

**The Coastal Storm Plan and the Sheltering System
New York City Office of Emergency Management**

The Coastal Storm Plan

Introduction

The Coastal Storm Plan outlines a scalable response to coastal storm events, ranging from Nor'easters to a worst case scenario Category 4 hurricane. In the worst case scenario, 2.2 million New Yorkers who are at risk from storm surge may be ordered to evacuate before a hurricane makes landfall. In addition, an estimated 800,000 New Yorkers who are not at risk may self-evacuate. Evacuees who are ordered to leave will be encouraged to find shelter with friends and family outside of storm surge areas in the City or to safer areas outside the City. Of these 3.0 million evacuees, more than 600,000 people may seek public shelter.

Facts and Figures

Population Expected to Evacuate	3.0 million
Population Expected to Seek Public Shelter	605,000
Evacuation Centers	65
Hurricane Shelters	501
Special Medical Needs Shelters	8
Staffing Requirement for a 24-hour period	34,000
Training Requirement for Shelter Staff	68,000
City Tax Levy Funds Dedicated to Logistics Planning & Supplies	\$20 million
Number for Pre-positioned Start-up Kits in Schools	600

Operational Strategies

The plan consists of six operational strategies describing the decisions, processes, and coordination activities needed to respond to a coastal storm.

Storm Tracking and Notification	This strategy describes the collection, review, and dissemination of meteorological information to New York City agencies and other partners.
Evacuation	This strategy describes the operational components needed for general evacuation through roadways and mass transportation. In addition, this strategy describes operational components for healthcare facility and special needs evacuation.
Sheltering	This strategy describes the operational components needed manage evacuees using the sheltering system. The sheltering system includes the following facilities: the Unified Operations and Resource Center (management), Evacuation Centers (receiving point), Hurricane Shelters (shelter), Special Medical Needs Shelters (medical shelters), and Transitional Shelters (long-term shelter).
Logistics	This strategy describes the phases and processes for providing facilities and resources to support the operational components of the Coastal Storm Plan.
Public Information	This strategy describes mechanisms to inform the public about preseason preparedness, hazards, evacuation orders, and protective actions the public can take.
Recovery and Restoration	This strategy describes the operational components needed to implement and coordinate damage assessment, essential service restoration, debris management, reconstruction, and long-term human needs. These components will be implemented over four operational periods.

Timeline

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A response to a coastal storm may begin as early as 96 hours prior to a storm’s forecasted landfall. The timeline of the response has been divided into eight operational phases. These eight phases are represented in the Decision Making Section.

Monitoring	The majority of actions taken during this time period relate to information gathering and notifications. During this time, agencies should factor a potential storm into daily operations and consider modifying.
Planning	Agencies, including special needs client agencies and healthcare facilities, initiate resource assessments, staging, and operational planning for an impending storm. Individuals with special needs begin planning for their evacuation.
Staging	During this phase, agencies notify and muster staff and deploy resources needed to prepare for an impending coastal storm. Actions during this stage may be based on the City’s decision to prepare/open the shelter system.
Mobilization	This phase tracks the ongoing deployment and staging of personnel and equipment to facilitate evacuation, sheltering, and recovery and restoration.
Evacuation	Following mayoral order to evacuate, agencies begin implementing evacuation operations.
Pre-Arrival	The length of this period is dependent upon the time needed to close transportation services used in the evacuation. Evacuation operations continue. Planning for storm arrival and maintenance of essential services continue. Toward the end of the stage, tasks to terminate the evacuation should be implemented.
Storm Event	This phase involves monitoring and problem solving current operations. In addition, post-storm planning is already in progress for the operational period following a coastal storm.
Post-Storm	This phase indicates the departure of all weather hazards from the area and outlines the four operational phases of Recovery and Restoration. However, many preparations for post-storm activities occur pre-evacuation.

Focus on Operational Strategy 3: Sheltering

Evacuees that seek public shelter will travel first to an Evacuation Center and then will be shuttled to either a Hurricane or Special Medical Needs Shelter.

The total system consists of 509 sheltering facilities that can provide safety to more than 600,000 evacuees during a storm event. If all facilities are open, the system will require 34,000 staff during a 24-hour period. To ensure adequate staffing, the City will train twice as many staff, or 68,000 individuals to operate the shelter system.

The sheltering strategy is divided into two management components — Shelter System Management and Solar System Management. These two components and their constituent parts work together to manage sheltering operations from a strategic as well as tactical level.

Facility Role in Management System	
Shelter System Management	Solar System Management
EOC - Sheltering ESF Unified Operations and Resource Center	Evacuation Centers Hurricane Shelters Special Medical Needs Shelter Transitional Shelters

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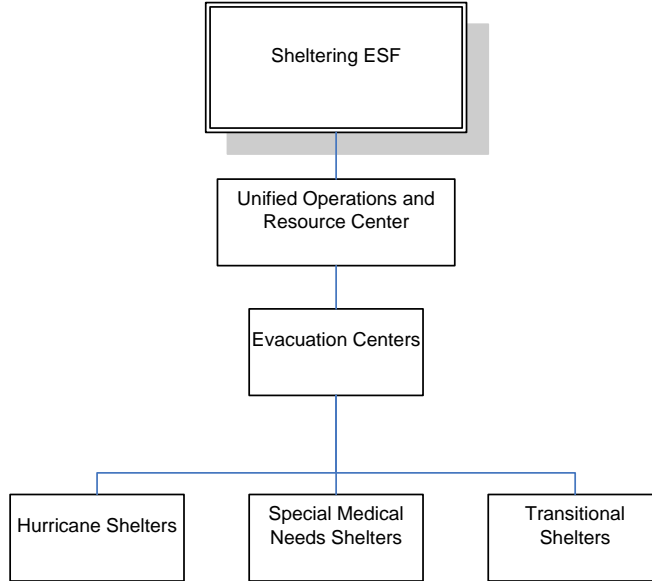


Figure 1: Shelter System Overview

Shelter System Management

The strategic management for the sheltering system occurs at the City’s Emergency Operations Center (EOC) through the Sheltering Emergency Support Function (ESF).

The Unified Operations and Resource Center (UORC) supports tactical management of shelter operations by filling resource requests and resolving problems within a solar system and at individual shelter system facilities.

Shelter System Management	
Overall System Management	
Facility	Description
(EOC) Sheltering ESF	Provides strategic decision making for the shelter system and is the coordinating mechanism in the City’s EOC for resource requests and information reporting/collecting from the Unified Operations and Resource Center.
UORC	Provides tactical-level management to shelter system in three ways: Manage routine logistics operations for solar systems Monitor and provide assistance to individual hurricane and Special Medical Needs Shelters when requested by Evacuation Center Managers Collect and summarize information from the Evacuation Centers for situation reports

Solar Systems

There are 65 Solar Systems across the five boroughs consisting of one Evacuation Center and between 5 to 10 Hurricane Shelters. Solar Systems are grouped based on geography into 8 Borough Commands. One Solar System per Borough Command will also contain a Special Medical Needs (SMN) Shelter. Following the storm event, Solar Systems will open Transitional Shelters based on need.

Solar System Management	
Solar System Management	
Facility	Description
Evacuation Centers	<input type="checkbox"/> Triage and distribute evacuees to shelters

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	<ul style="list-style-type: none"> <input type="checkbox"/> Troubleshoot problems at individual shelters <input type="checkbox"/> Collect and receive resource requests and situation reports from Hurricane Shelters and submit to the Unified Operations and Resource Center for fulfillment
Hurricane Shelters	<ul style="list-style-type: none"> <input type="checkbox"/> Connected to an Evacuation Center <input type="checkbox"/> Provides essential services to preserve the health and safety of people who must leave their permanent housing due to an impending storm. <input type="checkbox"/> Basic (limited) feeding is provided, however cots, blankets and other supplies may not be available. <input type="checkbox"/> After the storm, a Hurricane Shelter could become a Transitional shelter to house individuals whose homes have been destroyed.
Special Medical Needs Shelters	<ul style="list-style-type: none"> <input type="checkbox"/> A shelter for evacuees who do not require hospital or nursing home care, but do require specialized assistance based on their present condition or medical history.
Transitional Shelters	<ul style="list-style-type: none"> <input type="checkbox"/> A safe living space with essential services provided until permanent housing is found or restored. <input type="checkbox"/> Essential services include: meals, snacks, basic physical and mental health services, sleeping space and bedding, living space, and information.

Logistics

The operational requirements needed to sustain the shelter system housing includes support supplies and equipment (including blankets/ cots, ice, meals ready to eat, bottled water, cambros, comfort kits, baby formula/ supplies, feminine hygiene products, first aid kits and pet supplies) are massive. The primary logistics mission is to manage the infrastructure to supply the shelter system for a period of 7 days (2 days pre-landfall and 5 days post-landfall). The infrastructure will consist of a combination of stockpiles, guaranteed delivery through contingency agreement with suppliers, and purchase at or near the time of the event.