

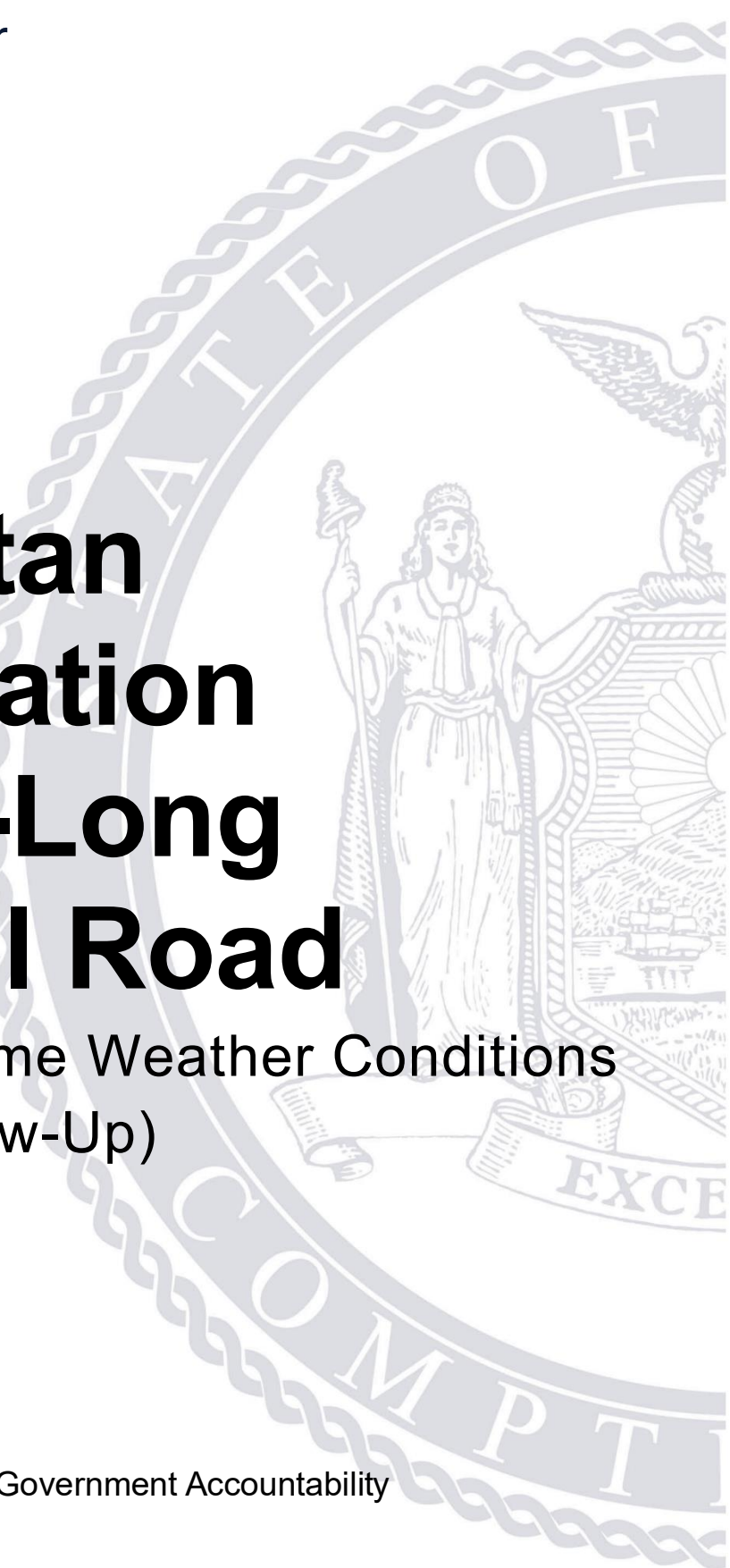
New York State Comptroller
THOMAS P. DiNAPOLI

Metropolitan Transportation Authority-Long Island Rail Road

Mitigation for Extreme Weather Conditions
and Flooding (Follow-Up)

June 2026 | Report 2025-F-30

Prepared by the Division of State Government Accountability



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Authority

Pursuant to the State Comptroller's authority as set forth in Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law, we have followed up on the actions taken by officials of the Metropolitan Transportation Authority-Long Island Rail Road to implement the recommendations contained in our initial audit report, *Mitigation for Extreme Weather Conditions and Flooding* (Report [2022-S-6](#)).

Background, Objective, and Scope

The Metropolitan Transportation Authority (MTA) is a public benefit corporation chartered by the New York State Legislature in 1965. The Long Island Rail Road (LIRR), which provides commuter railroad service, is one of six MTA agencies. The LIRR was founded in 1834 and comprises over 700 miles of track on 11 different branches, stretching 120 miles from Montauk in Long Island to Penn Station and Grand Central Madison in Manhattan, to Atlantic Terminal in Brooklyn, and to Hunterspoint Avenue in Queens. The MTA 2025–2029 Capital Plan has a budget of \$68.4 billion, with \$6 billion allocated to the LIRR. The LIRR is the busiest commuter railroad in North America, with an average weekday ridership of about 250,000. Therefore, it is imperative that the MTA-LIRR protect its system and assets and adapt its infrastructure to withstand the impacts of the rapidly changing climate.

Severe weather includes thunderstorms, tornadoes, hail, lightning, floods, damaging winds, and severe winter weather. These events can create hazardous travel conditions throughout the LIRR region and can hamper the LIRR's ability to provide regular train service. Additionally, hurricane season can bring high winds, heavy rain, and dangerous lightning, which can result in mudslides, fallen trees, and downed power lines along the right-of-way (tracks).

In September 2007, the MTA established the Blue-Ribbon Commission on Sustainability (Commission) to develop recommendations for the MTA and its operating agencies. In April 2009, the Final Report of the Commission was released. The report predicted that, without an adequate investment in adaptation measures, climate change will have even greater adverse impacts on the MTA's vital infrastructure, operations, and revenue streams in the future. The primary risks to the metropolitan region and the MTA service area include more extreme precipitation events, coastal storms and storm surges, flooding, and, in the longer term, rising sea levels. The report recommended that the MTA have a climate change adaptation master plan in place by 2015, one that includes realistic timetables and financing options.

The LIRR developed an operating plan for addressing winter storms and other contingencies referred to as the Winter Storm Operating Plan (WSOP). This document should be revised and updated each year with input from each department. In November 2025, the document was renamed Winter Storm Operating Guidelines & Other Contingencies (WSOG). It includes standard operating procedures for winter, which are in effect annually from November 15 through April 1. The LIRR also had a Hurricane Guide that provided direction for safely maintaining the most service possible during varying hurricane stages. The plan evaluates potential storm effects and implements service plans based on the projected storm category and path. This document is

also updated annually. In September 2025, the LIRR replaced the Hurricane Guide with the Coastal Storm Operating Guidelines & Other Contingencies (CSOG).

The Incident Command Center manages incidents, makes operational decisions, and handles interagency communications. It is staffed with senior-level managers from the LIRR's 11 departments, including Transportation, Maintenance of Equipment, and Engineering. Transportation is responsible for operating train crews and for the operation and supervision of LIRR trains. Maintenance of Equipment is responsible for inspecting and maintaining its rail cars and locomotive fleets. Engineering maintains the track, switches, signal system, and non-revenue equipment.

The objective of our initial audit, issued on March 13, 2024, was to determine whether the LIRR performed a system-wide risk assessment to identify potential risks to its system from extreme weather conditions and flooding and developed plans to mitigate their effects. We also determined whether the LIRR tested and updated the plans and inspected/maintained the equipment to ensure it can be deployed when needed. The audit covered the period from April 2009 to January 2023.

The audit found:

- The LIRR did not perform a systemwide assessment of its transportation facilities to identify weather-related risks. LIRR officials advised us that a risk assessment was being conducted and was to be completed by the fourth quarter of 2023.
- The Transportation, Engineering, and Maintenance of Equipment departments either were not in compliance or did not provide documentation to support compliance with the WSOP. For example, Engineering's Track sub-unit was supposed to have one backhoe loader, 10 front loaders, and 12 light towers; however, the backhoe loader, five of the front loaders, and two light towers were not at the site. Officials stated that the equipment was currently being used in the field; however, there was no documentation showing the location.
- Engineering's sub-units Power and Track did not complete the maintenance, inspection, and testing of equipment for the winter season. For example, our review of 13 pieces of snow-fighting equipment found there was no documentation to support that two pieces of equipment were prepared for five winter seasons (2018–2019 through 2022–2023). Another 11 pieces of equipment were missing records for at least one winter season.
- The WSOP states that the Maintenance of Equipment department's winter preparation begins on or before April 30 annually and ends by the second Friday of October. However, Maintenance of Equipment officials stated that they procure winter operation materials and rental equipment almost year-round, which is not in conformance with the WSOP. In addition, the 45-day inspection required by the WSOP is no longer performed. However, the WSOP was not revised to reflect the actual practices.
- Our review of four Superstorm Sandy capital projects designed to mitigate potential damage from weather found that none were completed on time. For example, one project was supposed to be completed in August 2019; however, it will not be completed until

December 2024—over 5 years later. We were advised that delays occurred due to changes in priorities, as well as issues with access to the tracks that are also used by internal and external entities such as Amtrak.

The objective of our follow-up was to assess the extent of implementation, as of April 9, 2026, of the 12 recommendations included in our initial audit report.

Summary Conclusions and Status of Audit Recommendations

MTA-LIRR officials made progress in addressing the problems we identified in the initial audit report. Of the initial report's 12 audit recommendations, five were implemented, four were partially implemented, and three were not implemented.

Follow-Up Observations

Recommendation 1 – Ensure that the systemwide risk assessment of the LIRR is completed on schedule and documented.

Status – Implemented

Agency Action – The MTA provided a copy of the Climate Resiliency Roadmap report dated April 2024. It also provided a copy of the Climate Resiliency Roadmap Update Report dated October 2025. According to MTA officials, these documents are their systemwide risk assessment.

Recommendation 2 – Verify that the work done to implement the lessons learned-related recommendations was completed.

Status – Implemented

Agency Action – The November 2025 WSOG indicated that lessons learned are only prepared when requested. Further, the WSOG is revised when something new works well. Since our initial report was issued, there was one weather-related event in January 2025 where the lessons learned review was done; however, it did not result in a revision to the WSOG.

Recommendation 3 – Formalize the written weather monitoring process including, but not limited to:

- The receipt and review of weather reports and identification of the weather conditions that necessitate a notification to LIRR departments.
- The retention of weather reports that require notification.

Status – Not Implemented

Agency Action – Although LIRR officials described the process for receiving written weather reports, they have not formalized them in writing.

Recommendation 4 – Ensure that the responsibility for reviewing and maintaining weather reports has 24/7 coverage.

Status – Implemented

Agency Action – Engineering's Power and Track sub-units are responsible for providing 24-hour coverage. Engineering System Operations within Power provides overnight and weekend monitoring of the weather notification and alerts.

Recommendation 5 – Revise the Hurricane Guide to include written procedures or required steps in preparation for the season.

Status – Partially Implemented

Agency Action – LIRR officials advised us that the Hurricane Guide is now part of the CSOG, which includes guidance for pre-storm preparation; however, there are no written preseason preparation procedures.

Recommendation 6 – Ensure the LIRR operation departments comply with seasonal (winter) preparation guidance.

Status – Partially Implemented

Agency Action – Winter equipment preparation includes inspecting, maintaining, and purchasing equipment and supplies required for the season (e.g., scraper shoes, wiper blades) and communicating specific actions (e.g., when shoes are installed and when snow-fighting equipment receives its preseason maintenance, inspection, and testing). However, we did not receive documentation to confirm that all the actions or activities necessary for equipment preparation were completed or that the LIRR was maintaining the appropriate documentation to support its seasonal preparation.

Recommendation 7 – Expand written procedures to account for the supply, maintenance, and location of equipment. Additionally, locate the missing equipment items.

Status – Not Implemented

Agency Action – The LIRR did not provide formal procedures to account for the supply, maintenance, and location of equipment. In addition, it did not provide documentation to confirm that the missing equipment items identified in the initial audit report were located.

Recommendation 8 – Review and revise the WSOP, where appropriate, to ensure uniformity between the agency's guidelines and department practices.

Status – Implemented

Agency Action – The 2024–2025 WSOP and November 2025 WSOG were revised. The two departments we reviewed (Transportation and Maintenance of Equipment) were both in compliance with the guidance.

Recommendation 9 – Update and revise the WSOP to include guidance as to what is required for the winterization of equipment.

Status – Partially Implemented

Agency Action – Although the WSOG contains guidance for some equipment (e.g., locomotives, coaches, MU Equipment [multiple-use train cars], and jet snow blowers), the preparation guidance for regular snow-fighting equipment is limited to a listing of equipment. Officials advised us they rely on the experience of the people performing the task to know what is required. However, we did not receive documents to show what actions were taken to winterize the equipment.

Recommendation 10 – Ensure all equipment is maintained, inspected, and tested regularly in a timely manner and documented.

Status – Partially Implemented

Agency Action – The LIRR did not have supporting documentation for the maintenance, inspection, and testing of all equipment. Officials stated that all records are in the Electronic Asset Management (EAM) System. We requested inspection records for Power and Track; however, EAM only contained work order information and did not include all equipment. Officials explained that they also use Tool Watch, which lists the item, serial number, and the description but does not include information on maintenance and inspections. Without a schedule of when maintenance, inspection, and testing are required, timeliness cannot be measured. LIRR officials stated they follow the manufacturers' manuals; however, they did not provide documentation to support this being followed.

Recommendation 11 – Establish clear and complete written procedures to address the maintenance, inspection, and testing process of equipment.

Status – Not Implemented

Agency Action – We reviewed Engineering's Power and Track sub-units and determined there were no written procedures for the maintenance, inspection, and testing of generators. LIRR officials advised us that a vendor performs the preventive maintenance and inspection. Although they provided us with a copy of the contract, it did not have any details on what the vendor is required to do.

Recommendation 12 – Ensure that all projects include provisions for working with internal LIRR groups and other MTA agencies and external agencies to expedite the project's completion.

Status – Implemented

Agency Action – The MTA has incorporated provisions in the contracts for coordination and cooperation with others. The provisions call for meetings, as deemed necessary, to schedule access, installation, work, storage, and staging requirements with other contractors. In addition, they state the contractor shall seek to minimize and mitigate potential costs and risks, including the risk of delay due to work by external groups.

Reporting Requirements

LIRR officials are requested, but not required, to provide information about any actions planned to address the unresolved issues discussed in this follow-up within 30 days of the report's

issuance. We thank the management and staff of the Metropolitan Transportation Authority-Long Island Rail Road for the courtesies and cooperation extended to our auditors during this follow-up.



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