

A February to Forget

On January 29th, MBTA got the attention of the media when a Red Line train malfunctioned at Quincy Center. Smoke resulting from a mechanical problem filled one of the train's six cars. The doors failed to open, and passengers were forced to break windows to evacuate the train. This mechanical malfunction resulting in a smoke-filled car was caused by the train's propulsion system. Because MBTA suspended service on January 27th for a blizzard, this mechanical failure was attributed to the weather.

On February 2nd, the Boston region experienced its second heavy winter storm in 7 days. Both of these storms brought roughly 2 feet of snow. The amount and frequency of snow accumulation became too much for switch heaters and snow removal crews to keep up with, and rail service became suddenly unreliable. Snow buildup on commuter rail switches and platforms negatively impacted service, already strained by mechanical problems with its locomotive fleet.



A commuter rail train arriving at North Beverly. Rail vehicles ingest snow accumulated on track areas, platforms, and switches, resulting in motor damage. Source: Boston Globe

The Patriots' victory parade on February 4th exacerbated the growing problem on the region's commuter rail and subway system. For commuter rail in particular, larger crowds boarding resulted in longer stops, slowing service significantly. In some instances, train crews had no choice but to leave customers on the platform due to overcrowding.

Delays increased as it became apparent the MBTA system and its vehicles were not prepared for these conditions. Monday, February 2nd saw the largest number of dropped trips for FY 2015 at 708. Breakdowns, delays, and dropped trips were rampant on Tuesday, February 3rd, totaling 577.5 drops and only 93.3% of trips run. Daily vehicle availability, particularly on the orange line, was declining.

MBTA got on Governor Baker's radar after the Quincy Center incident. As service continued to struggle, the Governor publicly stated his displeasure with the authority. A third storm brought more snow on February 9th, and rail service was shut down on the 10th. Service on the Braintree branch was suspended on the

evening of the 9th. Over 10 days later on February 20th, service was restored to North Quincy station. On February 23rd, 2 weeks after shutting down, service to all 4 Quincy stations and Braintree was restored.

The shutdowns on January 27th and February 10th were intended to allow crews to remove snow from tracks, switches, third rails, and maintenance facilities. The February 10th shutdown also gave MBTA an opportunity to assess snow-related damage to train equipment.

The snow removal effort focused on surface portions of the green and orange lines, and in particular, the red line's Braintree/Quincy branch. On February 9th, heavy snow buildup resulting from the third storm of 2+ feet of snow severely impacted service. A red line train became disabled on the surface portion in Quincy when its connection to the third rail was lost in several feet of snow. A photo of the stalled train was widely used by media in and outside of Boston (below).



A red line train become disabled because of heavy snow accumulation in Quincy. Source: Boston Globe

Service across the MBTA system was performing below customer expectations, and customers voiced frustration and disapproval of MBTA operations. Unreliable service and customer dissatisfaction was most profound on commuter rail, which had been struggling with locomotive availability prior to the heavy snowfall. Governor Baker was among the dissatisfied, and requested a meeting with Keolis management.

Governor Baker made his displeasure with MBTA known publicly. He and his staff expressed disapproval of an estimate given by MBTA for full service restoration (30 days). The governor felt that MBTA's response to heavy snow accumulation was not working. The Administration wanted to meet with MBTA management to hear what their plan was to restore service to regular levels.

On February 10th, with over 5 feet of snow accumulated across MBTA region and service suspended for the second time in 3 weeks, GM Beverly Scott held a press conference. She explained the situation bluntly, reminding reporters that problems facing MBTA precluded her tenure. Dr. Scott also stated that she and the governor had yet to meet or speak. The two were scheduled to meet on February 12th. On Wednesday February 11th, Scott announced her resignation, effective April 11th. This announcement came hours after MassDOT's Board of Directors gave her a unanimous vote of confidence.

The meeting on February 12th occurred, and a "healthy exchange of ideas" took place between the governor's staff and MBTA management, according to the governor. On February 20th, Governor Baker convened a commission to "diagnose" MBTA's problems. The commission has been tasked to identify "root

causes” of MBTA problems, according to MassDOT Secretary Stephanie Pollack. The governor set a deadline of March 30th for the commission to make recommendations.

Between February 9th and 23rd, volunteers, inmates, and national guard members assisted MBTA with snow removal efforts on the red line’s Braintree branch and portions of the green line along Beacon Street, Commonwealth Avenue, and Huntington Avenue. MBTA attempted to replace service on the Braintree-Quincy line with shuttle buses, but the number of buses available could not meet demand. Commutes between Braintree and Boston took twice as long as normal, and customers continued to voice frustration. Peter Pan Bus Lines offered buses to MBTA, which were used as shuttles between Braintree and JFK/UMass station. On February 20th, service was restored to North Quincy station. Shuttle buses remained in service between North Quincy and Braintree. Peter Pan’s buses gave MBTA extra capacity, but slower service.



Commuters lined up at Wollaston station for shuttle buses replacing red line service. Source: Boston Globe



Crews working on snow removal on red line tracks at North Quincy. Source: Boston Globe.

On the green line, service on the surface portions of the B, C, and E branches remained suspended for over a week between February 10th and 18th. D branch service operated with reduced frequency. The surface portion of the C branch, which runs along Beacon Street, was the first to reopen the 18th. Along Huntington Avenue, the E branch reopened on the 20th, and B branch service to Boston College along Commonwealth Avenue was restored on February 23rd.

Vehicle availability played a large role in post-winter storm recovery. Traction motors in red, orange, and commuter rail vehicles were heavily damaged. The amount of snow buildup was too much for the vehicles’ filtration system to keep out of the motor. This exacerbated an already depleted commuter rail locomotive inventory; mechanical problems sidelined brand new locomotives intended to replace equipment from the 1970s. On the red and orange lines, dozens of traction motors failed, according to Boston Globe. Failed

motors means the vehicle cannot be placed in revenue service, resulting in dropped trips. Dropped trips reduce service reliability, which falls below customer expectations. This was most profound on the orange line; its fleet of 120 vehicles run on direct current (DC) motors that ingest snow. A filtration system in the vehicle is designed to keep snow out of the motor, but failed under several feet of snow buildup on tracks and maintenance facilities.



MBTA employees preparing to reconnect a part to a red line vehicle at a maintenance facility in Dorchester. Source: Boston Globe

On February 25th, MassDOT’s board of directors, which oversees MBTA announced that Frank DePaola would serve as Interim General Manager, effective March 4th. Also on February 25th, Keolis Commuter Services, MBTA’s commuter rail operator, announced they would replace their GM with the assistant GM, Gerald Francis.

After receiving a phone call from Governor Baker, Keolis’ CEO arrived in Boston on February 26th. The CEO apologized to commuter rail customers, and announced the company had set a goal of March 30th to restore service to normal levels.

Keolis’ recovery plan focused on increasing the number of trains scheduled each weekday on Mondays between March 2nd and 30th. The number of scheduled trains increased as locomotives became available. 65 locomotives are necessary for daily commuter rail service, and only 48 were available in mid-February. By March 9th, 49 trainsets (passenger coaches and locomotive combined) were available. In addition to mechanical problems caused by snow buildup, a defect in 40 new locomotives delivered to MBTA severely reduced daily locomotive availability. 15 commuter rail trips were restored on Monday, March 9th. On Monday March 16th, 42 trains were reinstated, followed by 63 trains on March 23rd.

On March 5th, Keolis purchased a one-page advertisement in the Boston Globe. It featured Gerald Francis apologizing to customers for unreliable service. Francis provided an explanation for poor service. “The weather took a tremendous toll on the MBTA train equipment, which now must be repaired and tested for safety before being returned to service. That takes time,” he stated. The train equipment used for commuter rail service is MBTA property.

On Friday, March 6th, MBTA announced that the required number of orange line vehicles were available for revenue service. 96 vehicles (16 trainsets) are required for daily orange line service. In mid-February, only 8 trainsets were available, according to MBTA. Service on the orange line was severely reduced and well below customer expectations with half of the required equipment available. Between February 9th and 18th,

the surface portion of the orange line, between North Station and Oak Grove, saw extremely limited service. At one point, a single train operated between Wellington and Oak Grove. At other times, service was suspended between Sullivan and Oak Grove. Limited bus service was provided between these two stations. Full orange line service was restored on February 18th, according to Boston Globe.

Keolis met its full service restoration goal of March 30th. Several of the 40 new HSP locomotives damaged before the storms have been re-entered into service following completed repairs. The governor's commission is scheduled to release its report on April 8th.