

K. Water Quality Supporting Documentation

This appendix provides detailed information in support of Chapter 9, *Water Quality*:

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K.1 2023 Stormwater Outfall Reporting Under 2007 Permit

Table K-1 2023 Monthly Wet Weather Monitoring Results Under 2007 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Flow Rate (MGD)		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L)	Surfactant (mg/L)	Fecal Coliform (cfu/100mL)	Enterococcus (cfu/100mL)
2007 Permit Discharge Limitations ¹		Report	Report	6.0 to 8.5	15 mg/L	Report	100 mg/L	Report	Report	Report	Report
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
001A-North	January	0.565	3.463	6.91	4.1	45.0	45.0	<1.0	0.06	90	360
001A-North	February	0.307	1.921	7.89	8.0	57.0	57.0	<4.0	0.63	250	90
001A-North	March	0.601	8.106	7.36	4.1	6.8	6.8	<1.0	0.13	310	140
001A-North	April ²	0.304	4.656	NS	NS	NS	NS	NS	NS	NS	NS
001A-North	May ³	0.273	3.287	NS	NS	NS	NS	NS	NS	NS	NS
001A-North	June	0.263	1.610	7.24	<4.0	<5.0	<5.0	<1.0	0.13	3,500	2,600
001A-North	July	0.986	8.321	7.01	4.2	11.0	11.0	<1.0	0.39	4,000	3,200
001A-North	August	0.695	6.191	6.95	<4.0	54.0	54.0	<1.0	0.13	3,500	16,000
001A-North	September	0.371	4.745	7.95	<4.0	12.0	12.0	<1.0	0.05	16,000	5,700
001A-North	October	0.139	1.630	7.98	<4.0	6.4	6.4	<1.0	0.11	3,100	2,600
002A-West	January	2.035	12.734	7.48	<4.0	30.0	30.0	<1.0	0.13	220	440
002A-West	February	0.489	6.099	7.19	<4.0	20.0	20.0	<1.0	0.34	30	30
002A-West	March	1.727	29.775	7.49	6.5	21.0	21.0	<1.0	0.16	710	270
002A-West	April ²	0.907	12.596	NS	NS	NS	NS	NS	NS	NS	NS
002A-West	May ³	1.098	13.408	NS	NS	NS	NS	NS	NS	NS	NS
002A-West	June	0.918	5.583	7.09	<4.0	9.5	9.5	<1.0	0.19	33,000	5,500
002A-West	July	3.412	24.310	6.91	<3.6	15.0	15.0	<1.0	0.16	3,500	820
002A-West	August	2.450	21.839	7.35	<4.0	80.0	80.0	<1.0	0.07	3,500	13,000
002A-West	September	1.295	13.302	7.55	<4.0	24.0	24.0	<1.0	<0.25	80,000	65,000
002A-West	October	0.470	5.209	7.60	<4.0	9.2	9.2	<1.0	0.22	3,300	2,500
004A-Maverick St	January	0.137	0.915	7.32	<4.0	17.0	17.0	<1.0	0.10	470	140
004A-Maverick St	February	0.023	0.255	7.38	5.4	63.0	63.0	<1.0	0.27	450	180

Table K-1 2023 Monthly Wet Weather Monitoring Results Under 2007 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Flow Rate (MGD)		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L)	Surfactant (mg/L)	Fecal Coliform (cfu/100mL)	Enterococcus (cfu/100mL)
2007 Permit Discharge Limitations ¹		Report	Report	6.0 to 8.5	15 mg/L	Report	100 mg/L	Report	Report	Report	Report
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
004A-Maverick St	March	0.117	2.001	7.63	<4.0	<5.0	<5.0	<1.0	0.09	26,000	5,400
004A-Maverick St	April ²	0.072	1.156	NS	NS	NS	NS	NS	NS	NS	NS
004A-Maverick St	May ³	0.071	0.964	NS	NS	NS	NS	NS	NS	NS	NS
004A-Maverick St	June	0.064	0.409	6.96	<4.0	<5.0	<5.0	<1.0	0.12	26,000	1,300
004A-Maverick St	July	0.284	2.719	6.85	<4.0	10.0	10.0	<1.0	0.28	31,000	1,100
004A-Maverick St	August	0.167	1.502	7.14	<4.0	16.0	16.0	<1.0	0.07	3,100	3,200
004A-Maverick St	September	0.090	1.110	7.50	<4.0	24.0	24.0	<1.0	0.23	2,500	7,900
004A-Maverick St	October	0.033	0.400	7.50	<4.0	24.0	24.0	<1.0	0.13	1,500	12,000

Source: Massport.

Notes: Flow rates were estimated for outfalls 001, 002, and 004 by using the SWMM model developed for Logan Airport.

For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

The North Outfall, West Outfall, and Maverick Street Outfall samples were analyzed for klebsiella on a case-by-case basis if high fecal coliform concentrations were observed.

Bold values exceed maximum daily discharge limitation.

Wet weather conditions are defined as during a storm event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rain fall) storm event.

TSS Total Suspended Solids

NS Not sampled.

MGD Millions of gallons per day

1 Discharge limitations set in BOS NPDES permit issued in 2007. Discharge limitations may vary from the new NPDES permit, issued in August 2023, effective October 2023. Limitations reported in this table represent the monthly data grab and reporting requirements contained in the 2007 NPDES permit for the respective outfalls.

2 Wet weather event samples could not be collected during the month of April, as logistical issues prevented sampling during the two storm events that occurred over weekends.

3 Wet weather event samples could not be collected during the month of May, as logistical issues prevented sampling during the one storm that occurred over the weekend.

Table K-2 2023 Monthly Dry Weather Monitoring Results Under 2007 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L)	Surfactant (mg/L)	Fecal Coliform (cfu/100mL)	Enterococcus (cfu/100mL)
2007 Permit Discharge Limitations ¹		15 mg/L	Report	100 mg/L	Report	Report	Report	Report
Value Reported	Monthly	Daily Max	Mo. Avg.	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
001C-North	January	<4.0	13.0	13.0	<5.0	0.09	10	10
001C-North	February	<3.6	22.0	22.0	<2.0	<0.1	<10	50
001C-North	March	<3.6	10.0	10.0	<1.0	0.13	<10	10
001C-North	April	<4.0	<5.0	<5.0	<1.0	0.13	<10	<10
001C-North	May	<4.0	26.0	26.0	<1.0	0.09	80	<10
001C-North	June ²	<4.0	14.0	14.0	<1.0	0.21	22,000	260
001C-North	July	<3.6	22.0	22.0	<1.0	0.14	910	150
001C-North	August	<4.0	13.0	13.0	<1.0	0.08	280	140
001C-North	September	<3.6	<5.0	<5.0	<1.0	0.11	50	20
001C-North	October	<4.0	24.0	24.0	<1.0	0.26	20	10
002C-West	January	<4.0	18.0	18.0	<2.0	0.10	80	10
002C-West	February	<3.6	8.8	8.8	<2.0	0.13	90	<10
002C-West	March	5.3	12.0	12.0	<1.0	0.16	290	20
002C-West	April	<4.0	15.0	15.0	<1.0	0.10	100	<10
002C-West	May	4.3	20.0	20.0	<1.0	0.11	130	<10
002C-West	June	5.3	18.0	18.0	<1.0	0.34	2,500	<10
002C-West	July	<4.0	14.0	14.0	<1.0	<0.25	260	450
002C-West	August	<4.0	23.0	23.0	<1.0	0.12	2,200	430
002C-West	September	<3.6	10.0	10.0	<1.0	<0.25	320	90

Table K-2 2023 Monthly Dry Weather Monitoring Results Under 2007 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L)	Surfactant (mg/L)	Fecal Coliform (cfu/100mL)	Enterococcus (cfu/100mL)
2007 Permit Discharge Limitations ¹		15 mg/L	Report	100 mg/L	Report	Report	Report	Report
Value Reported	Monthly	Daily Max	Mo. Avg.	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
002C-West	October	<4.0	15.0	15.0	<1.0	<0.25	950	240
004C-Maverick St	January	<4.0	12.0	12.0	<1.0	0.06	<10	10
004C-Maverick St	February	<3.6	6.1	6.1	<1.0	0.10	20	<10
004C-Maverick St	March	<3.6	12.0	12.0	<1.0	0.09	30	10
004C-Maverick St	April	<4.0	12.0	12.0	<1.0	0.05	560	80
004C-Maverick St	May	<4.0	26.0	26.0	<1.0	0.08	590	310
004C-Maverick St	June	<4.0	11.0	11.0	<1.0	0.13	40	<10
004C-Maverick St	July	<4.0	76.0	76.0	<1.0	<0.1	200	170
004C-Maverick St	August	<4.0	17.0	17.0	<1.0	0.10	10	110
004C-Maverick St	September	<3.6	13.0	13.0	<1.0	0.13	<10	10
004C-Maverick St	October	<4.0	20.0	20.0	<1.0	0.28	<10	<10

Source: Massport.

Notes: Dry weather conditions mean that the samples must be taken at least 72 hours after the previously measurable (greater than 0.1 inch rain fall) storm event.

For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

1 Discharge limitations set in BOS NPDES permit issued in 2007. Discharge limitations may vary from the new NPDES permit, issued in August 2023, effective October 2023. Limitations reported in this table represent the monthly data grab and reporting requirements contained in the 2007 NPDES permit for the respective outfalls.

2 Klebsiella analysis was requested for the dry weather sample collected from the North Outfall on June 1, 2023 but could not be performed because the reagent to create the media was out of stock at the laboratory

Table K-3 2023 Monthly Wet Weather Monitoring Results Under 2007 Permit: Porter Street Outfall

Outfall	Monitoring Period	Flow Rate (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L)		Surfactant (mg/L)		Fecal Coliform (cfu/100mL) ⁵		Enterococcus (cfu/100mL) ⁵	
2007 Permit Discharge Limitations ²		Report	Report	6.0 to 8.5	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
003A-Porter St	January	0.424	2.524	7.58	9.8	5.2	5.6	<1.0	<1.0	0.13	0.28	242	490	282	650
003A-Porter St	February	0.053	0.366	6.60	26.0	62.0	72.0	<1.33	<2.0	0.40	0.60	<10	<10	54	130
003A-Porter St	March	0.325	5.267	7.44	5.1	9.2	15.0	<1.0	<1.0	0.13	0.16	24	70	125	540
003A-Porter St	April ³	0.167	1.699	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
003A-Porter St	May ⁴	0.288	4.135	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
003A-Porter St	June	0.186	1.679	6.73	<4.0	6.7	8.8	<1.0	<1.0	0.14	0.20	4,811	44,000	2,058	4,400
003A-Porter St	July	0.841	6.746	7.22	3.7	35.7	82.0	<1.0	<1.0	0.12	0.24	16,080	21,000	5,175	14,000
003A-Porter St	August	0.516	4.260	6.89	4.0	23.7	61.0	<1.0	<1.0	0.14	0.25	1,770	14,000	1,001	33,000
003A-Porter St	September	0.270	2.253	7.45	<4.0	12.7	28.0	<1.0	<1.0	0.06	0.07	2,547	17,000	1,433	16,000
003A-Porter St	October	0.098	0.629	7.46	5.8	14.3	25.0	<1.0	<1.0	0.16	0.32	4,031	80,000	3,934	14,000

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

The North Outfall, West Outfall, and Maverick Street Outfall samples were analyzed for klebsiella on a case-by-case basis if high fecal coliform concentrations were observed.

Wet weather conditions are defined as during a storm event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rain fall) storm event.

Bold values exceed maximum daily discharge limitation.

NS Not Sampled. Sample could not be taken due to environmental conditions.

TSS Total Suspended Solids

MGD Millions of gallons per day

1 Flow rates were estimated for outfalls 001, 002, and 004 by using the SWMM model developed for Logan Airport.

2 Discharge limitations set in BOS NPDES permit issued in 2007. Discharge limitations may vary from the new NPDES permit, issued in August 2023, effective October 2023. Limitations reported in this table represent the monthly data grab and reporting requirements contained in the 2007 NPDES permit for the respective outfalls.

3 Wet weather event samples could not be collected during the month of April, as logistical issues prevented sampling during the two storm events that occurred over weekends.

4 Wet weather event samples could not be collected during the month of May, as logistical issues prevented sampling during the one storm that occurred over the weekend.

5 For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

Table K-4 2023 Monthly Dry Weather Monitoring Results Under 2007 Permit: Porter Street Outfall

Outfall	Monitoring Period	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L)		Surfactant (mg/L)		Fecal Coliform (cfu/100mL) ¹		Enterococcus (cfu/100mL) ¹	
2007 Permit Discharge Limitations ²		Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Monthly	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
003A-Porter St	January	<4.0	9.6	18.0	<1.0	<1.0	0.23	0.55	<10	<10	10	10
003A-Porter St	February	<3.6	12.0	15.0	<1.0	<1.0	0.22	0.48	<10	<10	13	20
003A-Porter St	March	10.0	15.0	23.0	<1.0	<1.0	0.16	0.20	18	55	<10	<10
003A-Porter St	April	7.1	114.0	310.0	<1.0	<1.0	0.24	0.36	14	30	19	70
003A-Porter St	May	<4.0	11.8	14.0	<1.0	<1.0	0.18	0.35	141	1,400	38	70
003A-Porter St	June	5.1	12.0	20.0	<1.0	<1.0	0.11	0.13	20	80	<10	<10
003A-Porter St	July	3.9	8.0	12.0	<1.0	<1.0	0.08	0.09	101	1,300	89	250
003A-Porter St	August	<4.0	10.0	14.0	<1.0	<1.0	0.11	0.16	460	2,500	51	220
003A-Porter St	September	<4.0	17.0	41.0	<1.0	<1.0	0.10	0.15	113	2,400	14	30
003A-Porter St	October	8.0	20	44	<1.0	<1.0	0.19	0.22	447	2,100	62	600

Source: Massport.

Notes: Dry weather conditions mean that the samples must be taken at least 72 hours after the previously measurable (greater than 0.1 inch rain fall) storm event.

For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

1 For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

2 Discharge limitations set in BOS NPDES permit issued in 2007. Discharge limitations may vary from the new NPDES permit, issued in August 2023, effective October 2023. Limitations reported in this table represent the monthly data grab and reporting requirements contained in the 2007 NPDES permit for the respective outfalls.

Table K-5 2023 Quarterly Wet Weather Monitoring Results Under 2007 Permit: Northwest and Runway/Perimeter Stormwater Outfalls

Outfall	Monitoring Period	Flow (MGD) ¹		pH (S.U.)		Oil and Grease (mg/L)		TSS (mg/L)		Benzene (µg/L)	
2007 Permit Discharge Limitations ²		Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly ³	Mo. Avg.	Daily Max	Daily Min	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
005-Northwest	Q1 2023	0.074	0.441	7.44	7.44	<4.0	<4.0	19	19	<1.0	<1.0
006-Runway Perimeter ⁴	Q1 2023	0.055	0.31	7.13	7.82	<3.6	<3.6	<5.0	<5.0	<1.0	<1.0
005-Northwest	Q2 2023	0.035	0.243	6.79	6.79	<4.0	<4.0	18	18	<1.0	<1.0
006-Runway Perimeter ⁵	Q2 2023	0.033	0.186	7.08	7.68	<3.9	<4.0	7.2	21	<1.0	<1.0
005-Northwest	Q3 2023	0.153	1.542	6.46	6.46	<3.6	<3.6	23	23	<1.0	<1.0
006-Runway Perimeter ⁶	Q3 2023	0.164	1.586	7.12	7.83	3.8	3.8	6.3	13	<1.0	<1.0

Source: Massport.

Notes: For averaging calculations, a value of zero was employed for those results measures below the laboratory detection limit.

Outfall 006A is comprised of a representative sample of 15% of outfalls A-1 to A-44

TSS Total Suspended Solids

MGD Millions of gallons per day

1 Flow is estimated quarterly using the SWMM model developed for Logan Airport.

2 Requirements are from NPDES Permit MA 0000787, issued July 31, 2007.

3 Quarter 1 runs from January to March, Quarter 2 from April to June, Quarter 3 from July to September. Quarter 4 is reported with the 2023 NPDES permit.

4 Outfalls A17, A21, A24, A33, and A40 could not be sampled due to access restrictions or lack of flow. Outfalls A9, A15, A20(2), A22, A25, A34, and A38 were sampled to represent Runway/Perimeter Outfalls.

5 Outfalls A17, A24, A33, and A40 could not be sampled due to access restrictions or lack of flow. Outfalls A9, A18, A20(2), A21, A23, A34, and A38 were sampled to represent Runway/Perimeter Outfalls.

6 Outfalls A17, A20, A24, A33, and A40 could not be sampled due to access restrictions or lack of flow. Outfalls A9, A15, A19, A21, A25, A34, and A38 were sampled to represent Runway/Perimeter Outfalls.

Table K-6 2023 Quarterly Wet Weather Monitoring Results Under 2007 Permit: North, West, Porter Street, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period ¹	Benzo(a)-anthracene (µg/L)	Benzo(a)-pyrene (µg/L)	Benzo(b)-fluoranthene (µg/L)	Benzo(k)-fluoranthene (µg/L)	Chrysene (µg/L)	Dibenzo(a,h)-anthracene (µg/L)	Indeno (1,2,3-cd)-pyrene (µg/L)	Naphthalene (µg/L)	Total PAHs (µg/L)
2007 Permit Discharge Limitations ²		Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Total
001 - North	Q1 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
002 - West	Q1 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
003 - Porter St	Q1 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
004 - Maverick St	Q1 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
001 - North	Q2 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
002 - West	Q2 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
003 - Porter St	Q2 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
004 - Maverick St	Q2 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
001 - North	Q3 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
002 - West	Q3 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
003 - Porter St	Q3 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
004 - Maverick St	Q3 2023	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

Source: Massport.

Notes: For averaging calculations, a value of zero was employed for those results measures below the laboratory detection limit.

PAHs Polynuclear Aromatic Hydrocarbons

1 Quarter 1 runs from January to March, Quarter 2 from April to June, Quarter 3 from July to September. Quarter 4 is reported in **Table K-10** with the 2023 NPDES permit conditions.

2 Requirements are from NPDES Permit MA0000787, issued July 31, 2007. Outfalls 001, 002, 003, and 004 had the same quarterly discharge limits and reporting requirements in the 2007 NPDES permit.

Table K-7 Logan Airport 2022-2023 Deicing Season Monitoring Results Under 2007 Permit: North, West, and Porter Street Stormwater Outfalls

Outfall	Monitoring Period	Ethylene Glycol, Total (mg/L)	Propylene Glycol, Total (mg/L)	BOD ³ (mg/L)	COD ⁴ (mg/L)	Ammonia Nitrogen (mg/L)	Nonylphenol (µg/L)	Tolytriazole ⁵ (µg/L)
2007 Permit Discharge Limitations ¹		Report	Report	Report	Report	Report	Report	Report
Value Reported	Twice a Deicing Season ²	Max Result	Max Result	Max Result	Max Result	Max Result	Max Result	Max Result
003 – Porter Street Deicing	October 2022 – April 2023	7.14	311	670	NA	1.69	250	108.6

Source: Massport.

Notes: For averaging calculations, a value of zero was employed for those results measured below the laboratory detection limit.

WET testing is only required during 1st and 3rd year deicing seasons, and therefore was not monitored and reported during the 2022 – 2023 deicing season.

NA Not Analyzed

1 Requirements are from NPDES Permit MA0000787, issued July 31, 2007.

2 Deicing season is from October 2022 to April 2023. Measurements are taken twice each deicing season during separate wet weather deicing episodes, if practicable

3 BOD: Five-day Biochemical Oxygen Demand

4 COD: Chemical Oxygen Demand

5 Tolytriazole concentrations calculated as sum of 4-Methyl-1-H-benzotriazole and 5-Methyl-1-H-benzotriazole.

K.2 2023 Stormwater Outfall Reporting Under 2023 Permit

Table K-8 2023 Monthly Monitoring Results Under 2023 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L) ²		Fecal Coliform ^{3, 4, 5} (cfu/100mL)		Enterococcus (cfu/100mL) ^{3, 5}	
2023 Permit Discharge Limitations		Report	Report	6.0 - 8.5	15 mg/L	Report	100 mg/L	Report ¹	Report ¹	88 MPN/100 ml (01A) ²	260 MPN/100 ml (01A) ²	35 cfu/100 ml	130 cfu/100 ml
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
01A - North	November-23	0.214	3.977	7.19	<4.0	17	17	<1.0	<1.0	2,700	2,700	480	480
02A - West	November-23	0.743	12.643	7.80	<4.0	21	21	NS	NS	350	350	500	500
04A - Maverick St	November-23	0.050	0.972	7.65	<4.0	40	40	NS	NS	70	70	50	50
01A - North	December-23	0.672	7.155	7.23	<4.0	17	17	<1.0	<1.0	140	140	80	80
02A - West	December-23	2.380	28.072	7.47	<4.0	12	12	NS	NS	450	450	360	360
04 - Maverick St	December-23	0.163	1.816	7.76	<4.0	43	43	NS	NS	10	10	20	20

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

The North Outfall, West Outfall, and Maverick Street Outfall samples were analyzed for klebsiella on a case-by-case basis if high fecal coliform concentrations were observed.

Bold values exceed maximum daily discharge limitation.

NS Not Sampled

TSS Total Suspended Solids

MGD Millions of gallons per day

1 Flow rates were estimated for outfalls 001, 002, and 004 by using the SWMM model developed for Logan Airport.

2 2023 NPDES permit requires to report Benzene discharge from Outfall 01A only.

3 2023 NPDES permit only places limitations for fecal coliform on North Outfall 01A. Outfall 02A and Outfall 04A must only report the value of fecal coliform discharge.

4 Fecal Coliform and Enterococcus numerical bacteria limits were stayed at this time.

5 For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

Table K-9 2023 Monthly Monitoring Results Under 2023 Permit: Porter Street Outfall

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH	Oil and Grease (mg/L)	TSS (mg/L)		Fecal Coliform (cfu/100mL) ^{3, 4}		Enterococcus (cfu/100mL) ^{3, 4}	
2023 Permit Discharge Limitations ²		Report	Report	6.0 to 8.5	15 mg/L	Report	100 mg/L	Report	Report	35 cfu/100 ml	130 cfu/100 ml
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
03A-Porter St	November-23	0.171	2.142	7.82	<4.0	9.0	9.2	545	560	512	820
03A-Porter St	December-23	0.474	5.977	8.22	6.2	6.9	8.7	57	110	59	350

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit. Bold values exceed maximum daily discharge limitation.

MGD Millions of gallons per day

1 Flow rates were estimated by using the SWMM model developed for Logan Airport.

2 Monitoring requirements and discharge limitations beginning in November 2023 follow requirements in the 2023 NPDES Permit No. MA0000787

3 Fecal Coliform and Enterococcus numerical bacteria limits were stayed at this time.

4 For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

Table K-10 2023 Quarterly Monitoring Results Under 2023 Permit: North, West, Porter Street, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Total Ammonia Nitrogen (mg/L)		Benzo[a]anthracene (µg/L)	Benzo[a]pyrene (µg/L)	Benzo[b]fluoranthene (µg/L)	Benzo[k]fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz[a,h]anthracene (µg/L)	Indeno[1,2,3-cd]pyrene (µg/L)	Naphthalene (µg/L)	Total PAHs
2023 Permit Discharge Limitations		Report		Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Mo. Avg.	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
01A-North	Q4 2023	0.134	0.134	0.078	0.084	0.192	0.057	0.142	< 0.1	0.118	0.124	0.895
02A-West	Q4 2023	0.130	0.130	<0.1	<0.1	0.079	<0.1	<0.1	<0.1	<0.1	<0.1	0.779
03A-Porter St	Q4 2023	0.086	0.097	<0.1	<0.1	0.177	<0.1	0.155	<0.1	<0.1	<0.1	0.966
04A-Maverick St	Q4 2023	0.076	0.076	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Source: Massport.

Notes:

PAHs Polynuclear Aromatic Hydrocarbons

Table K-11 2023 Quarterly Monitoring Results Under 2023 Permit: Northwest Outfall

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)	
2023 Permit Discharge Limitations ²		Report	Report	Report	15 mg/L	Report	100 mg/L
Value Reported	Quarterly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max
05A-Northwest	Q4 2023	0.09	0.929	7.21	<4.0	82	82

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

1 Flow rates were estimated for outfalls 001, 002, and 004 by using the SWMM model developed for Logan Airport.

2 Monitoring requirements and discharge limitations beginning in November 2023 follow requirements in the 2023 NPDES Permit No. MA0000787

Table K-12 2023 Quarterly Monitoring Results Under 2023 Permit: Airfield Outfall A21, Airfield Outfall A33, and Airfield Outfall A8

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Dissolved Oxygen (mg/L) ³	
2023 Permit Discharge Limitations ²		Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
06A-Perimeter A21	Q4 2023	0.453	4.681	7.26	<4.0	11	11	11.55	11.55
07A-Perimeter A33	Q4 2023	0.038	0.365	7.14	<4.0	<5.0	<5.0	10.89	10.89
08A-Perimeter A8	Q4 2023	0.050	0.548	7.39	<3.6	<5.0	<5.0	10.72	10.72

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

MGD Millions of gallons per day

1 Flow rates were estimated using the SWMM model developed for Logan Airport.

2 Monitoring requirements and discharge limitations beginning in November 2023 follow requirements in the 2023 NPDES Permit No. MA0000787

3 Dissolved oxygen monitoring is only conducted during quarters ending in December (Q4) and March (Q1)

K.3 2024 Stormwater Outfall Reporting

Table K-13 2024 Monthly Monitoring Results Under 2023 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L) ²		Fecal Coliform ^{3, 4, 5} (MPN/100mL)		Enterococcus (cfu/100mL) ^{4, 5}	
2023 Permit Discharge Limitations		Report	Report	6.0 - 8.5	15 mg/L	Report	100 mg/L	Report (01A) ¹	Report (01A) ¹	88 MPN/100 ml (01A) ²	260 MPN/100 ml (01A) ²	35 cfu/100 ml	130 cfu/100 ml
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
01A-North	January	1.210	9.155	7.26	< 4.0	27.0	27.0	<1.0	<1.0	110	110	140	140
02A-West	January	3.119	32.758	7.25	< 4.0	17.0	17.0	NS	NS	1,000	1,000	60	60
04A-Maverick St	January	0.199	1.955	7.52	< 4.0	23.0	23.0	NS	NS	1,100	1,100	150	150
01A-North	February	0.132	0.742	6.67	12.0	87.0	87.0	<4.0	<4.0	130	130	50	50
02A-West	February	0.290	1.072	7.93	<4.0	32.0	32.0	NS	NS	80	80	110	110
04A-Maverick St	February	0.016	0.087	7.53	<4.0	14.0	14.0	NS	NS	130	130	30	30
01A-North	March	1.030	7.480	7.20	<4.0	22.0	22.0	<1.0	<1.0	290	290	<10	<10
02A-West	March	3.571	22.202	7.10	<4.0	7.3	7.3	NS	NS	80	80	<10	<10
04A-Maverick St	March	0.245	1.690	8.13	<4.0	12.0	12.0	NS	NS	10	10	<10	<10
01A-North	April	0.338	3.589	7.21	<4.0	16.0	16.0	<1.0	<1.0	80	80	10	10
02A-West	April	1.145	13.003	7.34	<4.0	9.2	9.2	NS	NS	710	710	320	320
04A-Maverick St	April	0.078	0.902	7.44	<4.0	12.0	12.0	NS	NS	1,700	1,700	100	100
01A-North	May	0.474	5.320	7.25	<4.0	12.0	12.0	<1.0	<1.0	<10	<10	<10	<10
02A-West	May	1.669	18.280	7.42	<4.0	9.3	9.3	NS	NS	110	110	20	20
04A-Maverick St	May	0.112	1.279	7.57	<4.0	<13.0	<13.0	NS	NS	110	110	20	20
01A-North	June	0.413	5.795	7.14	<4.0	27.0	27.0	<1.0	<1.0	49,000	49,000	490	490

Table K-13 2024 Monthly Monitoring Results Under 2023 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L) ²		Fecal Coliform ^{3, 4, 5} (MPN/100mL)		Enterococcus (cfu/100mL) ^{4, 5}	
2023 Permit Discharge Limitations		Report	Report	6.0 - 8.5	15 mg/L	Report	100 mg/L	Report (01A) ¹	Report (01A) ¹	88 MPN/100 ml (01A) ²	260 MPN/100 ml (01A) ²	35 cfu/100 ml	130 cfu/100 ml
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
02A-West	June	1.431	15.847	7.54	<4.0	22.0	22.0	NS	NS	360	360	390	390
04A-Maverick St	June	0.103	1.521	7.50	<4.0	20.0	20.0	NS	NS	170	170	10	10
01A-North	July	0.123	1.102	7.41	<4.0	<5.0	<5.0	<1.0	<1.0	320	320	30	30
02A-West	July	0.376	3.334	7.70	<4.0	12.0	12.0	NS	NS	390	390	130	130
04A-Maverick St	July	0.029	0.267	7.54	<4.0	16.0	16.0	NS	NS	<10	<10	30	30
01A-North	August	0.350	2.946	7.47	<4.0	17.0	17.0	<1.0	<1.0	200	200	10	10
02A-West	August	1.257	8.788	7.66	<4.0	15.0	15.0	NS	NS	90	90	20	20
04A-Maverick St	August	0.090	0.775	7.86	<4.0	40.0	40.0	NS	NS	<10	<10	10	10
01A-North	September	0.137	1.798	7.27	<4.0	6.4	6.4	<1.0	<1.0	230	230	<10	<10
02A-West	September	0.480	5.777	7.28	<4.0	18.0	18.0	NS	NS	80	80	<10	<10
04A-Maverick St	September	0.035	0.462	7.45	<4.0	34.0	34.0	NS	NS	180	180	10	10
01A-North	October	0.080	1.108	7.40	<4.0	10.0	10.0	<1.0	<1.0	210	210	70	70
02A-West	October	0.296	3.740	7.55	<4.0	30.0	30.0	NS	NS	1,200	1,200	210	210
04A-Maverick St	October	0.019	0.264	7.66	<4.0	32.0	32.0	NS	NS	10	10	<10	<10
01A-North	November	0.355	3.114	7.15	<4.0	14.0	14.0	<1.0	<1.0	510	510	80	80
02A-West	November	1.291	11.655	7.82	<4.0	14.0	14.0	NS	NS	160	160	10	10
04A-Maverick St	November	0.092	0.769	7.84	<4.0	16.0	16.0	NS	NS	230	230	60	60

Table K-13 2024 Monthly Monitoring Results Under 2023 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (ug/L) ²		Fecal Coliform ^{3, 4, 5} (MPN/100mL)		Enterococcus (cfu/100mL) ^{4, 5}	
2023 Permit Discharge Limitations		Report	Report	6.0 - 8.5	15 mg/L	Report	100 mg/L	Report (01A) ¹	Report (01A) ¹	88 MPN/100 ml (01A) ²	260 MPN/100 ml (01A) ²	35 cfu/100 ml	130 cfu/100 ml
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
01A-North	December	0.749	9.763	7.18	<4.0	42.0	42.0	<1.0	<1.0	26,000	26,000	1,700	1,700
02A-West	December	2.167	29.158	7.54	<4.0	35.0	35.0	NS	NS	110	110	55	55
04A-Maverick St	December	0.142	2.428	7.98	<4.0	40.0	40.0	NS	NS	50	50	130	130

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

Bold values exceed maximum daily discharge limitation.

NS Not Sampled.

TSS Total Suspended Solids

MGD Millions of gallons per day

MPN Most Probable Number

1 Flow rates were estimated using the SWMM model developed for Logan Airport.

2 2023 NPDES permit requires to report Benzene discharge from Outfall 01A only.

3 2023 NPDES permit only places limitations for fecal coliform on North Outfall 01A. Outfall 02A and Outfall 04A must only report the value of fecal coliform discharge.

4 Fecal Coliform and Enterococcus numerical bacteria limits were stayed at this time

5 For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

Table K-14 2024 Annual Surfactants Monitoring Results Under 2023 Permit: North and West Outfalls

Outfall	Monitoring Period	Surfactants	
Value Reported	Yearly	Monthly Average	Daily Max
01A-North	2024	0.2	0.2
02A-West	2024	0.14	0.14

Source: Massport

Table K-15 2024 Monthly Monitoring Results Under 2023 Permit: Porter Street Stormwater Outfalls

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Fecal Coliform (MPN/100mL) ^{2, 3}		Enterococcus (cfu/100mL) ^{2, 3}	
2023 Permit Discharge Limitations		Report	Report	6.0 - 8.5	15 mg/L	Report	100 mg/L	Report	Report	35 cfu/ 100 ml	130 cfu/ 100 ml
Value Reported	Monthly	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
03A-Porter St	January	0.590	6.908	7.52	10.5	152.5	152.5	7	7	61	61
03A-Porter St	February	0.064	0.585	9.02	8.2	20.0	20.0	<10	<10	140	140
03A-Porter St	March	0.697	3.566	8.06	<4.0	<5.0	<5.0	<10	<10	40	40
03A-Porter St	April	0.24	2.108	7.59	<4.0	<5.0	<5.0	90	90	<10	<10
03A-Porter St	May	0.332	3.398	7.81	<4.0	<5.0	<5.0	10	10	10	10
03A-Porter St	June	0.319	3.142	8.19	<4.0	39.0	39.0	90	90	360	360
03A-Porter St	July	0.087	0.568	7.80	<4.0	<5.0	<5.0	640	640	480	480
03A-Porter St	August	0.259	1.561	7.90	<4.0	11.0	11.0	110	110	20	20
03A-Porter St	September	0.077	1.048	8.01	<4.0	8.2	8.2	30	30	45	45
03A-Porter St	October	0.091	0.701	7.72	<4.0	19.0	19.0	<10	<10	10	10
03A-Porter St	November	0.243	2.241	8.08	5.3	30.0	30.0	190	190	5,400	5,400
03A-Porter St	December	0.449	6.15	7.94	<4.0	<5.0	<5.0	410	410	230	230

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

Bold values exceed maximum daily discharge limitation.

TSS Total Suspended Solids

MGD Millions of gallons per day

MPN Most Probable Number

1 Flow rates were estimated by using the SWMM model developed for Logan Airport.

2 For geometric mean calculations (fecal coliform and enterococcus), the reporting limit was employed for those results measured below the laboratory detection limit.

3 Fecal Coliform and Enterococcus numerical bacteria limits were stayed at this time.

Table K-16 2024 Quarterly Monitoring Results Under 2023 Permit: North, West, Porter Street, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Total Ammonia Nitrogen (mg/L)		Benzo[a]anthracene (µg/L)	Benzo[a]pyrene (µg/L)	Benzo[b]fluoranthene (µg/L)	Benzo[k]fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz[a,h]anthracene (µg/L)	Indeno[1,2,3-cd]pyrene (µg/L)	Naphthalene (µg/L)	Total PAHs
2023 Permit Discharge Limitations		Report		Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Mo. Avg.	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
01A-North	Q1 2024	0.359	0.359	0.112	0.111	0.445	0.107	0.336	<0.010	0.253	3.910	5.374
02A-West	Q1 2024	0.888	0.888	0.052	<0.050	0.108	<0.050	0.100	<0.100	<0.100	0.591	0.614
03A-Porter St	Q1 2024	0.125	0.125	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	0.550
04A-Maverick St	Q1 2024	0.228	0.228	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	0.540	6.780
01A-North	Q2 2024	0.615	0.615	<0.050	<0.050	0.094	<0.050	0.070	<0.100	<0.100	<0.100	1.151
02A-West	Q2 2024	0.964	0.964	<0.050	0.051	0.103	<0.05	0.075	<0.100	<0.100	0.271	0.800
03A-Porter St	Q2 2024	0.107	0.107	0.181	0.151	0.283	0.089	0.215	<0.100	0.117	<0.100	0.571
04A-Maverick St	Q2 2024	0.133	0.133	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	1.190
01A-North	Q3 2024	2.430	2.430	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	0.550
02A-West	Q3 2024	1.640	1.640	<0.050	<0.050	0.071	<0.050	<0.050	<0.05	<0.100	<0.100	1.236
03A-Porter St	Q3 2024	0.086	0.086	0.053	<0.050	0.087	<0.050	0.076	<0.100	<0.100	<0.100	0.616
04A-Maverick St	Q3 2024	0.151	0.151	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	<0.550
01A-North	Q4 2024	1.650	1.650	0.810	0.980	1.79	0.588	1.310	0.191	1.010	<0.100	0.990
02A-West	Q4 2024	0.778	0.778	0.095	0.109	0.196	0.070	0.148	<0.100	0.122	0.350	0.550
03A-Porter St	Q4 2024	0.485	0.485	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	0.550
04A-Maverick St	Q4 2024	0.104	0.104	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	<0.55

Source: Massport.

Notes:

PAHs Polynuclear Aromatic Hydrocarbons

Table K-17 2024 Quarterly Whole Effluent Toxicity (WET) Monitoring Results Under 2023 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	pH (S.U.)	Salinity (ppt)	Total Solids (mg/L)	TSS (mg/L)	Ammonia (mg/L)	Organic Carbon (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	LC ₅₀ Mysid Shrimp ¹	NOAEL Mysid Shrimp ¹	LC ₅₀ Inland Silverside ²	NOAEL Inland Silverside ²
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	% Daily Max	% Daily Max	% Daily Max	% Daily Max
01A-T	January (Q1)	7.39	3.60	2,800	11	1,190	2.49	0.0006	0.0035	<0.001	<0.001	0.029	>100	100	>100	100
02A-T	January (Q1)	7.57	12.50	9,600	8	320	6.27	0.0001	0.0034	<0.001	<0.001	0.019	>100	100	>100	100
04A-T	January (Q1)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
01A-T	March (Q2)	6.52	3.60	3,700	27	1.50	210	<0.0001	0.0059	<0.0025	0.002	0.031	17.5	50	44.7	6.25
02A-T	March (Q2)	6.99	8.80	8,800	30	0.41	178	<0.0001	0.0058	<0.0025	0.002	0.015	>100	50	80.8	100
04A-T	March (Q2)	7.98	24.30	31,000	14	<0.1	2.59	0.0001	0.0034	<0.001	<0.001	0.005	>100	100	>100	100
01A-T	July (Q3)	7.14	0.60	580	16	0.88	14.8	<0.0005	0.0061	<0.003	0.001	0.034	>100	100	>100	100
02A-T	July (Q3)	7.54	14.20	18,000	34	0.99	6.51	<0.0001	0.0041	<0.0025	<0.001	0.012	>100	100	>100	100
04A-T	July (Q3)	7.50	22.20	29,000	12	0.54	2.77	<0.0001	0.0025	<0.0013	<0.001	0.016	>100	100	>100	100
01A-T	October (Q4)	7.50	6.20	6,900	10	1.45	8.6	0.0001	0.0013	<0.001	<0.001	0.011	>100	100	>100	100
02A-T	October (Q4)	7.70	20.50	25,000	10	0.85	5.53	<0.0001	0.0024	<0.0013	<0.001	0.009	>100	100	>100	100
04A-T	October (Q4)	7.58	27.70	34,000	23	0.16	2.83	0.0002	0.0063	<0.0013	<0.001	0.026	>100	100	>100	100

Source: Massport.

Notes:

TSS: Total Suspended Solids

NOAEL No-observed-adverse-effect-level

LC₅₀ Lethal Concentration. The LC-50 value is an estimate of the concentration of effluent that is lethal to 50% of the test organisms during the time prescribed by the test method

1 NOAEL and LC₅₀ testing for Mysid Shrimp, *Americamysis bahia*, is required with WET tests conducted in February (during deicing), June, September, and December (during deicing) each year.

2 NOAEL and LC₅₀ testing for Inland Silverside, *Menidia beryllina* is required with WET tests conducted in February (during deicing), June, September, and December (during deicing) each year

Table K-18 2024 Quarterly Ambient Characteristic Monitoring Results Under 2023 Permit: North, West, and Maverick Street Stormwater Outfalls

Outfall	Monitoring Period	Temperature (degrees Centigrade)	pH (S.U.)	Salinity (ppt)	Ammonia (mg/L)	Organic Carbon (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
01A-North	January (Q1)	6.8	8.01	33.3	<0.05	2.39	<0.0001	<0.0005	<0.001	<0.001	<0.003
02A-West	January (Q1)	6.8	8.01	32.6	<0.05	2.12	<0.0001	<0.0005	<0.001	<0.001	0.003
04A-Maverick St	January (Q1)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
01A-North	March (Q2)	3.5	7.33	28.6	<0.1	1.7	<0.0001	<0.005	<0.005	<0.005	<0.02
02A-West	March (Q2)	3.5	7.33	29.0	<0.1	2.9	<0.0001	0.0088	<0.005	<0.005	0.030
04A-Maverick St	March (Q2)	3.5	7.33	28.6	0.31	1.71	<0.0001	<0.005	<0.005	<0.005	<0.02
01A-North	July (Q3)	14.7	8.11	29.7	0.3	2.58	<0.0001	0.009	0.011	<0.005	<0.02
02A-West	July (Q3)	14.7	8.11	29.6	0.36	1.92	<0.0001	0.0124	0.01	<0.005	0.034
04A-Maverick St	July (Q3)	14.7	8.11	29.6	<0.25	2.35	<0.0001	<5.0	<0.005	<0.005	<0.02
01A-North	October (Q4)	16.0	8.13	29.9	0.12	2.46	<0.0001	0.0019	<0.001	<0.001	<0.002
02A-West	October (Q4)	16.0	8.13	29.9	0.16	2.38	0.0003	0.0021	<0.0013	<0.001	<0.004
04A-Maverick St	October (Q4)	16.0	8.13	29.9	0.38	2.36	0.0001	0.0023	<0.0013	<0.001	<0.004

Source: Massport.

Notes:

NS Not Sampled

Table K-19 2024 Monthly Treated Discharge Monitoring Results Under 2023 Permit - North Outfall Fuel Farm Stormwater Drainage System (01D & 01E)

Outfall	Monitoring Period	Flow (MGD) ¹		pH Range (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (mg/L)	
2023 Permit Discharge Limitations ²		Report	Report	Report	15 mg/L	Report	100 mg/L	Report	Report
Value Reported	Monthly	Mo. Avg.	Daily Max	Daily Max	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
01D-North Industrial	January	NS	NS	NS	NS	NS	NS	NS	NS
01E-North Industrial	January	NS	NS	NS	NS	NS	NS	NS	NS
01D-North Industrial	February	32,000	16,000	6.24	<4.0	<5.0	<5.0	<0.001	<0.001
01E-North Industrial	February	32,000	16,000	7.72	6.4	5.2	5.2	<0.004	<0.004
01D-North Industrial	March	NS	NS	NS	NS	NS	NS	NS	NS
01E-North Industrial	March	NS	NS	NS	NS	NS	NS	NS	NS
01D-North Industrial	April	21,816	21,816	6.77	<4.0	<5.0	<5.0	<0.002	<0.002
01E-North Industrial	April	13,016	13,016	6.15	<4.0	<5.0	<5.0	<0.002	<0.002
01D-North Industrial	May	NS	NS	NS	NS	NS	NS	NS	NS
01E-North Industrial	May	NS	NS	NS	NS	NS	NS	NS	NS
01D-North Industrial	June	NS	NS	NS	NS	NS	NS	NS	NS
01E-North Industrial	June	NS	NS	NS	NS	NS	NS	NS	NS
01D-North Industrial	July	29,545	29,545	6.82	0	8.2	8.2	0	0
01E-North Industrial	July	29,545	29,545	6.82	0	8.2	8.2	0	0
01D-North Industrial	August	NS	NS	NS	NS	NS	NS	NS	NS
01E-North Industrial	August	NS	NS	NS	NS	NS	NS	NS	NS
01D-North Industrial	September	15,000	15,000	7.36	0	7.7	7.7	0	0
01E-North Industrial	September	15,000	15,000	6.84	0	0	0	0	0
01D-North Industrial	October	41.5	41.5	7.1	0	7.0	7.0	0	0

Table K-19 2024 Monthly Treated Discharge Monitoring Results Under 2023 Permit - North Outfall Fuel Farm Stormwater Drainage System (01D & 01E)

Outfall	Monitoring Period	Flow (MGD) ¹		pH Range (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Benzene (mg/L)	
2023 Permit Discharge Limitations ²		Report	Report	Report	15 mg/L	Report	100 mg/L	Report	Report
Value Reported	Monthly	Mo. Avg.	Daily Max	Daily Max	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
01E-North Industrial	October	41.5	41.5	5.6	0	0	0	0	0
01D-North Industrial	November	42	42	7	0	0	0	0	0
01E-North Industrial	November	42	42	7	0	9.8	9.8	0	0
01D-North Industrial	December	42	42	7.39	3.6	5.0	5.0	<0.001	<0.001
01E-North Industrial	December	42	42	7.02	<4.0	8.3	8.3	<0.011	<0.011

Source: Massport.

Notes: For averaging calculations, a value of zero was employed for those results measures below the laboratory detection limit.

TSS Total Suspended Solids

NS Not Sampled. There was no discharge in November 2023, December 2023, January 2024, March 2024, May 2024, June 2024, and August 2024, therefore, no samples were collected.

MGD Millions of gallons per day

1 Flow is estimated quarterly using a hydraulic model of the Logan Airport draining system.

2 Requirements are from the 2023 update of NPDES Permit MA 0000787.

Table K-20 2024 Quarterly Monitoring Results Under 2023 Permit: Northwest Outfall

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)	
2023 Permit Discharge Limitations ²		Report	Report	6.0 to 8.5 Wet	15 mg/L	Report	100 mg/L
Value Reported	Quarterly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max
05A-Northwest	Q1 2024	0.011	0.05	6.99	6.99	6	49
05A-Northwest	Q2 2024	0.058	0.89	8.15	8.15	<4.0	26
05A-Northwest ³	Q3 2024	NS	NS	NS	NS	NS	NS

Table K-20 2024 Quarterly Monitoring Results Under 2023 Permit: Northwest Outfall

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)	
2023 Permit Discharge Limitations ²		Report	Report	6.0 to 8.5 Wet	15 mg/L	Report	100 mg/L
Value Reported	Quarterly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max
05A-Northwest	Q4 2024	0.047	0.408	7.78	7.78	<4.0	22

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

Bold values exceed maximum daily discharge limitation.

NS Not Sampled

1 Flow rates were estimated for outfalls 001, 002, and 004 by using the SWMM model developed for Logan Airport.

2 Monitoring requirements and discharge limitations beginning in November 2023 follow requirements in the 2023 NPDES Permit No. MA0000787

3 Quarterly wet weather sampling for Northwest Outfall, and perimeter outfalls A8, A21, and A33 could not be collected during Q3 of 2024. There were nine days in the 3rd quarter of 2024 with at least 0.1 inches of precipitation that met the 72-hour antecedent dry weather conditions, but the storms were not suitable for sampling.

Table K-21 2024 Quarterly Monitoring Results Under 2023 Permit: Airfield Perimeter Outfalls A21, A33, and A8

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Dissolved Oxygen (mg/L) ³	
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
06A-Perimeter A21	Q1 2024	0.141	0.181	7.23	<4.0	8.5	8.5	11.11	11.11
07A-Perimeter A33	Q1 2024	0.017	0.023	7.71	<4.0	<5.0	<5.0	9.4	9.4
08A-Perimeter A8	Q1 2024	0.017	0.022	7.24	<4.0	<5.0	<5.0	12.21	12.21
06A-Perimeter A21	Q2 2024	0.252	3.337	7.42	<4.0	<5.0	<5.0	NA	NA
07A-Perimeter A33	Q2 2024	0.020	0.137	7.11	<4.0	<5.0	<5.0	NA	NA
08A-Perimeter A8	Q2 2024	0.034	0.528	7.34	<4.0	<5.0	<5.0	NA	NA
06A-Perimeter A21 ²	Q3 2024	NS	NS	NS	NS	NS	NS	NA	NA

Table K-21 2024 Quarterly Monitoring Results Under 2023 Permit: Airfield Perimeter Outfalls A21, A33, and A8

Outfall	Monitoring Period	Effluent Flow (MGD) ¹		pH (S.U.)	Oil and Grease (mg/L)	TSS (mg/L)		Dissolved Oxygen (mg/L) ³	
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report	Report	Report
Value Reported	Quarterly	Mo. Avg.	Daily Max	Mo. Grab	Daily Max	Mo. Avg.	Daily Max	Mo. Avg.	Daily Max
07A-Perimeter A33 ²	Q3 2024	NS	NS	NS	NS	NS	NS	NA	NA
08A-Perimeter A8 ²	Q3 2024	NS	NS	NS	NS	NS	NS	NA	NA
06A-Perimeter A21	Q4 2024	0.218	2.507	7.5	<4.0	<5.0	<5.0	11.03	11.03
07A-Perimeter A33	Q4 2024	0.020	0.221	7.65	<4.0	<5.0	<5.0	10.24	10.24
08A-Perimeter A8	Q4 2024	0.023	0.236	7.33	<4.0	<5.0	<5.0	11.14	11.14

Source: Massport.

Notes: For averaging calculations, the reporting limit was employed for those results measured below the laboratory detection limit.

NS Not Sampled

MGD Millions of gallons per day.

1 Flow rates were estimated by using the SWMM model developed for Logan Airport.

2 Quarterly wet weather sampling for Northwest Outfall, and perimeter outfalls A8, A21, and A33 could not be collected during Q3 of 2024. There were nine days in the 3rd quarter of 2024 with at least 0.1 inches of precipitation that met the 72-hour antecedent dry weather conditions, but the storms were not suitable for sampling.

3 Dissolved oxygen monitoring is only conducted during quarters ending in December (Q4) and March (Q1)

Table K-22 2024 Deicing Monitoring Results Under 2023 Permit (November 2023 – December 2024): North Outfall and West Outfall

Outfall	Monitoring Period	Flow Rate (MGD)	Propylene Glycol (mg/L)	BOD ¹ (mg/L)	BOD ¹ (lbs/day)	COD ² (mg/L)	COD ² (lbs/day)	Dissolved Oxygen (mg/L)	Nonylphenol (µg/L)	Tolytriazole (µg/L)
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report	Report	Report ⁴	Report ⁵
Value Reported	Monthly During Deicing Season ³	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
01B-North Deicing	November-23	3.997	<2.0	14	465	73	2,423	3.13	NA	NA
02B-West Deicing	November-23	12.643	<2.0	<10	1,055	580	61,196	6.36	NA	NA
01B-North Deicing	December-23	7.155	<2.0	13	776	71	4,240	5	NA	NA
02B-West Deicing	December-23	28.072	<2.0	<2	469	84	19,679	4.43	NA	NA
01B-North Deicing	January-24	9.155	2,680	2,800	213,926	4,700	359,090	5.35	<50.0	<1,000
02B-West Deicing	January-24	32.758	804	900	246,040	1,700	464,743	2.53	<49.0	<1,000
01B-North Deicing	February-24	0.742	1,640	3,100	19,196	6,900	42,727	12.03	<98	<1,000
02B-West Deicing	February-24	1.072	1,960	2,200	19,682	7,300	65,308	7.42	<24.0	<1,000
01B-North Deicing	March-24	7.48	9	61	3,808	110	6,967	6.44	NA	<1.0
02B-West Deicing	March-24	22.202	<2.0	140	25,940	460	85,231	3.13	NA	<1.0
01B-North Deicing	April-24	3.589	97	170	5,092	270	8,087	6.87	NA	<1.0
02B-West Deicing	April-24	13.003	375	440	47,747	680	73,790	10.1	NA	<1.0
01B-North Deicing	October-24 ⁶	NS	NS	NS	NS	NS	NS	NS	NS	NS
02B-West Deicing	October-24 ⁶	NS	NS	NS	NS	NS	NS	NS	NS	NS
01B-North Deicing	November-24 ⁷	3.114	NS	NS	NS	NS	NS	NS	NS	NS
02B-West Deicing	November-24 ⁷	11.655	NS	NS	NS	NS	NS	NS	NS	NS
01B-North Deicing	December-24	9.763	1,830	2,000	162,952	2,600	211,838	4.2	NA	NA
02B-West Deicing	December-24	29.158	638	760	184,935	1,600	389,336	5.72	NA	NA

Table K-22 2024 Deicing Monitoring Results Under 2023 Permit (November 2023 – December 2024): North Outfall and West Outfall

Outfall	Monitoring Period	Flow Rate (MGD)	Propylene Glycol (mg/L)	BOD ¹ (mg/L)	BOD ¹ (lbs/day)	COD ² (mg/L)	COD ² (lbs/day)	Dissolved Oxygen (mg/L)	Nonylphenol (µg/L)	Tolytriazole (µg/L)
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report	Report	Report ⁴	Report ⁵
Value Reported	Monthly During Deicing Season ³	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max

Source: Massport.

Notes: PFAS testing requirements for North and West Outfalls were not required until quarter 3 of the 2023 – 2024 deicing season. PFAS testing results are shown in **Table K-24**.

NS Not Sampled. Monitoring was not possible in November 2024 due to environmental conditions.

MGD Millions of gallons per day

1 BOD Five-day Biochemical Oxygen Demand

2 COD Chemical Oxygen Demand

3 Boston Logan's deicing season runs from October to April each year.

4 Total Tolytriazole is measured three times a deicing season.

5 Total Nonylphenol is measured once each deicing season.

6 Temperatures throughout the month remained too high for widespread deicing activities with only two instances of temperatures dropping below 40 degrees and never reaching freezing. Therefore, monthly deicing samples for North and West Outfall were not collected during the month of October.

7 Temperatures throughout the month remained too high for widespread deicing activities with only one instance of temperatures dropping below freezing. A monthly deicing event was planned for the coldest morning of the month (November 14th), however several airlines indicated they did not anticipate the need for deicing. Therefore, monthly deicing samples for North and West Outfall were not collected during the month of November.

Table K-23 2024 Deicing Monitoring Results Under 2023 Permit (November 2023 – December 2024): Porter Street Outfall and Airfield Perimeter Outfalls A21, A33, and A8

Outfall	Monitoring Period	Propylene Glycol (mg/L)	BOD ¹ (mg/L)	COD ² (mg/L)	Dissolved Oxygen (mg/L)	Nonylphenol (µg/L) ⁴	Tolytriazoles (µg/L)
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report ⁵
Value Reported	3 Times Each Deicing Season ³	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
03B-Porter St Deicing	January-24	702.0	3,700.0	4,500.0	16.20	<120.0	1,600
06B-Perimeter A21 Deicing	January-24	16.6	52.0	100.0	12.20	<4.9	<1,000
07B-Perimeter A33 Deicing	January-24	36.1	48.0	96.0	12.85	<10.0	<1,000
08B-Perimeter A8 Deicing	January-24	4.3	6.5	23.0	13.32	<4.8	<1,000
03B-Porter St Deicing	March-24	<2.0	4.9	33.0	16.60	NA	<1,000
06B-Perimeter A21 Deicing	March-24	<2.0	35.0	<10.0	11.71	NA	<1,000
08B-Perimeter A8 Deicing	March-24	<2.0	<20.0	3.1	11.61	NA	<1,000
07B-Perimeter A8 Deicing	April-24	<2.0	7.2	23.0	7.69	NA	<1,000

Source: Massport

Notes: Monthly Deicing samples for Porter St, Perimeter Outfalls A21, A33, and A8 were not collected during the months of February, October, November, and December 2024 due to high temperatures. PFAS testing requirements for North and West Deicing Outfalls came into effect beginning in Quarter 4 and are shown in **Table K-24**.

NA Not Applicable.

1 BOD Five-day Biochemical Oxygen Demand

2 COD Chemical Oxygen Demand

3 Boston Logan's deicing season runs from October to April each year.

4 Total Nonylphenol is measured once each deicing season.

Table K-24 2024 Quarterly PFAS Monitoring Results Under 2023 Permit – North, West, North Deicing, West Deicing, Porter Street, and Maverick Street Outfalls

Outfall	Monitoring Period	Perfluorooctanoic Acid (PFOA; ng/L)	Perfluoroheptanoic acid (PFHpA; ng/L)	Perfluorononanoic acid (PFNA; ng/L)	Perfluorododecanoic acid (PFDA; ng/L)	Perfluorohexanesulfonic acid (PFHxS; ng/L)	Perfluorooctanesulfonic acid (PFOS; ng/L)
2023 Permit Discharge Limitations		Report	Report	Report	Report	Report	Report ⁵
Value Reported	Quarterly	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
01A-North	Q3 2024	95.5	95.2	28.9	9.92	139	763
01B-North Deicing	Q3 2024	NA	NA	NA	NA	NA	NA
02A-West	Q3 2024	24.4	14.8	3.54	3.21	7.47	24.2
02B-West Deicing	Q3 2024	NA	NA	NA	NA	NA	NA
03A-Porter St	Q3 2024	13.0	8.95	3.30	4.31	3.68	6.71
04A-Maverick St	Q3 2024	1.55	<1.42	<1.42	<1.42	<1.42	4.16
01A-North	Q4 2024	112.0	149	36.8	14.1	532	616.0
01B-North Deicing	Q4 2024	112.0	149	36.8	14.1	532	616.0
02A-West	Q4 2024	34.1	20.8	6.55	7.18	9.56	27.6
02B-West Deicing	Q4 2024	34.1	20.8	6.55	7.18	9.56	27.6
03A-Porter St	Q4 2024	7.81	5.81	<1.51	< 1.51	2.54	13.0
04A-Maverick St	Q4 2024	3.04	1.81	<1.42	<1.42	<1.42	4.84

Source: Massport.

Notes: PFAS testing requirements for North and West Outfalls were not required at the time of the 2023 – 2024 deicing season.

NA Not Applicable. Results marked with NA were not required to be sampling because monitoring requirements for deicing outfalls was only required during the deicing season (October - April).

Table K-25 Logan Airport Stormwater Outfall NPDES Water Quality Monitoring Results, 2023 and 2024

Outfall	pH		Oil & Grease		TSS		Fecal Coliform		Enterococcus	
	2023	2024	2023	2024	2023	2024	2023	2024	2023	2024
Outfall 001 (North Outfall)	10 / 10	12 / 12	22 / 22	12 / 12	22 / 22	12 / 12	1 / 4	9 / 24	1 / 4	15 / 24
Outfall 001D and 001E (North Outfall AST, Fuel Loading Rack, & Set-up Tank)	NS	R	NS	14 / 14	NS	14 / 14	NS	NA	NS	NA
Outfall 002 (West Outfall)	10 / 10	12 / 12	22 / 22	12 / 12	22 / 22	12 / 12	R	R	0 / 4	13 / 24
Outfall 003 (Porter Street Outfall)	10 / 10	11 / 12	2 / 2	12 / 12	2 / 2	11 / 12	R	R	0 / 4	11 / 24
Outfall 004 (Maverick Street Outfall)	10 / 10	12 / 12	22 / 22	12 / 12	22 / 22	12 / 12	R	R	3 / 4	18 / 24
Outfall 005 (Northwest Outfall)	R	R	1 / 1	3 / 3	1 / 1	3 / 3	NA	NA	NA	NA

Source: Massport.

Notes: Table counts only measurements taken with discharge limitations from the active permit at the time of sampling.

R Report only. Discharge limitation not specified in NPDES permit.

NA Not Applicable. Not required to be measured or reported for outfall based on active NPDES Permit.

NS Not sampled by Massport. Outfall 001D and 001E were measured by Swissport, operator of the fuel farm.

K.4 Oil and Hazardous Materials Spills

Table K-26 Logan Airport Oil and Hazardous Material Spills¹ and Jet Fuel Handling, 2003, 2022-2024

Year	Total Number of all Spills	Total Number of all Spills >10 gallons	Total Volume of all Spills (Gallons)	Estimated Volume of Jet Fuel Handled (Gallons)	Total Volume of Jet Fuel Spilled (Gallons)
2003	128	19	10,364	319,439,910	10,188
2022	119	3	303	443,381,606	200
2023	229	11	891	507,717,073	511
2024	148	4	482	553,981,844	328

Source: Massport Fire-Rescue Department.

Notes:

N/A Not available.

1 Materials include: jet fuel, hydraulic oil, diesel fuel, gasoline, and other materials such as glycol and paint.

2 In 2003, one fuel spill comprised 9,460 gallons or 94 percent of the total volume of the MassDEP/MNSP reportable spills that year. The fuel spill was contained and did not enter the drainage system.

Table K-27 Type and Quantity of Oil and Hazardous Material Spills at Logan Airport, 2003, 2022-2024

Year	Jet Fuel			Hydraulic Oil			Diesel Fuel			Gasoline			Other		
	No. of Spills	Quantity (Gallons)	No. of Spills ≥ 10 Gallons	No. of Spills	Quantity (Gallons)	No. of Spills ≥ 10 Gallons	No. of Spills	Quantity (Gallons)	No. of Spills ≥ 10 Gallons	No. of Spills	Quantity (Gallons)	No. of Spills ≥ 10 Gallons	No. of Spills	Quantity (Gallons)	No. of Spills ≥ 10 Gallons
2003	89	10,188	15	15	91	3	15	30	0	7	24	0	2	31	1
2022	57	200	3	23	39	0	6	19	0	20	22	0	13	12	0
2023	146	511	7	26	74	0	9	46	1	12	24	0	36	236	3
2024	82	328	1	21	84	3	10	23	0	5	6	0	30	42	0

Source: Massport.

K.5 Massachusetts Contingency Plan Active Sites

Table K-28 Status of Massachusetts Contingency Plan (MCP) Active Sites at Logan Airport

Location (RTN) and MassDEP Reporting Status	Action/Status
1. Fuel Distribution System (FDS); RTN: 3-1287 – OPEN	
2022	Release Abatement Measures (RAM) Plan Status Report for the B to C Connector was submitted in March 2022 and the RAM. Completion Report was submitted in December 2022.
2023	A tier class extension was granted in February 2023. A periodic review of the temporary solution statement was completed in March 2023. Post Temporary Solution Status Report No. 37 was submitted in August 2023.
2024	Post Temporary Solution Status Reports No. 38 and No. 39 were submitted in March and September, respectively.
2. Fire Training Facility; RTN: 3-28199 – CLOSED	
2022	Phase V Remedy Operation Status Reports submitted in June and December 2022.
2023	The Final PSCS was submitted in June 2023.
3. Former American Airlines – North Cargo; RTN: 3-35030 – CLOSED	
2022	RAM Status Report No. 6 was submitted in June 2022. Phase II Comprehensive Site Assessment was submitted in July 2022. RAM Status Report No. 7 was submitted in December 2022.
2023	RAM Completion Report was submitted in June 2023. The Permanent Solution Statement (PSS) was submitted the following week in July 2023. Also in July 2023, Massport submitted the Notice of Activity and Use Limitation (AUL) first amendment letter to MassDEP.
4. Terminal B Gate 5 (formerly Gate 7); RTN: 3-35047 – CLOSED	
2022	Phase II Comprehensive Site Assessment submitted in July 2022.
2023	Interim Phase II Comprehensive Site Assessment was submitted in July 2023 as well as the Phase II Comprehensive Site Assessment and Phase III Remedial Action Plan. In August 2023, Massport submitted the Phase IV Remedial Implementation Plan.
2024	In January 2024, the Phase IV Remedy Implementation Status Report was submitted. In July of 2024, the AUL and PSCS Report were submitted to close out the project.
5. Former Building 6; RTN: 3-37749 – OPEN	
2022	In October 2022 a Release Notification Form was filed for this release site due to the discovery of PCBs in soil. The site is being developed for the construction of an additional fuel tank at the fuel farm facility. Excavation and management of PCB-impacted soil along with site investigations under the MCP are ongoing.
2023	The RAM Plan was submitted in January 2023, with the first status report and modification submitted in May of 2023. In November 2023, Massport completed the Phase I Initiation Site Investigation, Tier Classification, and submitted RAM Status report/RAM Plan Modification No. 2.

Table K-28 Status of Massachusetts Contingency Plan (MCP) Active Sites at Logan Airport

Location (RTN) and MassDEP Reporting Status	Action/Status
2024	RAM Status Report No. 3 and No. 4 were submitted in May and November 2024, respectively.
6. Runway 15R-33L Taxiway N Area; RTN: 3-38284 – CLOSED	
2023	The release tracking number (RTN) and 120-day reporting condition was issued in August 2023. Massport submitted the RAM Plan the following week in August 2023. In December 2023, Massport completed the RAM and submitted the PSS.
7. TWA Tank Farm Historic Release; RTN 3-1449	
2024	In October 2024, MassDEP identified this site as an historic release site which was not closed out by the responsible party. Massport began investigation to return the site to compliance.

Source: Massport.

Notes: This list includes active Massport MNSP sites only. Additional sites are the responsibility of Logan Airport tenants. Refer to **Figure 9-2** in Chapter 9 for the location of active MNSP sites.

RTN Release Tracking Number.

Phase I Initial Site Investigation

Phase II Comprehensive Site Assessment

Phase III Identification, Evaluation, and Selection of Comprehensive Remedial Actions

Phase IV Implementation of Selected Remediation Action

Phase V Operation, Maintenance, and/or Monitoring

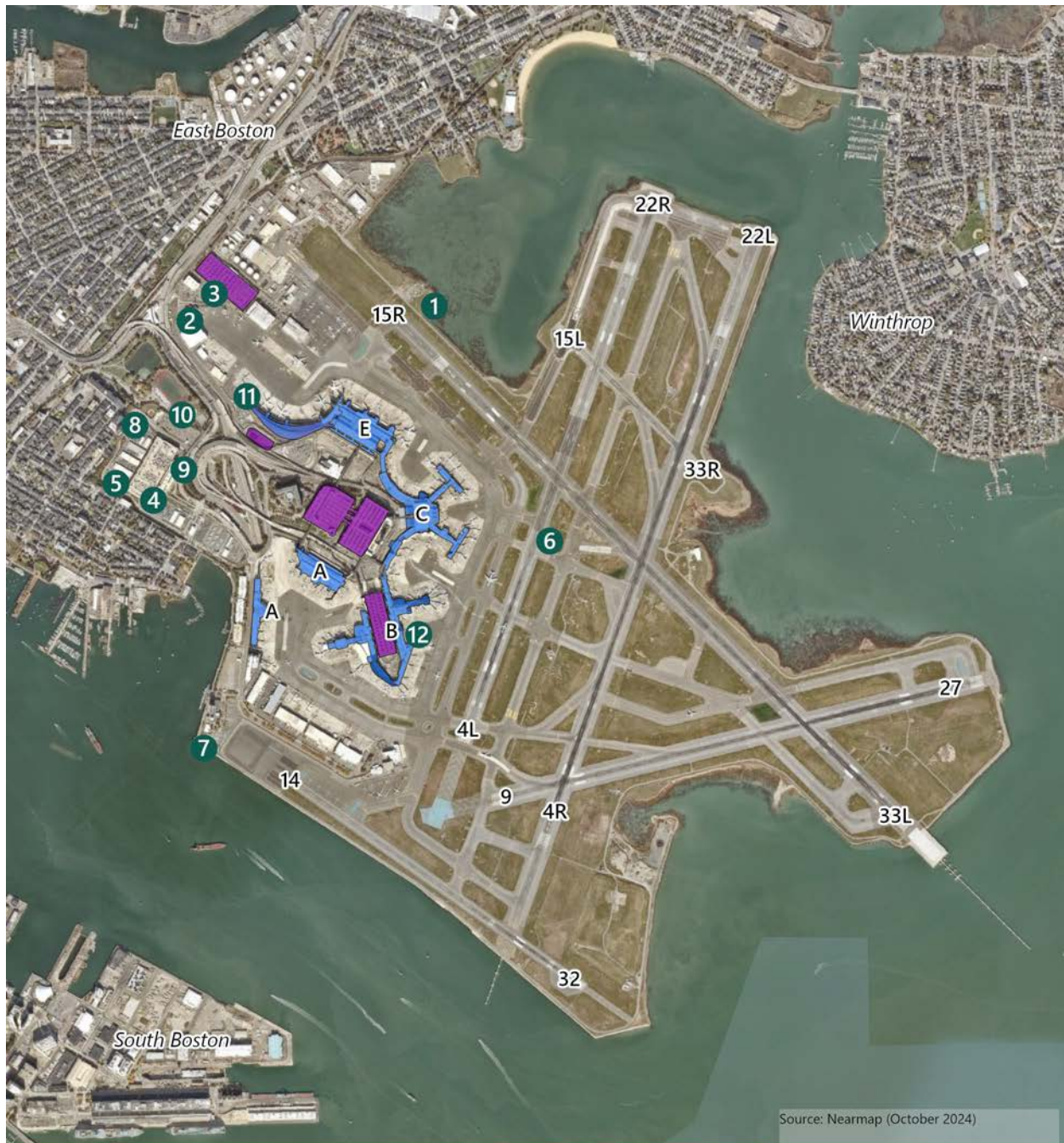


Figure K-1 Massachusetts Contingency Plan Sites (Closed)

2023/2024 Environmental
Data Report

- | | |
|--|--|
| 1. North Outfall (3-4837) | 7. West Outfall Release (3-29792) |
| 2. Former Robie Park (3-10027) | 8. Hertz Parking Lot Site (3-30260) |
| 3. Former Robie Property (3-23493) | 9. Former Butler Aviation Hangar (3-30654) |
| 4. Tomahawk Drive (3-27068) | 10. Southwest Service Area/Porter Street at Harborside Drive (3-32022) |
| 5. Southwest Service Area Overflow (3-28792) | 11. Former Hangar Building 16 (3-32351) |
| 6. Taxiway D (3-29716) | 12. Terminal B Gate 29 (3-35608) |

