problem for residents near the USCG facility.	Flood Hazards	Structure & Infrastructure Projects	Coastal and Urban Flood	In kind from DEEP to dredge outlets as part of mosquito control.	Capital improvement	Parks Department	7/2018-6/2019	High	Delayed	Need identified and feasibility assessed. Design and implementation schedule contingent on funding source (to be determined).	
16	East Shore Park shoreline stabilization	Living Shoreline solutions are being studied, including: segmented sills with marsh fringe, regrading and vegetating waterfront slopes with armored toe, and improving public access to the waterfront.	Flood Hazards	Natural Systems Protection	Coastal Flood; Coastal Erosion; Sea Level Rise	Approximately \$500,000.	CIRCA; City operating budget	Parks Department	7/2018-6/2019	High	Partially Completed / In Progress	Design underway. Funding secured for construction.	East Shore Park Living Shoreline
17	Crisuolo Park seawall	Install wall along shoreline of park to prevent flooding of park.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood	\$750,000	Capital improvement	Parks Department	7/2018-6/2019	High	Cancelled		
18	Lighthouse Point Park Carousel Building Floodproofing Study.	Conduct feasibility study to floodproof Carousel building to higher elevation in park to eliminate any future flooding of building.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood; Sea Level Rise	\$50,000	Operating budget	Parks Department	TBD	High	Delayed	In the process of developing scope of work.	
19	Fort Hale Park shoreline stabilization	Install riprap and other shoreline stabilization measures.	Flood Hazards	Structure & Infrastructure Projects	Coastal Flood; Coastal Erosion; Sea Level Rise	\$225,000	Capital improvement	Parks Department	7/2018-6/2019	High	Delayed	In the process of determining project manager to conduct site assessment and develop scope of work (see action #15).	
20	City Point Flood Mitigation Study	A study to prepare storm surge and sea level rise model for the City Point area to assess risk and propose protection and resilience strategies.	Community Planning	Local Plans & Regulations	Coastal Flood	\$425,000	TBD	City Plan	7/2017-8/2018	High	Delayed	City Plan and Engineering are collaborating on community engagement and outreach to determine scope of the study.	