TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC

MARINE MAMMAL MONITORING REPORT for INCIDENTAL HARASSMENT AUTHORIZATION

UNDER THE MARINE MAMMAL PROTECTION ACT

LOWER NEW YORK BAY LATERAL MAINTENANCE PROJECT

FEBRUARY 2025

FINAL

PREPARED BY:

WSP USA, INC.

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LIST OF ABBREVIATIONS AND ACRONYMS

IHA	Incidental Harassment Authorization
LNYBL	Lower New York Bay Lateral
m	meter
NMFS	National Marine Fisheries Service
Project	Lower New York Bay Lateral Maintenance Project
PSO	protected species observer
Transco	Transcontinental Gas Pipe Line Company, LLC

1.0 DESCRIPTION OF THE ACTIVITY

1.1 Introduction

Transcontinental Gas Pipe Line Company, LLC (Transco), a subsidiary of Williams Partners L.P., owns and operates the existing Lower New York Bay Lateral (LNYBL), a 26-inch-diameter, concrete-coated natural gas pipeline that crosses approximately 34 miles of open marine and estuarine waters in Raritan Bay, Lower New York Bay, and the Atlantic Ocean from Morgan, New Jersey, to Long Beach, New York (Figure 1-1). During routine monitoring of the existing LNYBL, Transco identified seven discrete sections of the gas pipeline with either limited cover or exposure resulting from dynamic conditions. The LNYBL Maintenance Project (Project) involved the maintenance of pipeline sections within seven corresponding "work areas" that encompassed all in-water temporary workspaces within New York and New Jersey where Project-related activities could have caused sediment disturbance. The Project area consisted of the combined spatial extent of the seven work areas.

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) issued an Incidental Harassment Authorization (IHA) for the Project on March 13, 2024, effective for the period of June 15, 2024, through June 14, 2025. This report has been developed in accordance with Condition 6 of the IHA to summarize all marine mammal monitoring efforts, including maintenance activities, protected species observer (PSO) locations, environmental conditions, marine mammal observation details, number of animals detected within the harassment zones, and implementation of mitigation measurements throughout the Project. A complete set of the PSO data will be submitted separately in an electronic spreadsheet (i.e. Microsoft Excel Format).

1.2 Completed Maintenance Activities

Maintenance was conducted at the seven work areas (Table 1-1) and included placing rock at all work areas and installing sheet piles in Work Area 3 near Sandy Hook Channel. The first test piles were installed on July 16, 2024, and pile driving was completed on October 31, 2024.

In total, 606 steel sheet pile pairs were installed; 41 sheet pile pairs were installed using an impact hammer and the remaining 565 pairs were installed using a vibratory hammer (Table 1-2). This resulted in 15 days of impact hammering, 39 days of vibratory hammering, and approximately 504 hours and 14 minutes of cumulative observation time logged by PSOs. Environmental conditions including sea state, cloud coverage, sun glare, and visibility on the horizon were monitored during all activities (Table 1-3). As it was not foggy during Project activities, it was not recorded by the PSOs and has not been included in Table 1-3.

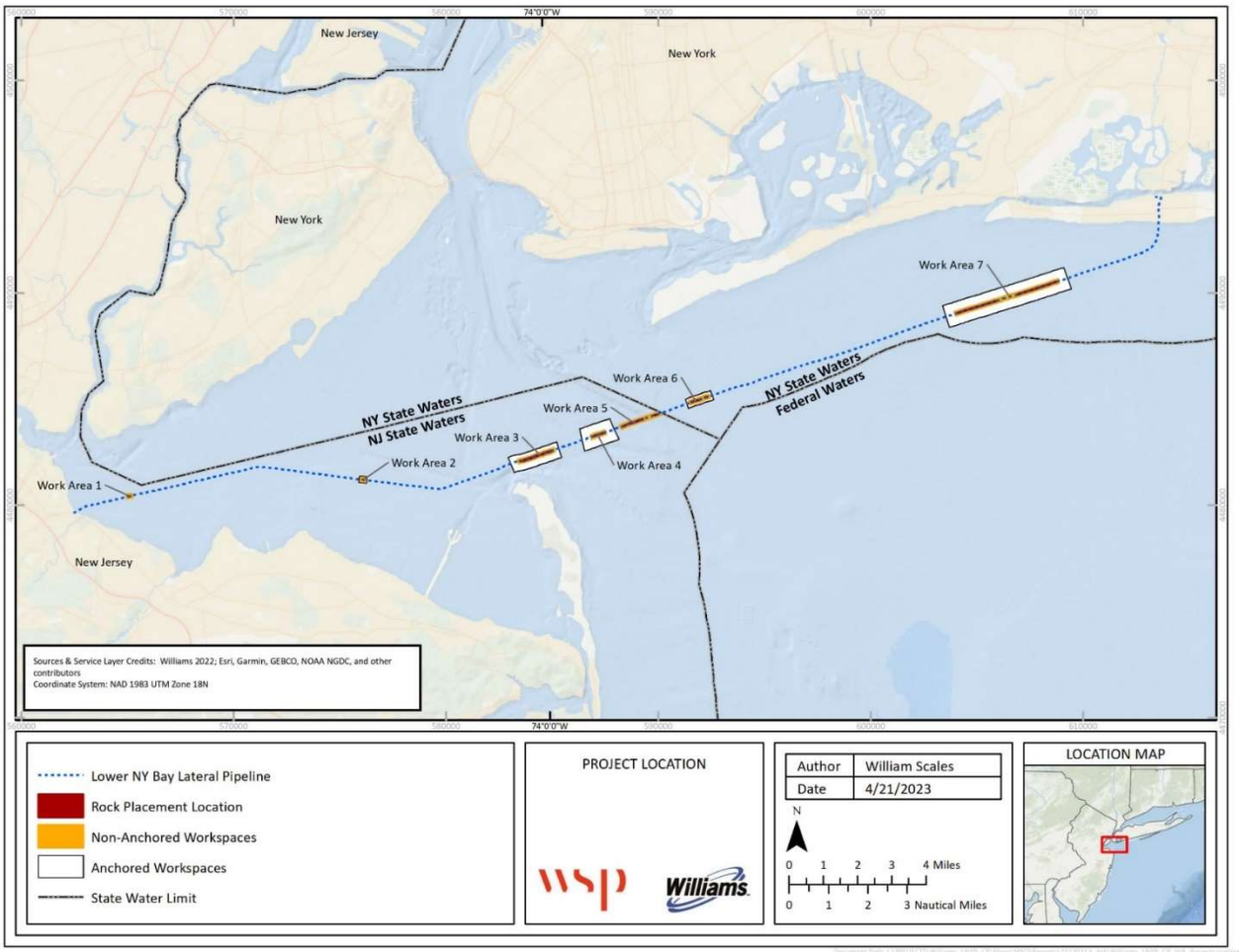

Figure 1-1: Project Location

Table 1-1: Maintenance Activities by Work Area

General Area	Work Area	State	Maintenance
West of Raritan Channel Areas	1, 2	New Jersey	Rock Placement
Sandy Hook Channel	3	New Jersey	Rock Placement and Sheet Piling
Sandy Hook to Ambrose Channel	4	New Jersey	Rock Placement
Ambrose Channel	5	New Jersey	Rock Placement
East of Ambrose Channel	6, 7	New York	Rock Placement

Table 1-2: Pile Driving Activities

Date	Number of Piles Installed	Hammer Type	Number of Blows	Drive Time (MM:SS)
6/13/24-7/09/24	0	N/A		None; mechanical delay
7/10/24-7/14/24	0	N/A		None; weather delay
7/15/24	0	N/A		None; mechanical delay
7/16/24	2	Impact	5,685	N/A
7/17/24	2	Impact	6,226	N/A
7/18/24	2	Impact	6,071	N/A
7/19/24	2	Impact	5,226	N/A
7/20/24	6	Impact	8,136	N/A
7/21/24	2	Impact	3,363	N/A
7/22/24-7/23/24	0	N/A		None; weather delay
7/24/24	3	Impact	4,087	N/A
7/25/24	4	Impact	6,194	N/A
7/26/24	5	Impact	6,217	N/A
7/27/24	3	Impact	5,704	N/A
7/28/24	1	Impact	1,042	N/A
7/29/24-8/01/24	0	N/A		None; weather delay
8/02/24	5	Impact	5,837	N/A
8/03/24	4	Impact	3,768	N/A
8/04/24	1	Impact	1,016	N/A
8/05/24-8/14/24	0	N/A		None; mechanical and weather delays
8/15/24	1	Vibratory	N/A	07:03
8/16/24-8/25/24	0	N/A		None; weather and mechanical delays
8/26/24	11	Vibratory	N/A	57:27
8/27/24	16	Vibratory	N/A	120:28
8/28/24	13	Vibratory	N/A	90:44
8/29/24-8/30/24	0	N/A		None; mechanical delay
8/31/24	8	Vibratory	N/A	79:23
9/01/24	16	Vibratory	N/A	120:19
9/02/24	11	Vibratory	N/A	99:03
9/03/24	12	Vibratory	N/A	82:24
9/04/24	16	Vibratory	N/A	110:12
9/05/24-9/08/24	0	N/A		None; weather delay
9/09/24	16	Vibratory	N/A	113:53
9/10/24	14	Vibratory	N/A	111:04

Date	Number of Piles Installed	Hammer Type	Number of Blows	Drive Time (MM:SS)
9/11/24	16	Vibratory	N/A	103:33
9/12/24	17	Vibratory	N/A	87:51
9/13/24	17	Vibratory	N/A	116:09
9/14/24	17	Vibratory	N/A	102:24
9/15/24-9/26/24	0	Vibratory		None; weather delay
9/27/24	18	Vibratory	N/A	114:17
9/28/24-9/29/24	0	N/A		None; weather delay
9/30/24	13	Vibratory	N/A	80:58
10/01/24-10/02/24	0	N/A		None; weather delay
10/03/24	18	Vibratory	N/A	95:23
10/04/24	19	Vibratory	N/A	114:09
10/05/24	18	Vibratory	N/A	83:47
10/06/24	19	Vibratory	N/A	73:52
10/07/24	20	Vibratory	N/A	113:46
10/08/24	22	Vibratory	N/A	113:20
10/09/24	20	Vibratory	N/A	116:10
10/10/24	17	Vibratory	N/A	78:52
10/11/24	10	Vibratory	N/A	47:51
10/12/24	19	Vibratory	N/A	73:30
10/13/24	5	Vibratory	N/A	15:44
10/14/24	0	N/A		None; weather delay
10/15/24	9	Vibratory	N/A	51:03
10/16/24	17	Vibratory	N/A	56:20
10/17/24	9	Vibratory	N/A	33:42
10/18/24-10/19/24	0	N/A		None; weather delay
10/20/24	20	Vibratory	N/A	82:35
10/21/24	24	Vibratory	N/A	90:49
10/22/24	25	Vibratory	N/A	89:50
10/23/24	21	Vibratory	N/A	86:25
10/24/24-10/25/24	0	N/A		None; weather delay
10/26/24	11	Vibratory	N/A	55:24
10/27/24	9	Vibratory	N/A	35:23
10/28/24-10/30/24	0	N/A		None; mechanical delay
10/31/24	5	Vibratory	N/A	36:55

Key:
N/A = not applicable; MM:SS = minutes and seconds of vibratory hammer drive time.
Note: “Number of blows” applies to impact hammering activity while “drive time” designates vibratory hammering activity.

Table 1-3: Monitoring Summary Featuring Environmental Conditions

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
7/16/2024	11:00	15:00	P/S	None; standby	2	20%	SEV	>5
7/16/2024	15:00	19:00	P/S	None; standby	2	20%	MOD	>5
7/16/2024	19:00	22:55	P/S	Impact hammering	2	20%	SEV	>5
7/17/2024	10:30	11:00	P/S	None; pre-start clearance	1	100%	Mild	2-5
7/17/2024	11:00	13:00	P/S	None; pre-start clearance	3	100%	Mild	2-5
7/17/2024	13:00	14:00	P/S	None; pre-start clearance	2	100%	Mild	2-5
7/17/2024	17:00	18:00	P/S	Vibratory hammering	2	10%	Mild	>5
7/17/2024	18:00	21:36	P/S	Impact hammering	3	10%	MOD	>5
7/18/2024	11:00	13:00	P/S	None; pre-start clearance	2	100%	Mild	>5
7/18/2024	13:00	14:00	P/S	None; pre-start clearance	3	100%	Mild	>5
7/18/2024	14:00	15:00	P/S	None; pre-start clearance	2	100%	Mild	>5
7/18/2024	15:00	17:00	P/S	Standby/impact hammering	2	10%	SEV	>5
7/18/2024	17:00	18:00	P/S	Impact hammering	2	50%	Mild	>5
7/18/2024	18:00	19:37	P/S	Impact hammering/post-completion clearance	1	70%	Mild	>5
7/19/2024	12:50	14:00	P/S	None; pre-start clearance	2	10%	SEV	>5
7/19/2024	14:00	19:00	P/S	Impact hammering/ standby	2	5%	SEV	>5
7/19/2024	19:00	21:00	P/S	Impact hammering	2	5%	SEV	>5
7/19/2024	21:00	21:45	P/S	Impact hammering	1	5%	SEV	>5
7/20/2024	11:15	12:00	P/S	Impact hammering	1	5%	SEV	>5
7/20/2024	12:00	14:00	P/S	Impact hammering	1	30%	SEV	>5
7/20/2024	14:00	15:00	P/S	Impact hammering	1	50%	SEV	>5
7/20/2024	15:00	16:00	P/S	Impact hammering	2	90%	SEV	>5
7/20/2024	16:00	18:00	P/S	Standby/impact hammering	2	100%	Mild	>5
7/20/2024	18:00	20:00	P/S	Impact hammering	3	100%	MOD	>5
7/20/2024	20:00	21:58	P/S	Impact hammering	3	70%	MOD	>5
7/21/2024	11:19	12:00	P/S	None; pre-start clearance	2	0%	SEV	>5
7/21/2024	12:00	16:00	P/S	Standby/impact hammering	1	20%	SEV	>5
7/21/2024	16:00	17:00	P/S	Impact hammering	2	20%	SEV	>5
7/21/2024	17:00	22:00	P/S	Impact hammering/ standby	3	20%	SEV	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
7/21/2024	22:00	7:19	P/S	Impact hammering/post-completion clearance	3	40%	SEV	>5
7/22/2024	20:33	20:40	P/S	None; transit	2	20%	Mild	>5
7/23/2024	12:50	15:00	P/S	None; pre-start clearance/standby	1	100%	None	>5
7/23/2024	15:00	16:00	P/S	None; standby	1	60%	None	>5
7/23/2024	16:00	17:00	P/S	None; standby	1	30%	None	>5
7/23/2024	17:00	18:00	P/S	None; standby	1	25%	None	>5
7/24/2024	10:44	14:04	P/S	Pre-start clearance; impact hammering	2	100%	None	2-5
7/24/2024	14:04	19:52	P/S	None; standby	2	100%	None	2-5
7/24/2024	19:52	21:00	P/S	Pre-start clearance/impact hammering	1	60%	None	>5
7/24/2024	21:00	22:10	P/S	Impact hammering/post-completion clearance	2	60%	None	>5
7/25/2024	11:50	15:00	P/S	Pre-start clearance/impact hammering	2	100%	None	>5
7/25/2024	15:00	16:00	P/S	Impact hammering	2	95%	None	>5
7/25/2024	16:00	17:00	P/S	Impact hammering	2	90%	None	>5
7/25/2024	17:00	17:52	P/S	Impact hammering	1	90%	None	>5
7/26/2024	11:20	12:00	P/S	None; pre-start clearance	3	30%	SEV	>5
7/26/2024	12:00	13:00	P/S	None; pre-start clearance	4	30%	SEV	>5
7/26/2024	13:00	15:00	P/S	Testing/impact hammering	4	30%	MOD	>5
7/26/2024	15:00	16:00	P/S	Impact hammering	3	30%	SEV	>5
7/26/2024	16:00	17:00	P/S	None; standby	2	30%	SEV	>5
7/26/2024	17:00	20:00	P/S	Impact hammering	1	30%	SEV	>5
7/26/2024	20:00	21:05	P/S	None; post-completion clearance/move vessel	2	30%	SEV	>5
7/27/2024	10:36	11:00	P/S	None; pre-start clearance	2	30%	SEV	>5
7/27/2024	11:00	12:00	P/S	None; pre-start clearance	3	30%	SEV	>5
7/27/2024	12:00	13:00	P/S	Impact hammering	3	60%	SEV	>5
7/27/2024	13:00	15:00	P/S	Impact hammering	2	60%	SEV	>5
7/27/2024	15:00	16:00	P/S	Impact hammering	2	40%	SEV	>5
7/27/2024	16:00	16:54	P/S	None; move barge and post-completion clearance	2	60%	SEV	>5
7/28/2024	10:37	12:00	P/S	None; pre-start clearance	2	30%	SEV	>5
7/28/2024	12:00	12:51	P/S	Impact hammering	2	10%	MOD	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
7/28/2024	14:44	15:00	P/S	None; standby	2	10%	Mild	>5
8/1/2024	15:54	17:00	P/S	None; pre-start clearance	2	20%	Mild	>5
8/1/2024	17:00	18:00	P/S	None; standby	3	20%	Mild	>5
8/1/2024	18:00	20:00	P/S	None; standby	3	40%	MOD	>5
8/1/2024	20:00	21:00	P/S	Impact hammering	3	80%	MOD	>5
8/2/2024	10:30	11:00	P/S	None; pre-start clearance	1	40%	MOD	2-5
8/2/2024	11:00	13:00	P/S	None; pre-start clearance	2	40%	SEV	2-5
8/2/2024	13:00	14:00	P/S	None; pre-start clearance	2	20%	SEV	2-5
8/2/2024	14:00	15:00	P/S	Impact hammering	2	40%	SEV	>5
8/2/2024	15:00	16:00	P/S	Impact hammering	2	60%	MOD	>5
8/2/2024	16:00	17:00	P/S	Impact hammering	2	30%	MOD	>5
8/2/2024	17:00	18:16	P/S	Impact hammering/post-completion clearance	3	30%	MOD	>5
8/3/2024	11:00	12:00	P/S	None; VSA barge move/pre-start clearance	2	70%	SEV	>5
8/3/2024	12:00	13:00	P/S	None; VSA barge move/pre-start clearance	2	20%	SEV	>5
8/3/2024	13:00	14:00	P/S	Impact hammering	2	50%	SEV	>5
8/3/2024	14:00	16:00	P/S	Impact hammering/ standby	2	40%	SEV	>5
8/3/2024	16:00	17:00	P/S	None; standby	2	40%	MOD	>5
8/3/2024	17:00	18:00	P/S	Impact hammering	3	40%	MOD	>5
8/3/2024	18:00	19:00	P/S	None; standby	2	50%	SEV	>5
8/3/2024	19:00	20:00	P/S	None; standby	4	70%	Mild	>5
8/3/2024	20:00	20:06	P/S	None; standby	4	100%	Mild	>5
8/4/2024	10:16	11:00	P/S	None; pre-start clearance	3	100%	None	>5
8/4/2024	11:00	12:48	P/S	Impact hammering	2	95%	None	>5
8/15/2024	15:06	15:18	P/S	None; VSA watch	1	20%	MOD	>5
8/15/2024	19:56	20:00	P/S	None; pre-start clearance	1	40%	SEV	>5
8/15/2024	20:00	20:26	P/S	None; pre-start clearance	1	50%	MOD	>5
8/15/2024	20:32	21:18	P/S	Vibratory hammering/post-completion clearance	1	50%	MOD	>5
8/25/2024	17:31	18:11	P/S	None; transit	2	40%	Mild	>5
8/26/2024	11:00	12:00	P/S	None; pre-start clearance	2	30%	MOD	>5
8/26/2024	12:00	14:00	P/S	Pre-start clearance/ vibratory hammering	2	40%	SEV	>5
8/26/2024	14:00	15:00	P/S	Vibratory hammering	2	50%	SEV	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
8/26/2024	15:00	16:00	P/S	Vibratory hammering	1	70%	SEV	>5
8/26/2024	16:00	17:00	P/S	None; standby	1	20%	SEV	>5
8/26/2024	17:00	18:00	P/S	Vibratory hammering	2	20%	SEV	>5
8/26/2024	18:00	19:00	P/S	Vibratory hammering	2	20%	MOD	>5
8/26/2024	19:00	20:00	P/S	None; standby	2	20%	SEV	>5
8/26/2024	20:00	21:00	P/S	Vibratory hammering	2	20%	MOD	>5
8/26/2024	21:00	22:02	P/S	Vibratory hammering/post-completion clearance	2	30%	MOD	>5
8/27/2024	10:30	11:00	P/S	None; pre-start clearance	2	5%	MOD	2-5
8/27/2024	11:00	12:00	P/S	Vibratory hammering	1	5%	MOD	>5
8/27/2024	12:00	14:00	P/S	Vibratory hammering	2	10%	SEV	>5
8/27/2024	14:00	16:00	P/S	Vibratory hammering	1	10%	MOD	>5
8/27/2024	16:00	18:00	P/S	Standby/vibratory hammering	1	10%	Mild	>5
8/27/2024	18:00	19:00	P/S	Vibratory hammering	2	20%	MOD	>5
8/27/2024	19:00	20:00	P/S	Vibratory hammering	2	20%	SEV	>5
8/27/2024	20:00	20:46	P/S	Vibratory hammering	2	10%	SEV	>5
8/28/2024	10:30	11:00	P/S	None; pre-start clearance	1	65%	None	>5
8/28/2024	11:00	12:00	P/S	None; pre-start clearance	2	70%	Mild	>5
8/28/2024	12:00	14:00	P/S	Vibratory hammering/ standby	2	70%	SEV	>5
8/28/2024	14:00	15:00	P/S	None; standby	2	60%	MOD	>5
8/28/2024	15:00	16:00	P/S	None; standby	2	50%	MOD	>5
8/28/2024	16:00	17:00	P/S	Vibratory hammering	2	40%	Mild	>5
8/28/2024	17:00	19:00	P/S	Standby/vibratory hammering	2	50%	MOD	>5
8/28/2024	19:00	20:00	P/S	Vibratory hammering	1	30%	SEV	>5
8/28/2024	20:00	21:50	P/S	Vibratory hammering/post-completion clearance	1	10%	SEV	>5
8/31/2024	10:23	11:00	P/S	None; pre-start clearance	1	100%	None	2-5
8/31/2024	11:00	16:00	P/S	Vibratory hammering/ standby	2	100%	None	>5
8/31/2024	16:00	17:00	P/S	None; standby	2	90%	None	>5
8/31/2024	17:00	18:00	P/S	None; standby	2	70%	None	>5
8/31/2024	18:00	19:00	P/S	Vibratory hammering	2	50%	Mild	>5
8/31/2024	19:00	20:00	P/S	Vibratory hammering	2	60%	Mild	>5
8/31/2024	20:00	21:00	P/S	Vibratory hammering	2	60%	MOD	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
8/31/2024	21:00	22:00	P/S	Vibratory hammering	2	70%	None	>5
8/31/2024	22:00	22:05	P/S	None; post-completion clearance	2	80%	None	>5
9/1/2024	11:12	16:00	P/S	Pre-start clearance/ vibratory hammering	1	100%	Mild	>5
9/1/2024	16:00	19:00	P/S	Vibratory hammering	2	100%	Mild	>5
9/1/2024	19:00	20:00	P/S	Vibratory hammering	2	60%	SEV	>5
9/1/2024	20:00	21:59	P/S	Vibratory hammering	2	70%	SEV	>5
9/2/2024	10:25	11:00	P/S	None; pre-start clearance	2	70%	Mild	>5
9/2/2024	11:00	12:00	P/S	Vibratory hammering	2	70%	MOD	>5
9/2/2024	12:00	14:00	P/S	Vibratory hammering/ standby	2	60%	SEV	>5
9/2/2024	14:00	15:00	P/S	Vibratory hammering	3	60%	SEV	>5
9/2/2024	15:00	17:00	P/S	Vibratory hammering	3	50%	SEV	>5
9/2/2024	17:00	21:00	P/S	Standby/vibratory hammering	2	40%	SEV	>5
9/2/2024	21:00	22:00	P/S	Vibratory hammering	2	30%	SEV	>5
9/2/2024	22:00	23:00	P/S	Vibratory hammering	2	20%	SEV	>5
9/2/2024	23:00	23:35	P/S	Vibratory hammering	2	10%	SEV	>5
9/3/2024	10:26	11:00	P/S	None; standby	2	10%	Mild	>5
9/3/2024	11:00	17:00	P/S	Pre-start clearance/ vibratory hammering/ standby	2	10%	SEV	>5
9/3/2024	17:00	19:00	P/S	Vibratory hammering	2	20%	SEV	>5
9/3/2024	19:00	23:19	P/S	Vibratory hammering/post-completion clearance	2	10%	SEV	>5
9/4/2024	10:27	11:00	P/S	None; pre-start clearance	1	10%	Mild	>5
9/4/2024	11:00	15:00	P/S	Vibratory hammering	1	10%	SEV	>5
9/4/2024	15:00	20:14	P/S	Standby/vibratory hammering/post-completion clearance	1	5%	SEV	>5
9/9/2024	11:50	12:20	P/S	None; pre-start clearance	3	10%	SEV	>5
9/9/2024	12:20	16:00	P/S	Vibratory hammering	3	10%	SEV	>5
9/9/2024	16:00	22:40	P/S	Vibratory hammering	2	30%	SEV	>5
9/10/2024	10:32	11:02	P/S	None; pre-start clearance	4	5%	MOD	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
9/10/2024	11:02	14:00	P/S	Vibratory hammering	4	5%	SEV	>5
9/10/2024	14:00	20:58	P/S	Vibratory hammering	3	5%	SEV	>5
9/11/2024	10:33	11:03	P/S	None; pre-start clearance	3	30%	Mild	>5
9/11/2024	11:03	13:00	P/S	Vibratory hammering	3	30%	SEV	>5
9/11/2024	13:00	19:28	P/S	Vibratory hammering	2	20%	SEV	>5
9/12/2024	10:34	11:00	P/S	None; pre-start clearance	1	60%	Mild	>5
9/12/2024	11:00	12:00	P/S	Vibratory hammering	1	70%	SEV	>5
9/12/2024	12:00	13:00	P/S	Vibratory hammering	1	70%	MOD	>5
9/12/2024	13:00	14:00	P/S	Vibratory hammering	2	60%	SEV	>5
9/12/2024	14:00	19:00	P/S	Vibratory hammering	2	50%	SEV	>5
9/12/2024	19:00	20:57	P/S	None; post-completion clearance	2	20%	Mild	>5
9/13/2024	10:35	11:05	P/S	None; pre-start clearance	2	20%	SEV	>5
9/13/2024	11:05	15:00	P/S	Vibratory hammering	2	10%	SEV	>5
9/13/2024	15:00	19:40	P/S	Vibratory hammering	2	5%	SEV	>5
9/14/2024	10:36	11:06	P/S	None; pre-start clearance	1	10%	MOD	>5
9/14/2024	11:06	12:00	P/S	Vibratory hammering	2	10%	MOD	>5
9/14/2024	12:00	18:00	P/S	Vibratory hammering	2	10%	SEV	2-5
9/27/2024	10:48	14:00	P/S	Pre-start clearance /vibratory hammering	3	100%	None	>5
9/27/2024	14:00	16:00	P/S	Vibratory hammering	3	100%	None	2-5
9/27/2024	16:00	20:49	P/S	Vibratory hammering/ standby	2	100%	None	>5
9/30/2024	11:00	12:00	P/S	Vibratory hammering	2	80%	Mild	>5
9/30/2024	12:00	13:00	P/S	Vibratory hammering	2	90%	None	>5
9/30/2024	13:00	15:00	P/S	None; standby	3	90%	None	>5
9/30/2024	15:00	16:00	P/S	Vibratory hammering	3	80%	SEV	>5
9/30/2024	16:00	17:00	P/S	Vibratory hammering	3	70%	SEV	>5
9/30/2024	17:00	18:00	P/S	Vibratory hammering	3	60%	SEV	>5
9/30/2024	18:00	18:57	P/S	None; post-completion clearance	3	80%	None	>5
9/30/2024	11:00	12:00	P/S	Vibratory hammering	2	80%	Mild	>5
10/1/2024	10:52	11:00	P/S	None; pre-start clearance	3	80%	None	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
10/1/2024	11:00	12:00	P/S	None; pre-start clearance	3	80%	SEV	>5
10/1/2024	12:00	13:00	P/S	None; standby	3	80%	MOD	>5
10/1/2024	13:00	14:00	P/S	None; standby	4	90%	MOD	>5
10/1/2024	14:00	16:00	P/S	None; standby	4	90%	Mild	>5
10/2/2024	16:37	16:57	P/S	None; pre-start clearance/standby	2	70%	SEV	>5
10/3/2024	10:54	12:00	P/S	None; pre-clearance watch/standby	2	80%	None	>5
10/3/2024	12:00	13:00	P/S	Vibratory hammering	2	90%	Mild	>5
10/3/2024	13:00	15:00	P/S	Vibratory hammering	2	100%	None	>5
10/3/2024	15:00	16:00	P/S	Vibratory hammering	2	90%	Mild	>5
10/3/2024	16:00	17:00	P/S	None; hammer maintenance	2	80%	MOD	>5
10/3/2024	17:00	18:00	P/S	None; hammer maintenance	2	90%	SEV	>5
10/3/2024	18:00	19:00	P/S	Vibratory hammering	2	50%	SEV	>5
10/3/2024	19:00	20:00	P/S	Vibratory hammering	2	50%	MOD	>5
10/3/2024	20:00	21:00	P/S	None; post-completion clearance	2	30%	SEV	>5
10/3/2024	21:00	22:27	P/S	Vibratory hammering/post-completion clearance	2	30%	MOD	>5
10/4/2024	10:55	11:00	P/S	None; pre-start clearance	2	30%	Mild	>5
10/4/2024	11:00	13:00	P/S	Vibratory hammering	2	30%	MOD	>5
10/4/2024	13:00	15:00	P/S	Vibratory hammering	2	40%	SEV	>5
10/4/2024	15:00	19:00	P/S	Vibratory hammering surrounding lunch break	2	50%	SEV	>5
10/4/2024	19:00	20:16	P/S	Vibratory hammering/post-completion clearance	2	60%	SEV	>5
10/5/2024	10:56	11:00	P/S	None; pre-start clearance	2	30%	None	>5
10/5/2024	11:00	12:00	P/S	Vibratory hammering	2	30%	Mild	>5
10/5/2024	12:00	13:00	P/S	Vibratory hammering	2	40%	SEV	>5
10/5/2024	13:00	14:00	P/S	Vibratory hammering	3	40%	SEV	>5
10/5/2024	14:00	16:00	P/S	Standby/vibratory hammering	3	30%	SEV	>5
10/5/2024	16:00	19:00	P/S	Vibratory hammering during partial time	3	20%	SEV	>5
10/6/2024	10:58	11:28	P/S	None; pre-start clearance	2	0%	None	>5
10/6/2024	11:28	14:00	P/S	Vibratory hammering	2	0%	SEV	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
10/6/2024	14:00	16:00	P/S	Vibratory hammering	2	5%	SEV	>5
10/6/2024	16:00	18:00	P/S	Vibratory hammering	2	10%	SEV	>5
10/6/2024	18:00	20:00	P/S	Vibratory hammering	3	5%	SEV	>5
10/7/2024	10:59	11:29	P/S	None; pre-start clearance	2	100%	None	>5
10/7/2024	11:29	16:00	P/S	Vibratory hammering	2	70%	SEV	>5
10/7/2024	16:00	17:00	P/S	Vibratory hammering	2	50%	SEV	>5
10/7/2024	17:00	18:00	P/S	Vibratory hammering	2	40%	SEV	>5
10/7/2024	18:00	22:00	P/S	Vibratory hammering	3	40%	SEV	>5
10/7/2024	22:00	22:14	P/S	None; post-completion clearance	3	40%	None	>5
10/8/2024	11:00	11:30	P/S	None; pre-start clearance	4	10%	SEV	>5
10/8/2024	11:30	13:00	P/S	Vibratory hammering	3	10%	SEV	>5
10/8/2024	13:00	15:00	P/S	Vibratory hammering	3	5%	SEV	>5
10/8/2024	15:00	18:00	P/S	Vibratory hammering	2	5%	SEV	>5
10/8/2024	18:00	19:00	P/S	Vibratory hammering	2	20%	MOD	>5
10/8/2024	19:00	20:00	P/S	Vibratory hammering	2	30%	SEV	>5
10/8/2024	20:00	21:56	P/S	Vibratory hammering	2	50%	SEV	>5
10/9/2024	11:00	12:00	P/S	Vibratory hammering	2	60%	MOD	>5
10/9/2024	12:00	13:00	P/S	Vibratory hammering	2	50%	SEV	>5
10/9/2024	13:00	14:00	P/S	Vibratory hammering	2	30%	SEV	>5
10/9/2024	14:00	18:00	P/S	Vibratory hammering	2	20%	SEV	>5
10/9/2024	18:00	20:00	P/S	None; post-completion clearance	2	30%	SEV	>5
10/9/2024	20:00	20:15	P/S	None; post-completion clearance	2	40%	SEV	>5
10/10/2024	14:00	20:00	P/S	Vibratory hammering/ standby	3	5%	SEV	>5
10/10/2024	20:00	21:57	P/S	Vibratory hammering/ standby	4	5%	SEV	>5
10/11/2024	11:03	12:00	P/S	None; pre-start clearance	3	0%	SEV	>5
10/11/2024	12:00	16:00	P/S	Vibratory hammering/ standby	3	5%	SEV	>5
10/11/2024	16:00	17:37	P/S	Vibratory hammering	3	0%	SEV	>5
10/12/2024	14:30	15:00	P/S	None; pre-start clearance	3	0%	SEV	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
10/12/2024	15:00	16:00	P/S	Vibratory hammering	3	5%	None	>5
10/12/2024	16:00	17:00	P/S	Vibratory hammering	3	10%	SEV	>5
10/12/2024	17:00	18:00	P/S	None; standby	3	10%	SEV	>5
10/12/2024	18:00	19:00	P/S	Vibratory hammering	3	20%	SEV	>5
10/12/2024	19:00	20:00	P/S	Vibratory hammering	2	20%	SEV	>5
10/12/2024	20:00	21:00	P/S	Vibratory hammering	2	30%	SEV	>5
10/12/2024	21:00	21:50	P/S	None; post-completion clearance	2	20%	SEV	>5
10/13/2024	11:05	12:00	P/S	None; pre-start clearance	3	60%	None	>5
10/13/2024	12:00	14:00	P/S	Vibratory hammering/ standby	3	60%	SEV	>5
10/13/2024	14:00	15:00	P/S	Vibratory hammering	4	60%	SEV	>5
10/13/2024	15:00	16:00	P/S	Vibratory hammering	4	30%	SEV	>5
10/13/2024	16:00	17:00	P/S	Vibratory hammering	4	40%	SEV	>5
10/13/2024	17:00	19:00	P/S	Vibratory hammering	3	50%	SEV	>5
10/13/2024	19:00	21:00	P/S	Vibratory hammering	2	50%	SEV	>5
10/13/2024	21:00	21:31	P/S	None; post-completion clearance	2	60%	SEV	>5
10/14/2024	12:00	14:15	P/S	None; standby	2	80%	None	>5
10/15/2024	14:45	16:00	P/S	Standby/vibratory hammering	3	20%	SEV	>5
10/15/2024	16:00	18:00	P/S	Standby/vibratory hammering	3	30%	SEV	>5
10/15/2024	18:00	19:00	P/S	Vibratory hammering	3	40%	SEV	>5
10/15/2024	19:00	20:00	P/S	Vibratory hammering	4	50%	MOD	>5
10/15/2024	20:00	21:00	P/S	Vibratory hammering	4	60%	Mild	>5
10/15/2024	21:00	21:29	P/S	None; post-completion clearance	4	70%	SEV	>5
10/16/2024	11:08	13:00	P/S	Pre-start clearance/ vibratory hammering	4	0%	SEV	>5
10/16/2024	15:45	16:00	P/S	None; second pre-start clearance	4	70%	SEV	>5
10/16/2024	16:00	17:00	P/S	Vibratory hammering	3	60%	SEV	>5
10/16/2024	17:00	18:00	P/S	Vibratory hammering	3	50%	SEV	>5
10/16/2024	18:00	19:00	P/S	Vibratory hammering	3	40%	SEV	>5
10/16/2024	19:00	20:00	P/S	Vibratory hammering	3	30%	SEV	>5
10/16/2024	20:00	21:00	P/S	Vibratory hammering	3	20%	SEV	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
10/16/2024	21:00	21:13	P/S	None; post-completion clearance	3	0%	SEV	>5
10/17/2024	13:45	14:00	P/S	None; pre-start clearance	4	0%	SEV	>5
10/17/2024	14:00	18:00	P/S	Vibratory hammering	3	5%	SEV	>5
10/17/2024	18:00	19:00	P/S	Vibratory hammering	3	40%	MOD	>5
10/17/2024	19:00	19:57	P/S	None; post-completion clearance	4	70%	MOD	>5
10/20/2024	11:12	12:00	P/S	Pre-start clearance/ vibratory hammering	2	0%	SEV	>5
10/20/2024	12:00	20:29	P/S	Vibratory hammering/post-completion clearance	2	5%	SEV	>5
10/21/2024	11:13	15:00	P/S	Pre-start clearance/ vibratory hammering	2	5%	SEV	>5
10/21/2024	15:00	19:00	P/S	Standby/vibratory hammering	1	0%	SEV	>5
10/21/2024	19:00	20:10	P/S	Vibratory hammering/post-completion clearance	2	0%	SEV	>5
10/22/2024	11:15	14:00	P/S	Pre-start clearance/ vibratory hammering	1	10%	SEV	>5
10/22/2024	14:00	19:00	P/S	Vibratory hammering	1	0%	SEV	>5
10/22/2024	19:00	21:19	P/S	Vibratory hammering/post-completion clearance	2	0%	SEV	>5
10/23/2024	11:16	14:00	P/S	Pre-start clearance/ vibratory hammering	1	10%	SEV	>5
10/23/2024	14:00	15:00	P/S	Vibratory hammering	1	30%	SEV	>5
10/23/2024	15:00	17:00	P/S	Vibratory hammering/ standby	2	40%	SEV	>5
10/23/2024	17:00	18:00	P/S	Vibratory hammering	2	40%	MOD	>5
10/23/2024	18:00	20:00	P/S	Vibratory hammering	2	20%	MOD	>5
10/23/2024	20:00	20:19	P/S	None; post-completion clearance	2	10%	SEV	>5
10/26/2024	11:19	12:00	P/S	None; pre-start clearance	3	60%	None	>5
10/26/2024	12:00	14:00	P/S	Vibratory hammering	3	20%	SEV	>5
10/26/2024	14:00	16:00	P/S	Vibratory hammering/ standby	4	20%	SEV	>5
10/26/2024	16:00	18:00	P/S	None; standby	4	15%	SEV	>5

Date	PSO Start Time	PSO End Time	PSO Location	Maintenance Activity	Beaufort Scale	Cloud Coverage	Sun Glare	Visibility to Horizon (km)
10/26/2024	18:00	20:00	P/S	None; standby	4	10%	SEV	>5
10/26/2024	20:00	20:55	P/S	Vibratory hammering/post-completion clearance	4	15%	SEV	>5
10/27/2024	11:20	12:00	P/S	None; pre-start clearance	3	5%	MOD	>5
10/27/2024	12:00	14:00	P/S	Vibratory hammering/ standby	3	0%	SEV	>5
10/27/2024	14:00	15:00	P/S	None; standby	2	0%	SEV	>5
10/27/2024	15:00	16:00	P/S	None; standby	2	10%	SEV	>5
10/27/2024	16:00	18:00	P/S	None; standby	1	20%	SEV	>5
10/27/2024	18:00	21:00	P/S	Standby/vibratory hammering	1	5%	SEV	>5
10/27/2024	21:00	22:06	P/S	Vibratory hammering/post-completion clearance	1	0%	SEV	>5
10/31/2024	11:25	12:00	P/S	None; pre-start clearance	1	30%	None	>5
10/31/2024	12:00	13:00	P/S	Vibratory hammering	1	30%	MOD	>5
10/31/2024	13:00	14:00	P/S	Vibratory hammering	2	30%	SEV	>5
10/31/2024	14:00	17:59	P/S	Vibratory hammering/post-completion clearance	2	20%	SEV	>5

Key:
km = kilometer; P/S = port and starboard; PSO = protected species observer; VSA = Vessel Strike Avoidance; SEV = Severe; MOD = Moderate
Note:
[1] VSA denotes when Protected Species Observers performed vessel strike avoidance watches while the barge was being moved; no vessel avoidance maneuvers were performed during these times.

1.3 Mitigation Requirements

The IHA authorized incidental take for marine mammals (i.e., a Level A harassment allowance for one species and Level B harassment allowance for 11 species; Table 2-2). Shutdown and harassment zones varied depending on species and installation method (Table 1-4).

Mitigation measures included the following:

A) Deploying PSOs (two at a minimum) to monitor shutdown zones on or near the maintenance barge during active pile driving. Monitoring was required 30 minutes prior to the onset of pile driving activity (pre-start clearance) and 30 minutes after completion of pile driving activity (post-completion clearance).

B) Halting or delaying pile driving activity if a marine mammal was observed entering the shutdown zone of 60 meters (m) during active vibratory pile driving operations and 80 to 1,000 m depending on sighted species during impact pile driving. If delayed or halted due to the presence of a marine mammal, activities could not resume until visual confirmation

occurred of the animal outside the shutdown zone or 15 minutes had passed without observation of the animal.

C) Conducting soft start techniques at the start of impact pile driving each day and at any time following cessation of impact pile driving for a period of 30 minutes or longer. If species not authorized in the IHA were sighted, or if the number of takes for an authorized species was met, pile driving activity was to be halted upon observation of an animal entering or within the harassment zone.

D) Avoiding direct physical interaction between crew members and marine mammals and the cessation of operations if such animals came within 10 m of Project activity.

E) Reducing work vessel speeds to avoid interaction with marine mammals whenever warranted.

Table 1-4: Authorized Shutdown and Harassment Zones

Installation Method	Pile Size and Type	Minimum Shutdown Zone (meters)					Harassment Zone (meters)
		North Atlantic Right Whale	Low Frequency	Mid Frequency	High Frequency	Phocid	
Vibratory	36-inch steel sheet	Any distance	60				13,594
Impact			1,000	80	200	150	1,000

2.0 RESULTS

2.1 Marine Mammal Observations

Monitoring occurred over the course of 90 days, spanning from July 16, 2024, to October 31, 2024. During that time period, PSOs conducted watch activities on 59 unique days. Two of those days (July 23, 2024, and August 25, 2024) included vessel transit activities with no pile driving and an additional two days (July 22, 2024, and October 14, 2024) involved only standby with no pile driving activities. On the remaining 54 days, impact or vibratory pile driving activities occurred.

In total, 643 marine mammals were observed on 37 of the 59 monitoring days between July 16 and October 31, 2024. On 37 of the 59 monitoring days, 370 bottlenose dolphins were observed (from 35 groups) and 113 takes by Level B harassment were recorded. On 6 of the 59 monitoring days, 10 humpback whales were observed (from 8 groups), resulting in 6 takes by Level B harassment. On 31 of the 59 monitoring days, 262 unidentified small cetaceans were observed (from 31 groups), and 166 takes by Level B harassment were recorded. On 1 of the 59 monitoring days, 1 unidentified whale was observed (from 1 group) that resulted in 0 takes by Level B harassment. In total, 285 marine mammal takes by Level B harassment were documented during impact and pile driving activities.

The only age class observed within the harassment zone during source activation were adults. The estimated total time animals spent within the harassment zone was 198 minutes. Bottlenose dolphins accounted for 78 minutes, humpback whales accounted for 37 minutes, and the unidentified small cetaceans accounted for 83 minutes. On average, bottlenose dolphins and unidentified small cetaceans spent less than 1 minute within the harassment zone, while humpbacks spent approximately 6 minutes within the harassment zone. The longest time a single group of animals spent within the harassment zone was a group of eight bottlenose dolphins for 22 minutes.

No injured or deceased marine mammals were observed during the Project.

Table 2-1: Marine Mammal Observations During Source Activation

Initial Sighting Date & Time	Time of Animal s Closest Approach	PSO	PSO Location	Species	Estimated Number of Animals	Animal s Closest Point of Approach (m)	Harassment Zone	Estimated Minutes Spent in Harassment Zone	Maintenance Activity	Description of Behavior
7/24/2024 13:49	13:49	D.A., J.M.	P/S	Unk	3 adults	300	B	2	Impact pile driving	Surfacing, diving
8/15/2024 20:12	20:38	D.A., A.M., P.C.	P/S	Tt	13 adults	600	B	6	Vibratory source active during portion of sighting	Diving, porpoising, swimming below the surface
9/2/2024 14:47	14:54	E.N., A.M.	P/S	Unk	4 adults	570	B	1	Soft start/ramp-up for portion of sighting	Acrobatic, surfacing, swimming at surface, travel
9/4/2024 18:12	18:28	E.N., N.P.	P/S	Unk	30 adults	758	B	5	Vibratory source active during portion of sighting	Swimming at surface, milling, travel, tail or pectoral fin slapping
9/4/2024 19:27	19:27	N.P., A.M.	P/S	Tt	18 adults	900	B	6	Vibratory source active during portion of sighting	Milling, tail or pectoral fin slapping, breaching/jumping, blowing, surfacing
9/9/2024 21:00	21:53	N.P.	P/S	Unk	17 adults	900	B	15	Vibratory source active during portion of sighting	Surfacing, breaching/jumping, blowing, travel
9/10/2024 12:03	12:31	N.P., M.R.	P/S	Unk	15 adults	900	B	9	Vibratory source active during portion of sighting	Surfacing, breaching/jumping, acrobatic, milling
9/10/2024 12:10	12:31	N.P., M.R.	P/S	Mn	1 adult	1,100	B	15	Vibratory source active during portion of sighting	Breaching/jumping, surfacing, blowing
9/10/2024 18:00	18:06	N.P., M.R.	P/S	Unk	15 adults	800	B	7	Vibratory source active during portion of sighting	Surfacing, travel
9/10/2024 18:53	19:20	N.P., M.R.	P/S	Tt	18 adults	550	B	4	Vibratory source active during portion of sighting	Surfacing, travel, milling, tail or pectoral fin slapping
9/11/2024 12:02	12:15	N.P.	P/S	Unk	5 adults	750	B	1	Vibratory source active during portion of sighting	Surfacing, breaching/jumping, acrobatic, blowing
9/11/2024 18:12	18:45	N.P.	P/S	Unk	12 adults	700	B	15	Vibratory source active during portion of sighting	Surfacing, breaching/jumping, blowing, travel
9/12/2024 12:52	13:07	N.P., M.R.	P/S	Unk	14 adults	1,700	B	1	Soft start/ramp-up for portion of sighting	Surfacing

Initial Sighting Date & Time	Time of Animal s Closest Approach	PSO	PSO Location	Species	Estimated Number of Animals	Animal s Closest Point of Approach (m)	Harassment Zone	Estimated Minutes Spent in Harassment Zone	Maintenance Activity	Description of Behavior
9/27/2024 18:41	18:41	N.P.	P/S	Unk	6 adults	350	B	2	Vibratory source active during portion of sighting	Surfacing, travel
10/3/2024 18:212	18:22	N.P.	P/S	Unk	12 adults	500	B	6	Vibratory source active during portion of sighting	Surfacing, tail or pectoral fin slapping
10/3/2024 19:37	19:37	N.P.	P/S	Unk	10 adults	450	B	4	Vibratory source active during portion of sighting	Surfacing, breaching/jumping, blowing
10/5/2024 15:53	15:54	N.P.	P/S	Unk	5 adults	1,500	B	3	Vibratory source active during portion of sighting	Surfacing, milling, breaching/jumping, acrobatic
10/7/2024 16:35	16:44	N.P., M.R.	P/S	Tt	12 adults	325	B	4	Vibratory source active during portion of sighting	Porpoising, feeding, milling, acrobatic, diving
10/7/2024 18:11	18:12	N.P.	P/S	Unk	4 adults	100	B	6	Vibratory source active during portion of sighting	Surfacing, travel, milling
10/8/2024 15:25	15:25	N.P., E.N., M.R.	P/S	Mn	1 adult	1,820	B	5	Vibratory source active during portion of sighting	Surfacing, blowing, travel
10/8/2024 16:22	16:35	N.P., M.R.	P/S	Tt	8 adults	280	B	22	Vibratory source active during portion of sighting	Porpoising, blowing, milling, diving
10/8/2024 17:00	17:17	N.P., E.N., M.R.	P/S	Tt	17 adults	1,000	B	13	Vibratory source active during portion of sighting	Surfacing, blowing, travel, acrobatic, swimming at surface, porpoising
10/8/2024 20:31	21:01	N.P., E.N.	P/S	Tt	12 adults	970	B	15	Vibratory source active during portion of sighting	Surfacing, swimming at surface, porpoising, blowing
10/9/2024 12:07	12:14	N.P.	P/S	Unk	14 adults	800	B	6	Vibratory source active during portion of sighting	Surfacing, blowing, milling, travel
10/10/202 4 21:01	21:16	N.P.	P/S	Tt	15 adults	750	B	8	Vibratory source active during portion of sighting	Surfacing, blowing, milling, breaching/jumping, acrobatic
10/11/202 4 15:06	15:43	N.P., E.N., M.R.	P/S	Mn	2 adults	1,800	B	7	Vibratory source active during portion of sighting	Breaching/jumping, feeding, surfacing, blowing, travel
10/12/202 4 18:11	18:28	N.P., M.R.	P/S	Mn	1 adult	200	B	5	Vibratory source active during portion of sighting	Surfacing, blowing, breaching/jumping, other

Initial Sighting Date & Time	Time of Animal s Closest Approach	PSO	PSO Location	Species	Estimated Number of Animals	Animal s Closest Point of Approach (m)	Harassment Zone	Estimated Minutes Spent in Harassment Zone	Maintenance Activity	Description of Behavior
10/16/2024 16:09	16:32	N.P., E.N., M.R.	P/S	Mn	1 adult	1,000	B	5	Vibratory source active during portion of sighting	Surfacing, blowing, travel
	Key: D.A. = Daniel Airola; J.M. = Jeffrey McCrary; A.M. = Austin McGowan; N.P. = Nathan Purcell; P.C. = Pablo Curiel; E.N. = Eli Nass; M.R. = Mario Reyes; P/S = port and starboard; Unk = Unidentified small cetacean; Tt = *Tursiops truncatus*; Mn = *Megaptera novaeangliae*; m = meter									

2.2 Implemented Mitigation Measures

PSOs were successfully deployed during all maintenance activities, including 30 minutes prior to the start of pile driving and 30 minutes after pile driving. Table 2-1 identifies the PSO or PSOs that made the initial sighting of the marine mammal during source activation, not PSOs that were on duty during the entire monitoring period. There were no documented instances of marine mammals entering the 60 m shutdown zone throughout operations. Soft start techniques were implemented during impact pile driving in July and August in which contractors provided an initial set of three strikes at reduced energy followed by a 30-second waiting period, then two subsequent reduced-energy strike sets. Soft starts occurred at the beginning of each day's impact pile driving and following the cessation of impact pile driving that lasted 30 minutes or longer. All species of marine mammals sighted during the Project were explicitly authorized under the approved IHA, so no shutdowns related to the observance of unauthorized species were necessary. No Level A takes occurred during maintenance activities, and all Level B takes abided by IHA limits except humpback whales.

On October 11, 2024, a group of two humpback whales were sighted (the third and fourth observed within the Project area), reaching and exceeding the three authorized Level B takes for that species.[1] One additional humpback whale was observed on October 12, 2024, and another humpback whale was observed on October 16, 2024, while the vibratory hammer source was active. Due to a miscalculation, it was not recognized that the Level B take allowance had been reached and additional measures were not taken to avoid exceeding the authorized take on these sighting dates. Transco was not made aware of these sightings until October 23, 2024, at which time instruction was provided to halt all hammer operations upon any subsequent humpback whale sightings to avoid further exceedance of authorized take. The NMFS was immediately notified of the take exceedance for this species via voicemail and email on October 23, 2024, and confirmed the requirement to halt all maintenance operations per Condition 4(g) in the IHA if any subsequent sightings of humpback whales occurred; however, no further observations occurred. Humpback whale Level B authorized takes were exceeded by three individuals, totaling six individual humpback whale Level B takes documented throughout the entire Project.

The IHA application that was submitted outlined plans to conduct maintenance activities during daylight hours, including no earlier than 30 minutes after sunrise and no later than 30 minutes before sunset. One deviation from this plan occurred on October 27, 2024, due to an equipment malfunction. At 17:24 pile driving activities were completed, but the vibratory hammer jaws remained stuck in the closed position on an already installed sheet. Crews attempted to open the jaws by turning the machine on for short intervals, lasting less than 1 minute. The last of the two attempts to unstick the hammer jaws occurred from 17:35 to 17:36, which was inside the 30-minute period before sunset for maintenance activities as sunset was at 17:58. After the jaws

[1] Though no changes in behavior were noted by the PSOs, as defined by the Marine Mammal Protection Act and the authorized IHA, a Level B take includes both actual and potential disturbance of an animal, which for this Project is defined as entering the predefined harassment zone.

could not be opened during these attempts, the crew cut the sheet pile and successfully removed the equipment from the water. No marine mammals were observed during this incident.

PSOs noted no changes in the behavior of bottlenose dolphins, humpback whales, and unknown small cetaceans. Throughout maintenance operations, all personnel avoided direct physical contact with marine mammals.

Table 2-2: Authorized and Actual (Observed) Incidental Takes

Common Name	Scientific Name	Stock	Level A Takes		Level B Takes	
			Authorized	Actual	Authorized	Actual
Fin Whale	*Balaenoptera physalus*	Western North Atlantic	0	0	5	0
Humpback Whale	*Megaptera novaeangliae*	Gulf of Maine	0	0	3	6
Minke Whale	*Balaenoptera acutorostrata*	Canadian East Coast	0	0	8	0
Atlantic White-sided Dolphin	*Lagenorhynchus acutus*	Western North Atlantic	0	0	12	0
Bottlenose Dolphin	*Tursiops truncatus*	Northern Migratory Coastal	0	0	6,098	113
		Western North Atlantic Offshore	0	0	321	
Harbor Porpoise	*Phocoena phocoena*	Gulf of Maine/Bay of Fundy	0	0	6	0
Common Dolphin	*Delphinus delphis*	Western North Atlantic	0	0	30	0
Atlantic Spotted Dolphin	*Stenella frontalis*	Western North Atlantic	0	0	24	0
All seals (Harbor Seal, Gray Seal, Harp Seal)	*Phoca vitulina, Haliochoerus grypus, Pagohilus groenlandicus*	Western North Atlantic	69	0	3,813	0
Unidentified small cetacean	N/A	N/A	N/A	0	N/A	166
Totals			*69*	*0*	*10,320*	*285*

Key:
N/A= not applicable