

# New York City Emergency Management

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## Hazard Mitigation and Coordination

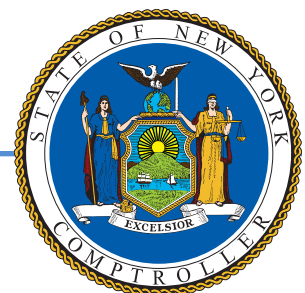
Report 2021-N-8 | October 2022

OFFICE OF THE NEW YORK STATE COMPTROLLER

Thomas P. DiNapoli, State Comptroller

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Division of State Government Accountability



# Audit Highlights

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## Objective

To determine if New York City Emergency Management (NYCEM) adequately monitors and coordinates with New York City agencies for natural hazard mitigation, evacuation, and continuity of operations. The audit covered the period from January 2018 through April 2022.

## About the Program

Hurricane Sandy, or Superstorm Sandy, hit New York City 10 years ago, on October 29, 2012, and in its wake left hundreds of thousands of New Yorkers without power, damaged critical public and private infrastructure, and left many New Yorkers with limited access to food, drinking water, health care, and other critical services. Made up of several combined storms, it was one of the most damaging hurricanes ever to make landfall in the United States. The storm resulted in the deaths of 44 City residents and inflicted an estimated \$19 billion in damages and lost economic activity across the City. Over 69,000 residential units were damaged and thousands of New Yorkers were temporarily displaced, including 6,500 patients who had to be evacuated from hospitals and nursing homes. Over 1 million New York City children were unable to attend school for a week.

NYCEM is responsible for coordinating citywide emergency planning and response for all types and scales of emergencies, including weather-related events. NYCEM helps New Yorkers before, during, and after emergencies through preparedness, education, and response. NYCEM also works to advance long-term initiatives that reduce risk and increase the resilience of New York City through mitigation planning and Federal Emergency Management Agency (FEMA) mitigation grant coordination. Hazard mitigation is any cost-effective and sustained action taken to reduce the long-term risk to human life, property, and infrastructure from hazards. Too often after disasters, repairs and reconstruction are completed in such a way as to simply restore damaged property to pre-disaster conditions. Hazard mitigation is a critical step that can break this cycle of repetitive loss by focusing on risk reduction; it is estimated that for every \$1 invested in hazard mitigation, an average of \$6 is saved in the long term.

NYCEM's New York City Hazard Mitigation Plan (HMP) identifies the hazards that pose a risk to the City and actions City agencies are taking to reduce the impacts of these hazards. To be eligible for FEMA post-disaster mitigation funding, including Hazard Mitigation Grant Program funding, the HMP must be updated every 5 years. In 2019, NYCEM released the 5-year HMP update as a website. The HMP includes mitigation actions led by NYCEM as well as other City agencies. A mitigation action is a specific project, plan, or procedure that achieves goals and objectives to minimize the effects from a disaster and reduce the loss of life and property.

NYCEM also creates and maintains four citywide evacuation plans: the Area Evacuation Plan, Maritime Emergency Transportation Plan, Coastal Storm Plan, and Flash Flood Emergency Plan. NYCEM's Plan Index is the list of all planning documents maintained by NYCEM. Continuity of Operations (COOP) plans ensure an individual organization can continue to perform its essential functions, provide essential services, and deliver core capabilities during a disruption to normal operations. Effective continuity of operations activities provide a baseline capability and represent the minimum standard required by a comprehensive, integrated continuity program.

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## Key Findings

- We identified significant deficiencies in NYCEM's HMP. Of the 755 hazard mitigation actions listed in the HMP:
  - 412 (55%) mitigation actions did not have finish dates.
  - 403 (53%) mitigation actions did not have start dates.
  - 281 (37%) mitigation actions did not have cost estimates.
- NYCEM did not update and assess its citywide evacuation plans in a timely manner.
  - The Area Evacuation Plan and the Maritime Emergency Transportation Plan were last updated in 2013 – 9 years ago.
  - NYCEM did not provide any evidence that it completed the required formal assessments for any of its four citywide evacuation plans.
- NYCEM did not provide adequate oversight and guidance regarding COOP plans.
  - On average, 13 of the 46 City agencies (28%) did not always submit quarterly attestations that their plans were complete and up to date.
  - 34 of the 46 City agencies (74%) had incomplete COOP plans.
  - Required COOP plan exercises were not completed as required:
    - ◆ 13 agencies (28%) did not complete a COOP plan exercise in 2018.
    - ◆ 8 agencies (17%) did not complete a COOP plan exercise in 2019.
    - ◆ 20 agencies (43%) did not complete a COOP plan exercise in 2021.

## Key Recommendations

- Comply with the HMP Maintenance Protocol and the HMP, including requesting sufficient supporting documentation from City agencies to ensure HMP mitigation action data is accurate, complete, and up to date.
- Establish time frames and implement formal written policies and procedures for updating citywide evacuation plans and conducting plan assessments.
- Review COOP plans submitted by City agencies to ensure, to the extent possible, that the plans are accurate, up to date, and complete.



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**Office of the New York State Comptroller  
Division of State Government Accountability**

October 25, 2022

Zachary Iscol  
Commissioner  
New York City Emergency Management  
165 Cadman Plaza East  
Brooklyn, NY 11201

Dear Commissioner Iscol:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage their resources efficiently and effectively. By so doing, it provides accountability for the tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit entitled *Hazard Mitigation and Coordination*. The audit was performed pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article III of the General Municipal Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

*Division of State Government Accountability*

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# Glossary of Terms

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<b>Term</b>	<b>Description</b>	<b>Identifier</b>
NYCEM	New York City Emergency Management	<i>Auditee</i>
Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act	<i>Law</i>
City Charter	New York City Charter	<i>Law</i>
COOP plans	Continuity of Operations plans	<i>Key Term</i>
EO 107	Executive Order 107 (Continuity of Operations Planning, October 2, 2007)	<i>Law</i>
EO 46	Executive Order 46 (Hazard Mitigation Plan, May 21, 2019)	<i>Law</i>
FEMA	Federal Emergency Management Agency	<i>Federal Agency</i>
Guide	NYCEM's COOP Planning Guide for City Agencies	<i>Key Term</i>
HMP	New York City Hazard Mitigation Plan	<i>Key Term</i>
RRU	NYCEM's Risk and Recovery Unit	<i>Auditee Unit</i>

# Background

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Hurricane Sandy, or Superstorm Sandy, hit New York City 10 years ago on October 29, 2012. Made up of several combined storms, it was one of the most damaging hurricanes ever to make landfall in the United States. Over the course of 48 hours, wind, rain, and water destroyed approximately 300 homes, left hundreds of thousands of New Yorkers without power, damaged critical public and private infrastructure, and left many New Yorkers with limited access to food, drinking water, health care, and other critical services. The storm resulted in the deaths of 44 City residents and inflicted an estimated \$19 billion in damages and lost economic activity across the City. Over 69,000 residential units were damaged and thousands of New Yorkers were temporarily displaced, including 6,500 patients who had to be evacuated from hospitals and nursing homes. Over 1 million New York City children were unable to attend school for a week. Major weather-related events continue to threaten New Yorkers. For example, in 2021, Hurricane Ida caused the deaths of 13 New York City residents, most of whom lived in basement apartments, in Queens and Brooklyn.

New York City Emergency Management (NYCEM) is responsible for coordinating citywide emergency planning and response for all types and scales of emergencies, including weather-related events. NYCEM helps New Yorkers before, during, and after these emergencies through preparedness, education, and response. NYCEM also works to advance long-term initiatives that reduce risk and increase the resilience of New York City through mitigation planning and Federal Emergency Management Agency (FEMA) mitigation grant coordination. Hazard mitigation is any cost-effective and sustained action taken to reduce the long-term risk to human life, property, and infrastructure from hazards.

Too often after disasters, repairs and reconstruction are completed in such a way as to simply restore damaged property to pre-disaster conditions. New York City has fundamentally shifted toward hazard mitigation, a critical step that can break the cycle of repetitive loss. The implementation of such hazard mitigation actions focuses on risk reduction and leads to building stronger, safer, and smarter. It is estimated that for every \$1 invested in hazard mitigation, an average of \$6 is saved in the long term.

NYCEM's New York City Hazard Mitigation Plan (HMP) identifies the hazards that pose a risk to the City as well as actions City agencies are taking to reduce the impacts of these hazards. To be eligible for FEMA post-disaster mitigation funding, including Hazard Mitigation Grant Program funding, the HMP must be updated every 5 years. In March 2009, NYCEM completed the first HMP to help make the City more resilient to hazards. Five years later, NYCEM partnered with the Department of City Planning and the Mayor's Office of Resiliency to create the 2014 HMP update. In 2019, NYCEM released the 5-year HMP update as a website.

NYCEM also creates and maintains four citywide evacuation plans: the Area Evacuation Plan, Maritime Emergency Transportation Plan, Coastal Storm Plan, and Flash Flood Emergency Plan. These citywide plans provide guidance for agencies to prepare for, conduct, and assess an emergency. Continuity of Operations (COOP) plans ensure an individual organization can continue to perform

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its essential functions, provide essential services, and deliver core capabilities during a disruption to normal operations. Effective continuity of operations activities provide a baseline capability and represent the minimum standard required by a comprehensive, integrated continuity program. As required by Executive Order 107 (EO 107), the COOP Management Team (which includes NYCEM and the New York City Department of Information Technology and Telecommunications) must provide training to City agencies on the creation and/or migration of existing agency contingency plans and the use of NYCEM's Sustainable Planner web-based tool to develop agency-wide COOP plans. The COOP Management Team is also required to provide oversight and guidance to City agencies as they fulfill their responsibility to develop COOP plans that will enable them to continue essential operations during a weather-related emergency or other incident that may disrupt normal agency operations.

Finally, Section 498 (a) of Chapter 19-A of the New York City Charter (City Charter) states that NYCEM shall be the lead agency in the coordination and facilitation of resources in incidents involving public safety and health, including incidents which may involve acts of terrorism. All agencies shall provide NYCEM promptly with all information relevant to the performance of the emergency management functions and shall collect and make available any information requested by NYCEM for use in emergency planning. Further, all agencies shall promptly provide NYCEM with all appropriate material, equipment, and resources needed for emergency management functions, including personnel.



# Audit Findings and Recommendations

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Given the increase in frequency and intensity of weather-related events, it is not a matter of if but when another storm like Hurricane Sandy hits New York City, potentially having a severe impact on the City's infrastructure and its residents. We found weaknesses in NYCEM's monitoring processes as well as inaccuracies in data reported on NYCEM's HMP website. As a result, the information on the HMP website is misleading to stakeholders and other members of the public who access it. Not only is adequate monitoring important to ensure the accuracy and completeness of plan information, but it also helps ensure that mitigation actions are in place and effective. Without this oversight, the City may be less prepared for the next hazardous weather emergency.

In addition, NYCEM did not provide evidence that it conducted formal assessments of its four citywide evacuation plans. We also found that two of these plans were last updated in 2013 – 9 years ago. Moreover, NYCEM does not have access to local evacuation plans.

Further, we determined that NYCEM could have done more to monitor and follow up with City agencies to ensure COOP plans were completed. We found that not all City agencies submitted COOP plans to NYCEM; therefore, NYCEM officials had no assurance that all City agency COOP plans were created or completed. Moreover, even when City agencies submitted COOP plans, NYCEM did not review them to ensure, to the extent possible, that the information was accurate, up to date, and complete. Our review found that COOP plans were often incomplete and had incorrect points of contact listed. Moreover, we found that many City agencies were not conducting the required COOP plan exercises that test the capabilities of the COOP plan. This can significantly impact the City's ability to respond to major weather-related emergencies.

## Hazard Mitigation Plans

NYCEM's HMP identifies the hazards that pose a risk to the City as well as actions City agencies are taking to reduce the impacts of these hazards. The HMP includes mitigation actions led by NYCEM as well as other City agencies. A mitigation action is a specific project, plan, or procedure that achieves goals and objectives that minimize the effects from a disaster and reduce the loss of life and property. NYCEM maintains and updates the HMP and annually requests updates from other City agencies. As NYCEM's website states, "This living plan will ensure we can continuously identify, assess and reduce our risk from an array of hazards threatening our city." City agencies self-report their project status. To be eligible for FEMA post-disaster mitigation funding, including Hazard Mitigation Grant Program funding, the HMP must be updated every 5 years.

NYCEM currently maintains an HMP website that lists existing and proposed mitigation actions to help reduce or eliminate the long-term risk to human life and property from natural hazards. City agencies, including NYCEM, create hazard mitigation actions – specific projects, plans, or procedures that achieve goals and objectives that minimize the effects from a disaster and reduce the loss of life

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and property. City agencies self-report updated information about their actions to NYCEM. NYCEM's Risk and Recovery Unit (RRU) is the lead coordinator to monitor and update the HMP. According to the HMP, RRU conducts several monitoring activities, including:

- Collecting reports and project studies annually from City agencies involved in implementing mitigation projects or activities identified in the Mitigation Strategy section of the HMP.
- Maintaining and updating the mitigation action tables annually (each April from 2019 through 2023).
- Conducting site visits and obtaining reports of completed or initiated mitigation actions to incorporate into the next plan revision, as needed.

NYCEM also has a Planning Team that supports RRU's work on the HMP. According to the HMP, NYCEM evaluates the HMP website on a quarterly basis to determine the effectiveness of its projects, programs, and policies. The Planning Team works with the Hazard Mitigation Planning Partners (e.g., City agencies, FEMA) to review all components of the HMP and determine whether new data requires portions to be updated or modified. The Planning Team also evaluates the content of the HMP by asking several questions, such as:

- How other citywide initiatives are able to complement and support the mitigation strategy;
- Whether the mitigation actions are effective; and
- Whether the goals, objectives, and mitigation actions are still relevant in light of any changes in City, State, or federal regulations or policies.

We found significant internal control weaknesses in NYCEM's monitoring processes as well as inaccuracies in data published on NYCEM's HMP website. The data was often incomplete, inaccurate, and/or out of date. Failure to keep the HMP database up to date reduces NYCEM's situational awareness of the City's mitigation efforts. Additionally, NYCEM does not adhere to the monitoring and evaluation sections of its HMP Maintenance Protocol and its HMP. By not monitoring HMP mitigation actions, NYCEM may miss opportunities to identify and help improve mitigation actions that are not efficient and effective. Consequently, the City may be less prepared for future weather emergencies.

## Review of Hazard Mitigation Plan Actions

As of March 10, 2022, NYCEM had 755 hazard mitigation actions listed in its HMP. These actions are intended to mitigate against one or more natural or non-natural hazards profiled in the HMP. The HMP includes a comprehensive set of data including estimated start dates, finish dates, and cost estimates. We reviewed the data listed in the HMP and found that it was often incomplete. For example, we found the following:

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- 412 (55%) mitigation actions did not have finish dates.
  - 403 (53%) mitigation actions did not have start dates.
  - 281 (37%) mitigation actions did not have cost estimates.

We selected a judgmental sample of 14 mitigation actions – four where NYCEM was the lead agency and 10 where other City agencies were the lead agency – to determine whether the HMP data was accurate and up to date. We found many instances where NYCEM could not provide support for start and finish dates for their own mitigation actions. In addition, we found significant differences when we compared the HMP data to City agency supporting data.

### **NYCEM-Led Mitigation Actions**

We reviewed the supporting documentation NYCEM officials provided for the four sampled mitigation actions and found it did not contain finish dates for any of the actions. Notably, in the HMP data, one mitigation action regarding the accessibility of evacuation centers had a reported finish date of April 15, 2019; however, the project is still ongoing – 3½ years later. Another mitigation action regarding interim flood protection measures had a reported finish date of June 30, 2021; however, the project is still ongoing – over 1 year later. In addition, NYCEM's supporting documentation for three mitigation actions did not contain start dates, so the start dates listed in the HMP could not be corroborated.

### **Other City Agency-Led Mitigation Actions**

NYCEM officials reached out to the other City agencies to obtain supporting documentation for their reported data (e.g., project address, vendor invoices, cost estimate support). Of note, NYCEM did not require or maintain supporting documentation from other City agencies. We compared the HMP data for these 10 actions with the documentation NYCEM provided and found the actions had differences in cost estimates, start dates, and/or finish dates.

We found differences between the cost estimates in the City agency records and those reported in the HMP for six actions. Notably, one City agency's cost estimate regarding the fortification of critical electrical systems exceeded the HMP cost estimate by \$737 million. Additionally, for another City agency, there were no cost estimates – from either NYCEM's HMP or the City agency – regarding a storm water study. Table 1 shows the differences between the HMP cost estimate data and City agency records.

**Table 1 – Differences Between Mitigation Action Cost Estimates**

Mitigation Action	Per HMP	Per City Agency	Difference
Stormwater Drainage	\$360 million	\$582.9 million	\$222.9 million
Stormwater Study	No cost listed	No cost provided	–
Emergency Generators	\$55 million	\$68.6 million	\$13.6 million
Shoreline Stabilization	\$12.7 million	\$12.7 million	–
Waterfront Drainage	\$481 million	\$481 million	–
Manhole and Conduit Repairs	\$2.7 million	\$3.1 million	\$0.4 million
Area Protective Measures	\$5.9 million	\$4.3 million	\$1.6 million
Stormwater Management	\$16 million	\$19.3 million	\$3.3 million
Natural Barriers*	0	0	–
Electrical System Fortification	\$50 million	\$787 million	\$737 million
<b>Total</b>			<b>\$978.8 million</b>

\*Performed in house at no cost.

We also found that seven of the start dates and five of the finish dates did not match. For example, one City agency’s start date differed from the HMP start date by over 4 years. In another example, one City agency’s finish date exceeded the HMP finish date by over 3 years. Table 2 shows the differences between start and finish dates.

**Table 2 – Differences Between Mitigation Action Start and Finish Dates**

Mitigation Action	Start Date			Finish Date		
	Per HMP	Per City Agency	Difference	Per HMP	Per City Agency	Difference
Stormwater Drainage	No date listed	12/30/2019	–	No date listed	6/26/2023	–
Stormwater Study	6/1/2018	4/1/2019	10 months	5/14/2021	10/1/2020	7 months
Emergency Generators	6/15/2015	1/1/2019	3 years, 6 months	1/1/2021	6/22/2024	3 years, 5 months
Shoreline Stabilization	3/20/2014	6/11/2018	4 years, 2 months	1/20/2019	6/10/2019	4 months
Waterfront Drainage	1/1/2016	10/1/2015	3 months	3/1/2023	No date provided	–
Manhole and Conduit Repairs	8/1/2016	12/21/2017	1 year, 4 months	7/31/2018	12/20/2019	1 year, 4 months
Area Protective Measures	4/29/2013	3/25/2013	1 month	12/12/2013	12/12/2013	–
Stormwater Management	6/1/2016	6/2/2014	2 years	8/1/2018	11/15/2016	1 year, 8 months
Natural Barriers	8/1/2012	8/1/2012	–	No date listed	No date provided	–
Electrical System Fortification	No date listed	No date provided	–	No date listed	2/1/2024	–

NYCEM officials stated they are not an oversight agency and do not have the authority to compel City agencies to provide the information to NYCEM. Officials also informed us they do not conduct the monitoring activities stated in NYCEM’s HMP Maintenance Protocol and the HMP. NYCEM officials referenced other criteria,

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such as the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Act) and NYC Executive Order 46 (EO 46), to demonstrate their compliance with hazard mitigation requirements. However, these criteria also require NYCEM to monitor and evaluate the HMP. According to the Act's implementing regulations, the HMP must include a section describing the method and schedule of monitoring, evaluating, and updating the plan. Similarly, EO 46 requires that NYCEM continue to be the agency responsible for monitoring, evaluating, and updating the HMP. EO 46 also states that all agencies must provide such assistance and cooperation as may be necessary or appropriate to implement the provisions of the HMP.

NYCEM officials also stated that monitoring in a financial or project management oversight capacity is not one of their responsibilities. They plan to update the HMP and the HMP Maintenance Protocol to more accurately reflect their role in the hazard mitigation process and add additional language to the HMP that the information is presented as received from the specific City agencies. However, such a disclaimer does not negate NYCEM's responsibility to ensure that information they provide to stakeholders on the City's behalf is accurate and current.

## Evacuation Plans

NYCEM's mission is to "help New Yorkers before, during, and after emergencies through preparedness, education, and response." Evacuation plans provide guidance for City agencies to prepare for, conduct, and assess an emergency. New York City is highly vulnerable to flooding from coastal storms due to its intensively used waterfront and its extensive coastal geography. Floods have the potential to destroy homes and businesses, impair infrastructure, and threaten human safety. With climate change and sea level rise, these risks are expected to increase in the future, but will most adversely affect low-lying neighborhoods. Therefore, it is critical that evacuation plans be accurate, complete, and up to date.

Overall, we found that NYCEM needs to update and assess its citywide evacuation plans in a more timely manner. They also need to establish time frames and implement formal, written policies and procedures on updating citywide evacuation plans and conducting plan assessments. In addition, we found that NYCEM did not have access to local evacuation plans such as evacuation plans for specific Community Districts. Access to such plans would allow NYCEM, as the City's emergency response coordinator, to ensure adequate coordination.

## Citywide Evacuation Plans

NYCEM coordinates and supports multi-agency responses to emergencies and other significant incidents in New York City. As such, NYCEM maintains four citywide evacuation plans: the Area Evacuation Plan, Maritime Emergency Transportation Plan, Coastal Storm Plan, and Flash Flood Emergency Plan. NYCEM manages its citywide plans through a Plan Index that contains the list of all planning documents maintained by NYCEM and includes the names of the documents, category, unit owner, and month and year it was last updated. NYCEM's Planning Catalog is a separate list of documents that are being updated in any given year.

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- **Area Evacuation Plan:** Coordinates evacuations of one or more neighborhoods due to large-scale, no-notice incidents.
  - **Maritime Emergency Transportation Plan:** Seeks to coordinate the response to incidents that cause an immediate and unforeseen surge in demand for maritime transportation.
  - **Coastal Storm Plan:** Provides a citywide overview of response, relief, and recovery operations during a coastal storm, particularly a tropical storm or hurricane. Specifically, it defines authorities, timelines, and procedures for communication, coordination, decision making, and operations.
  - **Flash Flood Emergency Plan:** Describes a coordinated response to flash flood events in the City. The plan contains detailed procedures to mitigate the effects of these events on people and property, and guides agency stakeholders through the decisions and actions required before, during, and after such an event.

The New York City Administrative Code requires that NYCCEM assess their plans (e.g., citywide evacuation plans) once every 2 years for the purpose of responding to coastal storms, severe weather, and natural disaster events. We reviewed the latest assessments and plan updates of NYCCEM's four citywide evacuation plans and found the following:

- The Area Evacuation Plan and the Maritime Emergency Transportation Plan were last updated in 2013 – 9 years ago.
- There was no evidence of formal assessments for any of the four plans.

We determined that NYCCEM does not have set time frames or formal, written procedures for updating evacuation plans and conducting plan assessments. As a consequence, there is a risk that evacuation plans may not be accurate, complete, and up to date.

NYCCEM officials disagreed with our findings. They advised us they hold annual meetings with each unit where they review documents owned by that unit, talk through each one, and determine the priorities for the following year. Officials also stated that the Planning Catalog is updated live during these meetings; however, they do not take minutes. They added that NYCCEM also makes assessments as to whether a plan needs to be updated based on after-action reports and real-world events. However, without written meeting minutes, it is unclear what was discussed, if all necessary elements were reviewed, and what follow-up was required.

## Local Evacuation Plans

Although NYCCEM's four citywide evacuation plans provide a citywide overview of how to respond during emergencies, officials advised us they do not maintain specific evacuation plans for local communities, such as Community Districts. NYCCEM officials advised us that they are not responsible for and do not have access

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to these plans, but that they are maintained by the New York City Police Department. NYCEM officials also emphasized that citywide comprehensive emergency plans can serve and function within a local community. The role of NYCEM's emergency planning model is to be flexible and scalable to service all New Yorkers across all five boroughs. This planning model aligns with foundational emergency management guidelines. We acknowledge that NYCEM is not responsible for local evacuation plans; however, access to such plans would allow NYCEM, as the City's emergency response coordinator, to ensure adequate coordination.

## COOP Plans

According to NYCEM officials, all mayoral agencies must complete a COOP plan. In addition, non-mayoral City agencies have the option of completing a COOP plan. COOP plans ensure that an individual organization can continue to perform its essential functions, provide essential services, and deliver core capabilities during a disruption to normal operations. Effective continuity of operations activities provide a baseline capability and represent the minimum standard required by a comprehensive, integrated continuity program. EO 107 called for the creation of a COOP Management Team co-chaired by the Commissioner of NYCEM and the Commissioner of the New York City Department of Information Technology and Telecommunications. According to EO 107, the COOP Management Team must provide training to City agencies on the creation and/or migration of existing agency contingency plans and the use of the Sustainable Planner to develop an agency-wide COOP plan. The COOP Management Team is also required to provide oversight and guidance to City agencies as they fulfill their responsibility to develop COOP plans to enable them to continue essential operations during an emergency or other incident that may disrupt normal agency operations. Further, on March 24, 2010, the Deputy Mayor's office sent a memo to agency heads outlining the requirement for these agencies to complete annual COOP plan exercises. In addition, Section 498 (a) of the City Charter requires all agencies to provide NYCEM promptly with all information relevant to the performance of the emergency management functions and to collect and make available any information requested by NYCEM for use in emergency planning.

Overall, we determined that NYCEM could have done more to provide oversight and guidance to City agencies to ensure COOP plans were completed. Not all City agencies submitted COOP plans to NYCEM; therefore, NYCEM did not know whether all City agency COOP plans were completed. Instead, NYCEM asks City agencies to attest that their COOP plans are complete and up to date. However, several City agencies failed to do this. Additionally, even when NYC agencies submitted COOP plans to NYCEM, NYCEM did not review the COOP plans to ensure, to the extent possible, that the information was accurate, up to date, and complete. We reviewed agency COOP plans and found several issues. We also found that the required COOP plan exercises were not completed. NYCEM should create formal policies and procedures for following up with City agencies that are delinquent in attesting to/submitting COOP plans and completing COOP plan exercises.

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## COOP Plan Attestations

According to EO 107 and NYCEM officials, mayoral agencies are mandated to participate in the COOP program. In addition, EO 107 requires NYCEM to provide oversight and guidance to City agencies as these agencies fulfill their responsibility to develop COOP plans. To comply with this, NYCEM provides agencies with its Sustainable Planner to assist users with the design, development, and maintenance of COOP plans. According to NYCEM officials, City agencies are given the option of developing a single COOP plan with all their essential services or developing a separate plan for each essential service. NYCEM officials advised us that City agencies attest on a quarterly basis that their COOP plans are complete and up to date. NYCEM officials also stated that they take follow-up actions, such as sending reminders and posting delinquency statuses on agency-shared dashboards, when City agencies did not attest to COOP plans.

During our audit period, 46 City agencies were required to participate in the attestation process (through NYCEM's Sustainable Planner). On average, 13 of the 46 agencies (28%) did not submit their attestation each quarter for 2018, 2019, 2020, and 2021, as required (see Table 3 for a breakdown per quarter). One City agency did not attest to its COOP plans for either 2020 or 2021.

**Table 3 – Number of City Agencies That did not Complete COOP Attestations**

Quarter	2018	2019	2020	2021
First Quarter	14	16	15	11
Second Quarter	13	12	12	18
Third Quarter	11	8	9	15
Fourth Quarter	11	12	13	14
<b>Average</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>15</b>

NYCEM officials indicated that they gave extensions to many of these City agencies; however, we found that these agencies never filed and simply attested to their COOP plans in the following quarter.

We also identified one mandated City agency that never participated in the COOP program. NYCEM officials advised us of another City agency (non-mandated) that had experienced an emergency and had difficulties continuing its operations, but still has not finalized a COOP plan.

## COOP Plan Content

NYCEM created a COOP Planning Guide for City Agencies (Guide) and shared a template with City agencies for use in preparing COOP plans. According to the Guide and template, COOP plans must include certain details, such as reconstitution, an employee directory, and emergency point-of-contact names and phone numbers. We reviewed the latest COOP plans prepared (as of April 21, 2022) by all participating 46 City agencies to determine if the plans were complete. We found that 34 of the 46 City agencies (74%) had incomplete COOP plans.



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- 34 City agency COOP plans had missing sections or pages.
    - 4 City agencies did not have the required reconstitution section, which outlines the process by which agency personnel resume normal operations from their primary or alternate facilities.
    - 16 City agencies had an incomplete or missing employee directory.
    - The remaining 14 agencies had incomplete information on task by process, orders of succession, team assignments, delegation of authority, and resource requirements pages.
  - Points-of-contact phone numbers were not listed on COOP plans of eight (17%) agencies.
  - COOP plans of three agencies were labeled as drafts and were incomplete (e.g., missing point-of-contact names, incomplete orders of succession).

NYCEM officials indicated that what they provide to City agencies is meant to be a guide, not a requirement, for COOP plan preparation and they do not hold City agencies to any “hard and fast requirement.” As a result, some of these agencies used their own templates to guide their COOP plan preparation instead of using the template provided by NYCEM. This led to inconsistencies in information provided and a lack of standardization in the way information was presented, making it difficult to compare plans and quickly identify relevant information.

## Points of Contact

We selected a judgmental sample of 588 points of contact listed on the latest COOP plans to verify if these individuals were still employed by their respective City agencies. We verified their employment statuses through online sources such as agency websites, SeeThroughNY, and LinkedIn. Based on our research, we found that:

- 45 of the 588 points of contact (8%) were no longer employed by their respective agencies (e.g., retired, left the agency).
- 18 of the 46 City agencies (39%) had outdated points of contact listed on their COOP plans. For example, three City agencies had their former Commissioner listed as a point of contact.

In addition, we selected a judgmental sample of 50 point-of-contact phone numbers listed on the latest COOP plans and attempted to contact the respective employees to determine if their contact information was up to date. We were unable to verify seven phone numbers because the numbers did not have voicemail capabilities, or we did not receive a return call after leaving a voicemail. We called the remaining 43 phone numbers listed in the COOP plans and found that 12 of the 46 City agencies (26%) had outdated point-of-contact phone numbers listed on COOP plans. This included:

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- Seven phone numbers that belonged to different people.
  - Three phone numbers that were invalid (e.g., we could not connect after dialing or the number was no longer in service).
  - One phone number belonged to an employee who stated they still work for the applicable City agency but were no longer involved with the agency's COOP planning.
  - One phone number belonged to a person who indicated they were never employed by the applicable City agency and did not know why they were listed as a point of contact on the agency's COOP plan. The individual told us he was a contractor/vendor.

## COOP Plan Exercises

On March 24, 2010, the Deputy Mayor sent a memo to agency heads outlining the requirement for these agencies to complete annual COOP plan exercises in order to test COOP plan capabilities. This is vital to the continued ability of City agencies to execute their COOP plans. An example of a COOP plan exercise is a COOP plan tabletop exercise, which includes a facilitated discussion of a plan in an informal, stress-free environment. It is similar to a problem-solving or brainstorming session where participants share capabilities and solve problems as a group based on their organization's existing plans and the determined objectives of the exercise. Agencies with multiple COOP plans may elect to conduct an exercise on only one plan.

NYCEM officials advised us they provide oversight and guidance in their role on the COOP Management Team through advice, templates, and assistance with tracking and management of COOP plans. Additionally, they claim they require quarterly attestations of plan review and update and yearly COOP plan exercises and that they track updates weekly on dashboards that are available to all City COOP program participants. They also stated they routinely follow up with agencies that are not in compliance with the COOP plan requirements, such as sending reminders when City agencies do not complete COOP plan attestations and exercises.

NYCEM officials advised us that they eliminated the COOP plan exercise requirement in 2020 because of the COVID-19 pandemic. We reviewed information from NYCEM's Sustainable Planner for the other years to determine whether each of the 46 City agencies completed their annual COOP plan exercises for 2018, 2019, and 2021. We found that:

- 13 agencies (28%) did not complete a COOP plan exercise in 2018.
- 8 agencies (17%) did not complete a COOP plan exercise in 2019.
- 20 agencies (43%) did not complete a COOP plan exercise in 2021.

During our review, we noted that City agencies sometimes conducted non-tabletop exercises. Although these agencies completed other types of exercises, we found

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that the exercises did not appear to adequately test COOP plan capabilities, certainly not to the extent of a tabletop exercise. For example, one City agency described its exercise simply as “Review of COOP Plan.” Additionally, the 2018 and 2019 lists of exercises conducted by City agencies did not always describe the types of exercises conducted.

NYCEM officials stated they do not have the responsibility and power to compel other agencies to take action. They claim that EO 107 requires the COOP Management Team to only provide oversight and guidance to City agencies as they fulfill their responsibility to develop a COOP plan. NYCEM officials also stated they are not an expert in the operations of other City agencies and are not qualified to assess the COOP plans of other agencies for accuracy and completeness.

We acknowledge that NYCEM is not an expert in the operations of other City agencies and that City agencies are responsible for their own COOP plans. However, we strongly believe that providing oversight includes monitoring and supervision to help ensure City agencies fulfill their responsibility to develop COOP plans that enable them to continue essential operations during an emergency. In addition, Section 498 (a) of the City Charter requires all agencies to provide NYCEM promptly with all information relevant to the performance of the emergency management functions and require them to collect and make available any information requested by NYCEM for use in emergency planning. Although NYCEM fails to take any responsibility for the significant weakness we found during this audit, they recognize the weaknesses in the COOP plan process. According to NYCEM’s COOP Strategic Plan 2022-2026, NYCEM will review agency COOP materials for completeness and make recommendations for areas of focus.

## Recommendations

1. Comply with the HMP Maintenance Protocol and the HMP, including requesting sufficient supporting documentation from City agencies to ensure HMP mitigation action data is accurate, complete, and up to date.
2. Establish time frames and implement formal written policies and procedures for updating citywide evacuation plans and conducting plan assessments.
3. Explore the feasibility of obtaining access to local evacuation plans.
4. Create formal policies and procedures for following up with City agencies that are delinquent in attesting to/submitting COOP plans and completing COOP plan exercises.
5. Enhance monitoring and follow-up efforts with City agencies when they do not attest to/submit COOP plans or complete COOP plan exercises in a timely manner.
6. Review COOP plans submitted by City agencies to ensure, to the extent possible, that the plans are accurate, up to date, and complete.

# Audit Scope, Objective, and Methodology

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The objective of our audit was to determine if NYCEM adequately monitors and coordinates with City agencies for natural hazard mitigation, evacuation, and continuity of operations. The audit covered the period from January 2018 through April 2022.

To accomplish our objective and assess relevant internal controls, we met with officials from NYCEM and reviewed the City Charter, New York City Administrative Code, COOP Planning Memorandum, HMP, and the HMP Maintenance Protocol. We interviewed NYCEM officials and reviewed NYCEM's mitigation action data as of March 10, 2022 to determine if the data listed in the HMP was complete and up to date. We selected a judgmental sample of 14 mitigation actions from the 755 mitigation actions listed in the HMP, four where NYCEM was the lead agency and 10 where other City agencies were the lead agency, to determine whether the HMP data was accurate and up to date. The samples were selected based on the types of City agencies and mitigation actions.

We also reviewed NYCEM's four citywide evacuation plans and assessments to determine when the plans were last updated and assessed. We also reviewed records from the Sustainable Planner to determine if all 46 City agencies completed their quarterly COOP plan attestations and annual COOP plan exercises from 2018 through 2021.

Furthermore, we reviewed the latest COOP plans prepared (as of April 21, 2022) by all 46 City agencies to determine if the plans were accurate, complete, and up to date. We also selected a judgmental sample of 588 points of contact listed on the latest COOP plans to verify if these individuals were still employed by their respective City agencies. In addition, we selected a judgmental sample of 50 point-of-contact phone numbers listed on the latest COOP plans and attempted to contact the respective employees to determine if their contact information was up to date. The samples were selected from all 46 City agencies based on the point-of-contact titles. We determined that the data used to pull our samples and perform our analysis was sufficiently reliable for our use in accomplishing our audit objective.

Our samples were not designed to be projected to the entire population of mitigation actions and COOP plans.

# Statutory Requirements

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## Authority

The audit was performed pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article III of the General Municipal Law.

We conducted our performance audit in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained during the audit provides a reasonable basis for our findings and conclusions based on our audit objective.

As is our practice, we notify agency officials at the outset of each audit that we will be requesting a representation letter in which agency management provides assurances, to the best of their knowledge, concerning the relevance, accuracy, and competence of the evidence provided to the auditors during the course of the audit. The representation letter is intended to confirm oral representations made to the auditors and to reduce the likelihood of misunderstandings. Agency officials normally use the representation letter to assert that, to the best of their knowledge, all relevant financial and programmatic records and related data have been provided to the auditors. They affirm either that the agency has complied with all laws, rules, and regulations applicable to its operations that would have a significant effect on the operating practices being audited, or that any exceptions have been disclosed to the auditors. However, officials at the New York City Mayor's Office of Operations have informed us that, as a matter of policy, mayoral agency officials do not provide representation letters in connection with our audits. As a result, we lack assurance from NYCEM officials that all relevant information was provided to us during the audit.

## Reporting Requirements

A draft copy of this report was provided to NYCEM officials for their review and formal comment. Their comments were considered in preparing this final report and are included in their entirety at the end of it. NYCEM officials generally disagreed with most of our conclusions. Our responses to certain NYCEM comments are embedded within NYCEM's response.

Within 180 days after the final release of this report, we request that the Commissioner of New York City Emergency Management report to the State Comptroller, advising what steps were taken to implement the recommendations contained in this report, and if the recommendations were not implemented, the reasons why.

# Agency Comments and State Comptroller's Comments

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NEW YORK CITY EMERGENCY MANAGEMENT  
165 CADMAN PLAZA EAST BROOKLYN, NEW YORK 11201

ZACH ISCOL  
COMMISSIONER

October 12, 2022

Mr. Thomas P. DiNapoli, State Comptroller  
Office of the New York State Comptroller  
Division of State Government Accountability  
110 State Street, 11<sup>th</sup> Floor, Albany, NY 12236

**RE: NYCEM'S RESPONSE TO OSC'S DRAFT AUDIT REPORT ON NYCEM'S HAZARD MITIGATION AND COORDINATION (2021-N-8)**

Dear State Comptroller DiNapoli,

New York City Emergency Management (NYCEM) reviewed the Office of the State Comptroller's (OSC) audit report on NYCEM's monitoring and coordination with NYC agencies for natural hazard mitigation, evacuation, and Continuity of Operations (COOP).

We thank OSC for revising the preliminary findings and recommendations based on the additional information NYCEM provided. We also thank the auditors for the opportunity to review the draft report. However, there are still some conclusions and findings contained in the draft report that NYCEM respectfully disagrees with, as discussed below. We take this role seriously and we appreciate OSC's work in helping local government agencies manage their resources efficiently and effectively.

**HAZARD MITIGATION PLANS**

**Page 2 of the Draft Report:**

"We identified significant deficiencies in NYCEM's HMP. Of the 755 hazard mitigation actions listed in the HMP:

- 412 (55%) mitigation actions did not have finish dates.

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- 403 (53%) mitigation actions did not have start dates.
  - 281 (37%) mitigation actions did not have cost estimates.”

As described in more detail below, stating that the HMP has significant deficiencies because of missing information such as missing dates or cost estimates is misleading to the readers of this report, as mitigation actions are often proposed actions that are shared with the intent to encourage further discussion and engagement from partners.

**State Comptroller’s Comment** – The HMP covers 2019 to 2023. It is updated annually, and the 755 actions reviewed are all listed as completed or in process as of 2021. One year prior to the next scheduled update the percentages of incomplete data ranges from 37% up to 55%. Without basic data, it is difficult for NYCEM and its stakeholders to gauge the progress/status of mitigation actions.

See *Attachment 1, NYS DHSES Memorandum in Support*. OSC should also cite the dates in which Mitigation Actions from the Hazard Mitigation Plan (HMP) were pulled for this audit. Without this information, NYCEM will not be able to respond to the relevance of this finding.

**State Comptroller’s Comment** – The date we pulled the mitigation actions for this audit, March 10, 2022, is listed on pages 9 and 19 of our report. Moreover, NYCEM provided us with the mitigation action documentation.

**Page 6 of the Draft Report:** “NYCEM’s New York City Hazard Mitigation Plan (HMP) identifies the hazards that pose a risk to the City as well as actions City agencies are taking to reduce the impacts of these hazards. To be eligible for FEMA post-disaster mitigation funding, including Hazard Mitigation Grant Program funding, the HMP must be updated every 5 years.”

In the above statement, OSC omits that the HMP is governed by FEMA and NYS requirements and policies that are mandatory guidelines for the HMP, including the sections evaluated within this audit (i.e., 44 CFR 201.6)

**State Comptroller’s Comment** – Our report is focused on NYCEM’s monitoring of the HMP based on NYCEM’s HMP and HMP Maintenance Protocol.

NYCEM’s HMP is in compliance with our oversight agencies (FEMA and NYS DHSES) and met their requirements for mitigation actions. As mentioned in *Attachment 1, NYS DHSES Memorandum in Support*:

New York City’s Hazard Mitigation Plan (HMP) was completed in 2019 and went through exhaustive state and federal review before approval and adoption, which included review of submitted actions, and the plan for continued maintenance and update of the HMP. NYC’s HMP met or exceeded standard metrics for validating requirements, assessed by DHSES and as evidenced by FEMA.

**State Comptroller’s Comment** – Our report is focused on NYCEM’s monitoring of the HMP. As documented throughout this report, we found significant non-compliance with the

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HMP and the HMP Maintenance Protocol. Federal and State approval of the HMP is not within the scope of this audit.

**Page 9 of the Draft Report:** “We found significant internal control weaknesses in NYCEM’s monitoring processes as well as inaccuracies in data published on NYCEM’s [Hazard Mitigation Plan] HMP website. The data was often incomplete, inaccurate, and /or out of date. “

Soliciting and sustaining meaningful engagement from participants (city agencies, in NYCEM’s case) is a consistent challenge of Hazard Mitigation planning across the state and the country. Although it would be ideal to have complete data for all proposed actions included in the plan, it is typical and expected that HMPs will include underdeveloped actions. Documentation of these underdeveloped actions still serves a purpose, reflecting the engagement of planning partners, and functioning as a method to record and inventory known risks and possible solutions. NYCEM’s transparency is above what is required. Further, if NYCEM were to follow OSC’s suggestion by requesting further documentation from participants, it may discourage participants from submitting information or participating altogether.

**State Comptroller’s Comment** – NYCEM is responsible for ensuring the HMP data, which is published on its HMP website, is accurate. Requesting important documentation from other City agencies is part of that process. Executive Order 46 states that “All agencies shall provide such assistance and cooperation as may be necessary or appropriate to implement the provisions of the Hazard Mitigation Plan and carry out the City’s responsibilities under the Disaster Mitigation Act.”

NYCEM also takes issue with OSC’s statistical method for mitigation actions. NYCEM highly discourages treating the review of “potential / proposed” and “existing” actions as one in the same and reviewing them equally for completeness. Potential / proposed actions do not have start dates, finish dates, or cost estimates since they have likely only been scoped, and by nature are not funded.

**State Comptroller’s Comment** – The deficiencies of incomplete data were based on actions that were listed as completed or existing in 2021. None of the 755 hazard mitigation actions were listed as potential/proposed.

Due to the complexity and practical implementation of existing actions, the information collected in the database could not always be populated for a variety of reasons, including (but not limited to): unavailable data, data security concerns, or the data not intended for public consumption.

**State Comptroller’s Comment** – NYCEM officials did not demonstrate how these situations applied to any of our sampled mitigation actions.

**Page 9 of the Draft Report:** “NYCEM does not adhere to the monitoring and evaluation sections of its HMP Maintenance Protocol and its HMP.”

According to FEMA, for the purposes of hazard mitigation planning, “monitoring” means tracking the implementation of the plan over time, not necessarily the monitoring of discrete actions included within the plan. The 44 CFR §201.6(c)(4)(i) mandates the description of the method and schedule for monitoring, but it does not and cannot mandate the activities that constitute plan monitoring.

**State Comptroller’s Comment** – The HMP states that NYCEM’s Risk and Recovery Unit conducts several monitoring activities, including maintaining and updating the mitigation action



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tables annually. NYCEM's HMP also requires officials to ensure the data is properly maintained and updated; however, our audit found they do not have up-to-date data. This is contrary to its own HMP and HMP Maintenance Protocol as well as NYC Executive Order 46, which is in addition to FEMA standards.

While it is ideal to maintain up to date information as frequently as possible, NYCEM has little authority and available resources to mandate formal monitoring activities throughout the five-year cycle. Further, frequent requests for updates may result in "burn out" from participants and may lead to disengagement in the future.

**State Comptroller's Comment** – According to the HMP and HMP Maintenance Protocol, "Annually collecting reports and project studies from agencies involved in implementing mitigation projects or activities identified in the Mitigation Strategy section of the HMP." Moreover, NYC Executive Order 46 states that "All agencies shall provide such assistance and cooperation as may be necessary or appropriate to implement the provisions of the Hazard Mitigation Plan and carry out the City's responsibilities under the Disaster Mitigation Act." Further, NYCEM is responsible for ensuring the HMP data, which is published on its HMP website, is accurate. Requesting important documentation from other City agencies is part of that process.

NYCEM needs to rely on the expertise of City agencies to monitor their projects, and City agencies have latitude on what information or data they share with NYCEM.

**State Comptroller's Comment** – We agree that NYCEM needs to rely on the expertise of other City agencies; however, providing updated "basic" data such as start dates, finish dates, and cost estimates does not require expertise.

**Page 10 of the Draft Report:** "We found many instances where NYCEM could not provide support for start and finish dates for their own mitigation actions. In addition, we found significant differences when we compared the HMP data to City agency supporting data."

It is important to note that the mitigation planning process, among other things, is distinctly intended to facilitate the identification of proposed actions that City agencies may implement in the future to reduce risk long term. *See Attachment 1, NYS DHSES Memorandum in Support.* Start dates, finish dates, and cost estimates are rarely expected to be finite for "proposed" actions. They are dependent on available resources for implementation. Cost estimates are expected to change (sometimes drastically) for several reasons as continued planning happens, more information is ascertained, labor and material costs go up, etc.

**State Comptroller's Comment** – We agree that start dates, finish dates, and cost estimates change over time. That's why it is important to keep the HMP updated.

With respect to "existing" actions, NYCEM must balance encouraging participation from City agencies with participants experiencing "burn out" from frequent requests for updates resulting in discouraging participation at all. Further, it is typical for the city agency which included the action in the HMP to be responsible for providing updated information as available.

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## EVACUATION PLANS

**Page 12 and Page 13 of the Draft Report:** “NYCEM needs to update its Citywide evacuation plans in a more timely manner.” (Page 12). “We reviewed the latest assessments and plan updates of NYCEM’s four citywide evacuation plans and found the following:

- The Area Evacuation Plan and the Maritime Emergency Transportation Plan were last updated in 2013 – 9 years ago.” (Page 13).

NYCEM is committed to ensuring that plans get reviewed in a timely manner. To help supplement our staffing resources, NYCEM has partnered with a local university to update the Area Evacuation Plan and the Maritime Emergency Transportation Plan by 2023. Although there is no documentation of formal updates to this plan, the plan has been reviewed on an annual basis as part of NYCEM’s annual plan review process.

**Page 12 and Page 13 of the Draft report:** “They also need to establish time frames and implement formal, written policies, and procedures on updating citywide evacuation plans and conducting plan assessments.” (Page 12). “We determined that NYCEM does not have set time frames or formal, written procedures for updating evacuation plans and conducting plan assessments. NYCEM officials disagreed with our findings. They advised us they hold annual meetings with each unit where they review documents owned by that unit, talk through each one, and determine the priorities for the following year. Officials also stated that Planning Catalog is updated live during these meetings; however, they do not take minutes... However, without written minutes, it is unclear what was discussed, if all necessary elements were reviewed, and what follow-up was required.” (Page 13).

While the report is correct in that NYCEM does not take formal meeting minutes during these annual plan review meetings, that does not mean the reviews are not occurring. Rather than create more work, the team has found ways to increase efficiencies and best utilize staff time. This is done by using technology to live-edit the Planning Catalogue during the meeting. Doing so ensures that all staff who are present see the changes made, in real time, as the discussions occur. This eliminates not only the need for additional work during the meeting, but the many back-and-forth post-meeting emails that would be required to finalize these edits. With this efficiency, staff have more time and bandwidth to get to work on the changes and updates for their planning documents.

**State Comptroller’s Comment** – We stand by our finding that without written meeting minutes, it is unclear what was discussed, whether all the necessary elements were reviewed, and what follow-up was required because of the meetings. Documenting how decisions are made is also a fundamental part of ensuring public accountability.

The Plan Management team keeps versions of the Planning Annual Catalogue and Plan Index so that staff can look back and compare the two to see any changes, if needed. The team will explore adding additional plan assessment formalization mechanisms (e.g., adding a "date assessed" column to the Plan Index in addition to the existing "date updated" column recorded in the Plan Index) in a manner that ensures staff time is utilized as efficiently and effectively as possible.

**Page 13 of the Draft Report:** “Although NYCEM’s four citywide evacuation plans provide a citywide overview of how to respond during emergencies, officials advised us they do not maintain specific

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evacuation plans for local communities, such as Community Districts. NYCEM officials advised us that they are not responsible for and do not have access to these plans, but that they are maintained by the New York City Police Department.”

This is not accurate. NYCEM responded that NYPD conducts its own, more localized evacuation planning, not that NYPD maintains “local evacuation plans” for each of NYC’s Community Districts. OSC will have to reach out to NYPD directly to find out the specifics of what official plans (if any) exist for each Community District.

**State Comptroller’s Comment** – As the lead agency in coordination, NYCEM should have access to localized evacuation plans. Access to such plans would allow NYCEM, as the City’s emergency response coordinator, to ensure adequate coordination.

For context on NYPD’s role, NYCEM also provided background for OSC on the importance of the Citywide Incident Management System (CIMS) in coordinating incidents that require a multiagency response. CIMS - an incident management doctrine for managing emergency incidents and planned events in the City of New York – was shared with OSC as part of the initial batch of foundational materials provided by NYCEM. CIMS defines roles and responsibilities for NYC agencies conducting incident response and recovery operations and designates authority for leading and coordinating these operations.

CIMS, which was modeled after FEMA’s National Incident Management System (NIMS), relies on the effective use of agency core competencies for incident response operations. Core competencies are functional areas of expertise which are implemented at incidents, and which relate specifically to tactical operations. During incident response operations, the Primary Agency remains responsible for overall management of an incident. As Coordinating Agency, NYCEM is responsible for citywide coordination and facilitation of resources in support of these efforts.

As an agency of only approximately 200 people, NYCEM utilizes CIMS to define agency roles and responsibilities and would like to clarify that NYPD is responsible for traffic management and public safety. Their role is defined at the appropriate and necessary level in the NYC Citywide plan. NYPD conducts its evacuation planning at a more localized level, hence NYCEM’s response to OSC directed the auditors to follow up directly with the NYPD for additional details on more localized evacuation planning.

NYCEM would also like to emphasize that citywide comprehensive emergency plans can serve and function within a local community. The role of NYCEM’s emergency planning model is to be flexible and scalable to service all New Yorkers, across all five boroughs. This planning model aligns with foundational emergency management guidelines.

**Page 14 of the Draft Report:** “We acknowledge that NYCEM is not responsible for local evacuation plans [for local communities, such as Community Districts]; however, access to such plans would allow NYCEM, as the City’s emergency response coordinator, to ensure adequate coordination.”

NYCEM disagrees with the Comptroller’s findings surrounding local evacuation plans. First, the New York State Executive Law, which outlines comprehensive local emergency management plans, states:

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Each county, **except those contained within the city of New York, and each city with a population of one million or more**, shall prepare a comprehensive emergency management plan. Each city with a population of less than one million, town and village is authorized to prepare a comprehensive emergency management plan. The disaster preparedness commission shall provide assistance and advice for the development of such plans. Each city with a population of less than one million, town and village plan shall be coordinated with the county plan.

NYCEM would like to highlight that the definition of local government is the City of New York, not the Community Districts / Community Boards. Furthermore, it is unclear what OSC's goal was in reaching out to a judgmental sample of Community Boards to ask if they "have access to evacuation plans for their respective Community District", as community boards have no operational role in these plans. NYCEM holds the "Know Your Zone" program for coastal storm evacuation. The zones for coastal storm evacuations do not follow Community District boundaries; they follow scientific and topographical information based on data from several sources related to where flooding can be expected.

**State Comptroller's Comment** – We revised our report and removed references to our outreach to the Community Districts.

Finally, NYCEM disagrees that Community Districts are relevant in any way in this analysis. Community Districts, and the Boards that govern them, do not have a statutory or implementation role in evacuation beyond amplifying messaging. Community Boards are described as:

Each community board is led by a District Manager who establishes an office, hires staff, and implements procedures to improve the delivery of City services to the district. While the main responsibility of the board office is to receive complaints from community residents, they also maintain other duties, such as processing permits for block parties and street fairs. Many boards choose to provide additional services and manage special projects that cater to specific community needs, including organizing tenants' associations, coordinating neighborhood cleanup programs, and more.

There is nothing in the charter or state law that suggests, implies, or mandates that Community Boards are local governing bodies in New York City. Community Boards issue advisory opinions on rezonings, district needs, and approval of liquor licenses. They do not have the authority to compel action. NYCEM believes the Comptroller's focus on Community Boards is akin to believing they function as a town government would. This is not the case in law or in responsibility.

**State Comptroller's Comment** – We revised our report and removed references to our outreach to the Community Districts.

#### **COOP PLANS**

**Page 2 of the Draft Report:** "NYCEM did not provide adequate oversight and guidance regarding COOP Plans"

In respect to the above statement in OSC's Draft Report, NYCEM would like to emphasize that we are committed to continuing to add controls aligned with the NYCEM COOP Strategic Plan 2022-2026 to

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improve COOP Plan oversight and guidance. As OSC acknowledged, NYCEM recognizes targeted areas of focus within the COOP Program and within the COOP Strategic Plan and always seeks continuous improvement in its role leading the City's COOP Program.

However, NYCEM does not agree with OSC's interpretations of authorities included within the New York City Charter, Executive Order No. 107 of 2007, and the 2010 Deputy Mayor's COOP memo. We note that in a few places within the document, these authorities are cited to suggest that our agency has both the responsibility and the power to compel other agencies to take action. We do not read or understand these authorities in that way. Ultimately, NYCEM's role within the City is as a coordinator, advisor, and source of guidance and information. NYCEM's interpretation is that no law or authority cited, grants us the powers that the document suggests we should be exercising and that it simply does not have the power to mandate or compel compliance on the part of any other agency.

**State Comptroller's Comment** – Our report does not suggest that NYCEM has the power to mandate or compel other City agencies to take action. Instead, we noted criteria, such as Section 498 (a) of the City Charter, which may have been helpful in gaining compliance from City agencies. COOP plans are essential to the City's continuity of operations so an organization can continue to perform essential functions, provide essential services, and deliver core capabilities in case of an emergency. Incomplete or outdated COOP plans cannot be effectively utilized in case of an emergency. Moreover, NYCEM has a responsibility to make sure COOP plans are operational. We found significant deficiencies in all aspects of the COOP plans including quarterly attestations, COOP plan content, points of contact, and COOP plan exercises.

**Page 2 of the Draft Report:** "On average, 13 of the 46 agencies (28%) did not always submit quarterly attestations that their plans were complete and up to date."

NYCEM does not agree with this finding as it is not aligned to the information we provided OSC in NYCEM's response to OSC's Preliminary Report. Our response demonstrated that on average, 7 of the 46 agencies (17%) did not submit quarterly attestations that their plans were complete or up to date.

**State Comptroller's Comment** – We disagree. We based our analysis on all unsubmitted attestations. We determined the attestations were not submitted in the required quarter or not submitted at all. It is not reasonable to exclude a City agency's compliance because it requested an extension to its attestation, especially when, as noted in the report, after receiving an extension, the agencies never filed or simply attested to their COOP plans in the following quarter.

NYCEM officials acknowledge that seven of the 46 agencies (17%) did not submit quarterly attestations that their plans were complete and up to date. We disagree with NYCEM's statement that the remaining six agencies were in compliance.

**Page 2 of the Draft Report:** "34 of the 46 City agencies (74%) had incomplete COOP plans."

NYCEM does not agree with this finding. As shared previously, NYCEM provides recommended guidance for COOP plans but lacks the authority to require City agencies to complete individual COOP plan sections according to NYCEM instructions. As not all sections are required, COOP plans that do not include information within specific sections should not be labeled as incomplete.

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**State Comptroller’s Comment** – We disagree. Our report focused on COOP plan items that were required by the COOP Planning Guide for City Agencies such as emergency contacts, reconstitution, order of succession, and points of contacts.

**Page 2 of the Draft Report:** “Review COOP plans submitted by City agencies to ensure, to the extent possible, that the plans are accurate, up to date, and complete.”

NYCEM is committed to working with agency partners to ensure, to the extent possible, that plans are accurate, up to date, and complete. However, NYCEM does not have the specific agency subject matter expertise to independently review other City agency COOP plans for accuracy, timeliness, and completeness. Nor is NYCEM staffed to provide this level of technical review and support to 46 City agencies. Nevertheless, aligned to the NYCEM COOP Strategic Plan, NYCEM is piloting an effort to provide high-level COOP Plan assessments and workshop sessions for four operational agencies by the end of 2022. NYCEM would require additional resources to successfully implement a similar assessment for all participating agencies on a routine basis.

**State Comptroller’s Comment** – Our report recommended that NYCEM review COOP plans submitted by City agencies to ensure, to the extent possible, that the plans are accurate, up to date, and complete. While NYCEM may not have specific City agency expertise, our audit team was able to determine that City agencies’ COOP plans were not accurate, not up to date, and not complete. NYCEM should be able to perform a similar review.

**Page 7 of the Draft Report:** “Finally Section 498 (a) of Chapter 19-A of the New York Charter (City Charter) states that NYCEM shall be the lead agency in the coordination and facilitation of resources in incidents involving public safety and health, including incidents which may involve acts of terrorism.”

Though the reference to Section 498(a) of Chapter 19-A is correct, in 2001, the City adopted the Citywide Incident Management System (CIMS) to outline agency responsibilities to complex incidents. In this, NYCEM is a coordinating agency – not the lead agency – for public safety and health incidents. Although NYCEM is leading the coordination of the emergency response amongst City agencies, NYPD is the lead agency in the actual response and management of the incident due to their subject matter expertise.

**State Comptroller’s Comment** – As NYCEM acknowledges, Section 498 (a) states that “NYCEM shall be the *lead agency (emphasis added)* in the coordination and facilitation of resources in incidents involving public safety and health, including incidents which may involve acts of terrorism.” Similarly, the Mayor’s Management Report states that NYCEM “*leads (emphasis added)* the coordination for multiagency responses to emergencies and other significant incidents in New York City, including planned events, severe weather and other natural and non-natural hazards.”

**Page 8 of the Draft Report:** “We found that NYCEM could have done more to monitor and follow up with City agencies to ensure COOP plans were completed.”

NYCEM conducts repeated outreach and engages with agency COOP teams regularly. NYCEM posts citywide dashboards to highlight compliance and non-compliance status to monitor and follow up with

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COOP agencies for COOP plan maintenance and COOP exercise conduct. However, in alignment with audit findings, we are including the following enhancements to our approach:

- While NYCEM has conducted outreach and follow-up through NYCEM COOP liaisons since program inception, we are codifying and expanding our approach through a Standard Operating Procedure (SOP) on COOP Plan and exercise communications. This SOP will outline methods for conducting outreach with City agencies on requirements, including timelines and escalation procedures. The SOP is currently in draft.
- NYCEM will require agencies to provide their updated COOP plans to NYCEM upon their quarterly attestation.

**Page 8 of the Draft Report:** “We found that not all City agencies submitted COOP plans to NYCEM...NYCEM officials had no assurance that all City agency COOP plans were created or completed.”

In response to the above statement, we would like to highlight that NYCEM implemented a plan attestation process whereby agencies sign off quarterly on their plan creation (2009) and maintenance (2009 forward). NYCEM is of the opinion that this plan attestation serves as the "assurance" of plan creation or completion.

**State Comptroller's Comment** – We acknowledge NYCEM's plan attestation process. However, our audit found that, on average, 28% of City agencies did not attest that their COOP plans were complete and up to date. It is evident that NYCEM's current process is not adequate.

NYCEM will continue to expand monitoring in this area and will require agencies to provide their updated COOP plans to NYCEM upon their quarterly attestation.

**Page 15 of the Draft Report:** COOP Plan Attestations – Table 3 – Number of City Agencies That did not Complete COOP Attestations

The chart in Table 3 of the audit findings and associated data are inconsistent with NYCEM program management standards. OSC did not adjust per NYCEM's response to OSC's Preliminary Report, to account for agencies requesting extensions as allowed in our program administration. An updated chart is provided below:

**State Comptroller's Comment** – We disagree. As we state on page 15 the report, NYCEM officials indicated that they gave extensions to many of these City agencies; however, we found that these agencies never filed and simply attested to their COOP plans in the following quarter. This should not count as attested on time.

Table 3: Number of City Agencies Per Quarter That Did Not Complete COOP Plan Attestations

	2018	2019	2020	2021	Average
First Quarter	6	8	11	7	
Second Quarter	5	8	7	14	
Third Quarter	1	7	6	10	
Fourth Quarter	6	6	9	8	
Average	4.5	7.25	8.25	9.75	7.44 Agencies

**Page 15 of the Draft Report:** “We also identified one mandated City agency that never participated in the COOP Program.

This statement is misleading. More accurately, NYCEM was not aware of a newly created Mayoral agency until the start of COVID. NYCEM is aware of this issue and plans to conduct outreach to onboard the new agency into the COOP program.

**State Comptroller’s Comment** – We stand by our finding. The City agency referred to in our report was created before the start of the COVID-19 pandemic.

**Page 15 of the Draft Report:** “NYCEM officials advised us of another City agency (non-mandated) that had experienced an emergency and had difficulties continuing its operations, but still has not created a COOP Plan.”

While it is unfortunate that a non-mandated agency had an emergency, NYCEM has no jurisdiction over a non-mandated agency to create a COOP Plan. NYCEM believes this finding should be removed.

**State Comptroller’s Comment** – As the lead and coordinating agency, NYCEM should take a leadership role and encourage non-mandated City agencies to submit COOP plans.

**Page 16 of the Draft Report:** “We found that 34 of the 46 City agencies (74%) had incomplete COOP plans.”

It is important to note that some City agencies prefer to not include all sections in their COOP Plans and are not required to do so. For instance, employee directories are often kept up to date by agency HR departments rather than COOP teams. NYCEM is of the opinion that OSC is holding agencies to a standard that is not currently prescribed by the COOP program requirements.

**State Comptroller’s Comment** – We disagree. We reported on COOP plan items that were required by the COOP Planning Guide for City Agencies.

**Page 16 of the Draft Report:** “Based on our research, we found that 18 of the 46 City agencies (39%) had



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outdated points of contact listed on their COOP plans.”

NYCEM would like to state that with respect to outdated information, the onus for confirming and vetting the appropriate contact information falls upon the specific agency COOP planning team. NYCEM does not have the specific agency expertise, staff bandwidth, nor are we required, to ensure data integrity. Moreover, NYCEM would like to point out that OSC conducted their research during the beginning of a new Mayoral administration, as well as during a global pandemic, when personnel turnover across city agencies was significantly high across the City's workforce, as staff change jobs or retire.

**State Comptroller's Comment** – We disagree. While NYCEM may not have specific City agency expertise, our audit team was able to determine that City agency COOP plans were not accurate, not up to date, and not complete. NYCEM should be able to perform a similar review. Moreover, excusing non-compliance on a new Mayoral administration and a global pandemic is not a justifiable excuse.

**Page 16 of the Draft Report:** “According to the Guide and template, COOP plans must include certain details...”

NYCEM is in the process of updating the Guide to include the following language instead “According to the Guide and template, COOP plans are recommended to include certain details...”

**State Comptroller's Comment** – We strongly believe that weakening the requirements of COOP plans will exacerbate the problems we identified during the audit.

**Page 18 of the Draft Report:** “Although NYCEM fails to take any responsibility for the significant weaknesses we found during this audit...”

NYCEM strongly disagrees with this statement and counters with some context on governmental COOP program development and maintenance. The most important element is to begin COOP planning within individual agencies and gain fidelity and comprehensiveness, iterating to improve over time. NYCEM recognizes the difficulties inherent in COOP planning and seeks to be a service leader in this area. COOP planning will never be complete or perfect; information becomes stale quickly, COOP team members are often detailed with COOP as an ancillary job duty and fall behind in their updates; agencies change their missions and gain or lose essential services. These issues are consistent across levels of government and are not unique to the NYC context.

The above statement from OSC's Draft Report does not capture NYCEM's ethos and commitment to continuously improving, nor does it recognize that NYCEM does not have the authority to do what the auditors recommend. NYCEM cannot take responsibility for City agency individual COOP programs as we do not have the mandate, authority, or accompanying resources.

**State Comptroller's Comment** – Our report does not suggest that NYCEM has the power to mandate or compel other City agencies to take action. Instead, we noted criteria such as Section 498 (a) of the City Charter, which may have been helpful in gaining compliance from City agencies. COOP plans are essential to the City's continuity of operations, so an organization can continue to perform essential functions, provide essential services, and deliver core capabilities in case of an

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emergency. Incomplete or outdated COOP plans cannot be effectively utilized in case of an emergency. We found significant deficiencies in all aspects of the COOP plans including quarterly attestations, COOP plan content, points of contact, and COOP plan exercises.

In our role as a coordinating agency, NYCEM is charged with supporting these agencies to fulfill their duties in developing and maintaining individual COOP programs. NYCEM provides planning, training, exercises, and technical assistance support to help agencies develop and hone their COOP programs. NYCEM will continue to improve our COOP program, incorporating OSC's feedback and findings into the exercises and trainings for COOP mandated agencies, and will seek to enhance our offerings to City agencies so they can be more resilient and best serve the people of New York. NYCEM takes this role seriously and appreciates OSC's consideration.

Sincerely,



Zach Iscol  
Commissioner

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**ATTACHMENT 1**  
**NYS DHSES MEMORANDUM IN SUPPORT**



## Homeland Security and Emergency Services

KATHY HOCHUL  
Governor

JACKIE BRAY  
Commissioner

September 30, 2022

NYS Division of Homeland Security  
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MEMO RE: NYC Hazard Mitigation Plan

The New York State Division of Homeland Security and Emergency Services (DHSES) is the lead agency responsible for the administration of the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance (HMA) programs, which includes oversight of hazard mitigation planning and project implementation across the state.

A Hazard Mitigation Plan is a documented outcome of a planning process that is federally mandated by the Disaster Mitigation Act of 2000 (DMA 2000) as a prerequisite to receiving FEMA HMA funding. As such, there are specific and discrete requirements associated with these plans, as outlined in the 44 Code of Federal Regulations, and further expanded on in HMA Guidance and Local Planning Policy memos.

It is important to note that the mitigation planning process, among other things, is distinctly intended to facilitate the identification and documentation of **proposed** actions that City agencies may implement in the future to reduce risk long term. This is critical to understand the data that is expected to be included, complete or partial, and final or subject to change within the HMP. New York City's Hazard Mitigation Plan (HMP) was completed in 2019 and went through exhaustive state and federal review before approval and adoption, which included review of submitted actions, and the plan for continued maintenance and update of the HMP. NYC's HMP met or exceeded standard metrics for validating requirements, as assessed by DHSES and as evidenced by FEMA approval.

**State Comptroller's Comment** – Our audit report focused on NYCCEM's compliance with its own requirements as stated in its HMP and HMP Maintenance Protocol. Our audit scope did not include the HMP approval process. Moreover, the actions examined were, per NYCCEM records, not proposed but rather completed or in process as of 2021.

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