Kevin Mooney
Senior Project Manager
GE Aerospace

1 Plastics Ave.
Pittsfield, MA 01201

T (413) 553-6610
kevin.mooney@geaerospace.com

Via Electronic Mail

October 10, 2025

Mr. Alexander Carli-Dorsey
U.S. Environmental Protection Agency, New England Region
Five Post Office Square
Suite 100
Boston, MA 02109

Re: GE-Pittsfield/Housatonic River Site
Rest of River (GECD850)
2025 Annual Visual Inspection Report for Willow Mill Dam

Dear Mr. Carli-Dorsey:

On August 12, 2025, GE's consultants from GZA GeoEnvironmental, Inc. performed the 2025 annual visual inspection of the of the Willow Mill Dam (also known as Hurlbut Dam) on behalf of GE and Onyx Specialty Papers, Inc. (the dam owner and operator) in accordance with the EPA-approved Operation, Monitoring, and Maintenance Plan for this dam. Enclosed is GZA's report on this annual inspection, including photographs and the annual dam inspection checklist.

Please let me know if you have any questions about the enclosed inspection report.

Very truly yours,

Kevin G. Mooney
Senior Project Manager

Enclosure

Cc: (via electronic mail)
Joshua Fontaine, EPA
John Kilborn, EPA
Christopher Ferry, ASRC Federal
Thomas Czelusniak, HDR Inc.
Scott Campbell, Taconic Ridge Environmental
Izabella Zapisek, Taconic Ridge Environmental
Emily Caruso, MassDCR, Office of Dam Safety
Michael Gorski, MassDEP
Tamara Cardona-Marek, MassDEP

Ben Guidi, MassDEP
Michelle Craddock, MassDEP
Jeffrey Mickelson, MassDEP
Mark Tisa, MassDFW
Eve Schluter, MassDFW
Betsy Harper, MA AG
Traci Iott, CT DEEP
Graham Stevens, CT DEEP
Carol Papp, CT DEEP
Lori DiBella, CT AG
Danielle Perry, NOAA
James McGrath, City of Pittsfield
Andrew Cambi, City of Pittsfield
Michael Coakley, PEDA
Melissa Provencher, BRPC
Jay Green, Town Administrator, Town of Lenox
R. Christopher Brittain, Town of Lee
Town Manager, Great Barrington
Town Administrator, Stockbridge
Town Administrator, Sheffield
Jim Wilusz, Tri Town Health Dept.
Donald Zukowski, Onyx
Lance Hauer, GE
Matthew Calacone, GE
Eric Merrifield, GE
Rachel Leary, GE
Jonathan Andrews and Seth Krause, GZA
James Bieke, Counsel for GE
Public Information Repository at David M. Hunt Library in Falls Village, CT
GE Internal Repository

Known for excellence.
Built on trust.

Visual Inspection

2025 Annual Visual Inspection Report
Willow Mill Dam (MA00262)
South Lee, Massachusetts

Date of Inspection: August 12, 2025
Date of Report: October 10, 2025
File No. 01.0019896.72

PREPARED FOR:
Onyx Specialty Papers, Inc.
Lee, Massachusetts
and
General Electric Company
Pittsfield, Massachusetts

GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue | Norwood, Massachusetts 02062
(781) 278-3700

35 Offices Nationwide
www.gza.com

PREFACE

The assessment of the general condition of the dam reported herein was based upon available data and visual inspections. Detailed investigations and analyses involving topographic mapping, subsurface investigations, testing and detailed computational evaluations were beyond the scope of this report unless reported otherwise.

In reviewing this report, it should be realized that the reported condition of the dam was based on observations of field conditions at the time of inspection, along with data available to the inspection team. Underwater portions of the structure were not inspected.

It is critical to note that the condition of the dam depends on numerous and constantly changing internal and external conditions and is evolutionary in nature. It would be incorrect to assume that the reported condition of the dam will continue to represent the condition of the dam at some point in the future. Only through continued care and inspection can there be any chance that unsafe conditions be detected.

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION

On behalf of Onyx Specialty Papers, Inc. (Onyx) and the General Electric Company (GE), GZA GeoEnvironmental, Inc. (GZA) performed an annual visual inspection of the Willow Mill Dam (the Dam, also known as Hurlbut Dam), owned and operated by Onyx, on the Housatonic River in South Lee, Berkshire County, Massachusetts. GZA performed the inspection on August 12, 2025 and has developed this report summarizing the results of the inspection. This report is subject to the limitations in **Appendix A**.

2.0 PURPOSE

Annual visual inspections of Willow Mill Dam are required by the Operation, Monitoring, and Maintenance Plan (OM&M Plan) for the Dam, Revision 1, prepared by Onyx and GE and dated July 13, 2023, as conditionally approved by the United States Environmental Protection Agency (EPA) on October 11, 2023.

3.0 INSPECTION SUMMARY

3.1 GENERAL

On August 12, 2025, Jonathan Andrews, Seth Krause, Leslie DeCristofaro, Lexus Pattershall, and Raymond Mullin from GZA (representing GE), Tom Czelusniak from HDR (representing EPA), and Alex Carli-Dorsey from EPA, mobilized to Willow Mill Dam and performed a visual inspection of the Dam. They were accompanied for part of the inspection by Donald Zukowski representing Onyx. The weather was sunny in the high 70s / low 80s, and the upstream pool level was estimated at about five inches above the spillway crest.

Overall, the conditions of the Dam were generally similar to those reported in the most recent Phase I Inspection Report (conducted for Onyx on July 29, 2022 by Fuss & O'Neill and provided in Attachment C to the revised OM&M Plan), the report on GZA's 2024 annual visual inspection (conducted by GZA on September 3, 2024 and reported on November 1, 2024), and the checklist on the most recent quarterly observation (conducted on June 3, 2025 by Onyx).

A summary of observations at each structure is provided below. A site sketch and photo location map are provided on **Figure 1** and **Figure 2**, respectively. Photographs from the inspection are provided in **Appendix B** and the annual dam inspection checklist, broken down by structure, is provided in **Appendix C**.

3.2 MASONRY DAM / PRIMARY SPILLWAY (SPILLWAY)

The spillway was overtopping during the inspection; therefore, the downstream face of the spillway, spillway toe, and other areas downstream of the spillway were partially obstructed by water and difficult to observe. Based on discussions with Onyx, low-flow conditions when the upstream water levels drop below the spillway crest occur periodically throughout the year, allowing opportunity to observe the spillway's downstream features. The August 26, 2024 quarterly inspection checklist indicated that bedrock in the splash zone was "solid" based on observations with 2.5 inches of flow over the spillway

3.3 RIVER OUTLET WORKS (RIVER OUTLET CONTROL STRUCTURE)

The river outlet control structure at the right abutment of the dam was observed to be in generally adequate condition. Minor cracking, efflorescence, and missing mortar joints were observed on the vertical faces of the structure. Minor cracking, surface deterioration, and vegetation was observed on the concrete cap slab.

Minor leakage through Gate #1 and Gate #2 was observed during the inspection. The leakage appeared similar to that observed during the 2024 annual inspection.

The river outlet gates were closed at the time of the inspection, and no gates were operated during the annual inspection. The quarterly inspection reports and plant log book indicate that Gate #1 and Gate #2 were last operated on April 16, 2024 and May 28, 2025, respectively.

An offset vertical joint in the right concrete training wall was observed just upstream of the river outlet control structure. The offset was measured to be about two inches longitudinally (perpendicular to the flow of the river). A small vertical crack in the right training wall was observed just downstream of the river outlet control structure. Both features appeared similar to those observed during GZA's 2023 and 2024 annual inspections and in photographs included in the 2022 Phase I Inspection Report.

Minor cracking and efflorescence were observed in the right-side training wall downstream of the river outlet control structure.

3.4 AUXILIARY SPILLWAY / HEADRACE WALL (AUXILIARY SPILLWAY / WASTE WEIR)

During the August 12, 2025 inspection, the headrace channel was dewatered and repairs to the auxiliary spillway and canal walls were being performed. The repairs consisted of the following: replacement of displaced masonry stones and repointing joints on the canal walls; repair of deteriorated brick in the arched opening to the mill; and in-kind replacement of Gate #3 and Gate #4. The openings for Gate #3 and Gate #4 had been bulkheaded with steel plates to support gate removal and replacement. The repairs were being performed in conjunction with removal of sediment from the canal and mill penstock.

The auxiliary spillway / waste weir was observed to be in generally adequate condition with some loss of mortar and masonry blocks, as during the 2024 annual inspection. As during that prior inspection, missing mortar was observed on the canal walls, particularly near the water level, missing mortar was observed on the downstream side of the auxiliary spillway between the capstones and underlying masonry façade, and missing bricks were observed at the arched entrance to the headrace tunnel. In addition, in the most recent inspection, missing mortar and stones were observed on the auxiliary spillway below the crest on the upstream side (subsequently repaired as described below).

No distress, cracking, offsets, or signs of displacement of the auxiliary spillway were observed. Note that the downstream face of the auxiliary spillway was constructed with a slight angle or bulge.[1]

A six-inch diameter PVC canal drainpipe was observed at the right-side toe of the auxiliary spillway.

Based on GZA's discussions with Onyx, repairs to the auxiliary spillway and canal walls were subsequently performed in late August / early September 2025. As reported by Onyx, the canal cleaning work and repairs to the masonry walls and brick archway were conducted, new timber gates (Gates #3 and #4) were reconstructed (in-kind) and reinstalled, and flow was restored to the canal. See **Appendix D** for photographs of the canal during and after repairs (provided by Onyx). This repair work still needs to be completed by repointing the downstream auxiliary spillway masonry joints (see Section 4.2, recommendation #1).

[1] See GZA GeoEnvironmental, Inc. (June 10, 2004). Record Drawings – Phases 1-5, "Willow Mill Dam Repairs & Improvements".

3.5 DOWNSTREAM AREA / MISCELLANEOUS

The discharge channel downstream of the Dam appeared to be in generally adequate condition. As during the prior annual inspection, missing mortar and stone masonry were observed in the retaining wall below the roadway downstream of the Dam.

During the 2023 annual inspection, a depression related to former utility pole had been observed in the grassed area to the right of the river outlet control structure. The depression was not observed during the 2024 or 2025 inspections and grass cover in the area appeared adequate. The caretaker reported that depression had been filled.

GZA discussed flood operations with Onyx; no changes in flood operations were noted. Above-water and slightly submerged metal surfaces were observed during the inspection. No significant corrosion was observed and contacts with underlying masonry and concrete surfaces appeared intact.

Similar to the 2024 inspection, some railing sections were observed to be broken at the left spillway abutment/canal intake structure.

At the left parking lot area upstream of the canal sluice gate structure, a depression was noted within the pavement, along with areas of patched pavement. Onyx indicated that this depression had been repaired in the past with asphalt. Differential settlement was observed in capstones for the upstream left training wall near the pavement depression, along with loss of mortar in wall joints below.

4.0 RECOMMENDATIONS

The following are GZA's recommendations for continued monitoring and maintenance of the Dam.[2]

4.1 MONITORING RECOMMENDATIONS

In addition to the requirements of the OM&M Plan, GZA recommends the following monitoring activities that do not require engineering design:

1. As recommended in the 2024 annual inspection report, visually observe typically submerged structures during low-flow conditions, including looking for signs of scour at the spillway toe and the missing piece of stone masonry in the downstream spillway face noted in the 2022 Phase I Inspection Report. These observations could be made by Onyx during the routine quarterly inspections, subject to flow conditions. Photographs should be taken to help document conditions during low-flow periods. [Checklist Items 1 to 4, 7 to 12, 15, 18, 19, 29, 31, 33, 34, 44, 49, 56, 100.] This will remain an ongoing recommendation, as it is dam safety best practice to visually observe typically submerged structures when conditions are appropriate, such as during low-flow conditions.

2. Continue to monitor the leakage observed through the river outlet works (control structure) gates [Checklist Items 48 and 53].

3. Continue to monitor the deteriorated mortar joints, minor cracking, and efflorescence at the river outlet works (control structure) [Checklist Items 56, 57, 58].

[2] GZA's recommendations are cross-referenced to the corresponding items in the inspection checklist in **Appendix C**.

4. Continue to monitor the offset vertical joint in the right upstream concrete training wall adjacent to the river outlet works (control structure) [Checklist Item 63].

5. Continue to monitor the flow from the six-inch canal drainpipe at the auxiliary spillway, monitor the water flow from the drainpipe, and look for signs of sediment transport [Checklist Item 75]. See also Section 4.2 recommendation #2.

6. Continue to monitor vegetative growth, including trees and woody vegetation, in proximity to the dam [Checklist Items 84, 88]. See also Section 4.2, recommendation #3.

7. Continue to monitor the cracking and efflorescence in the downstream right-side concrete training wall [Checklist Item 111].

8. Continue to monitor the mortar joints and loose stone in the roadway masonry retaining wall downstream of the dam at the left-side bridge abutment [Checklist Item 114].

4.2 MAINTENANCE RECOMMENDATIONS

GZA recommends the following maintenance actions which are intended to maintain and improve the overall condition of the Dam but would not alter the current design of the Dam. These recommendations may require design by a professional engineer and construction contractor experienced in dam construction.

1. Complete the masonry joint repairs in the headrace canal walls by repointing the downstream auxiliary spillway masonry joints during the next scheduled planned maintenance activities [Checklist Item 72]. In the interim, this condition should be monitored, and if observed to worsen, expedited repairs should be made.

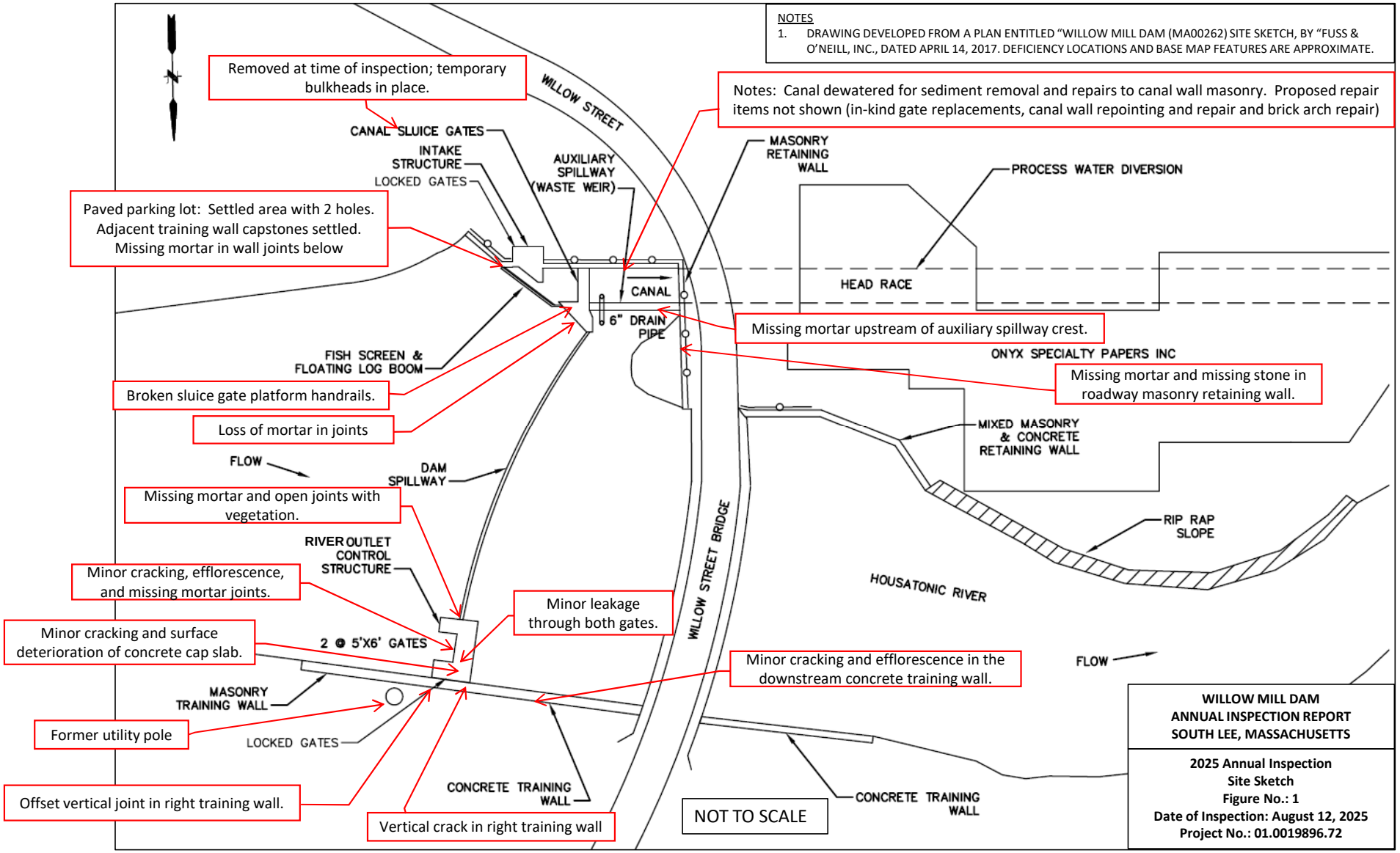
2. If the six-inch drainpipe at the auxiliary spillway becomes clogged, continue to remove debris from the drainpipe when there is safe access to the drainpipe, as recommended in the 2024 annual inspection report [Checklist Item 75].

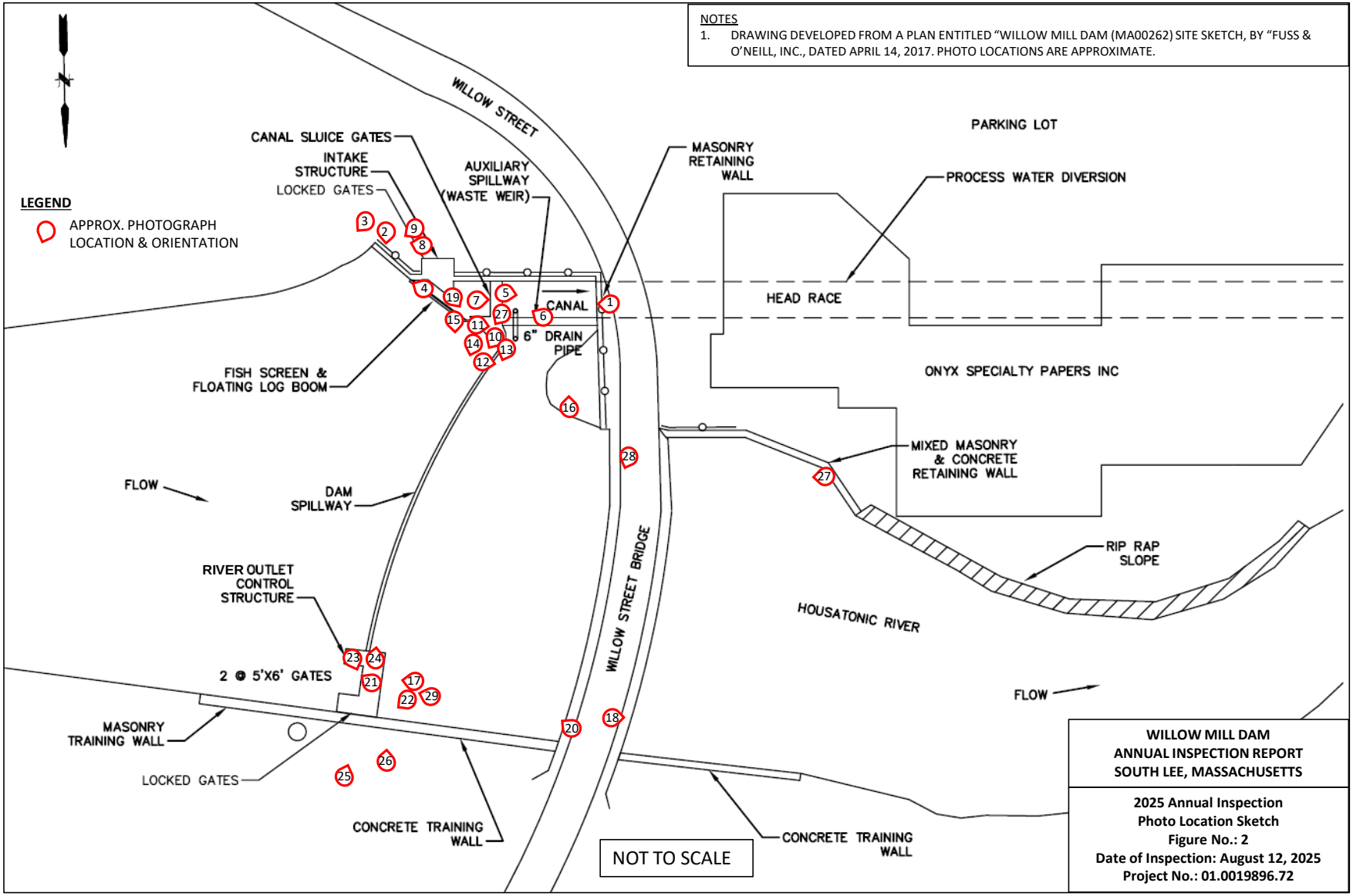
3. Continue to remove vegetative growth from within 20 feet of the dam, including from the crest of the auxiliary spillway, during planned maintenance activities, as recommended in the 2024 annual inspection report [Checklist Items 84, 88, 125].

4. Replace the broken and missing handrails around the sluice gate platform during the planned maintenance activities [Checklist Item 122], as recommended in the 2024 annual inspection report.

5. Backfill the pavement holes and settled area upstream of intake structure and repoint areas of missing mortar on left upstream masonry training wall [Checklist items 27 and 118]. In the interim, these conditions should be monitored, and if they are observed to worsen, expedited repairs should be made on a case-by-case basis.

Figures


NOTES
1. DRAWING DEVELOPED FROM A PLAN ENTITLED "WILLOW MILL DAM (MA00262) SITE SKETCH, BY "FUSS & O'NEILL, INC., DATED APRIL 14, 2017. DEFICIENCY LOCATIONS AND BASE MAP FEATURES ARE APPROXIMATE.
Removed at time of inspection; temporary bulkheads in place.
Notes: Canal dewatered for sediment removal and repairs to canal wall masonry. Proposed repair items not shown (in-kind gate replacements, canal wall repointing and repair and brick arch repair)
WILLOW STREET
CANAL SLUICE GATES
INTAKE STRUCTURE
LOCKED GATES
AUXILIARY SPILLWAY (WASTE WEIR)
MASONRY RETAINING WALL
PROCESS WATER DIVERSION
Paved parking lot: Settled area with 2 holes. Adjacent training wall capstones settled. Missing mortar in wall joints below
HEAD RACE
CANAL
6" DRAIN PIPE
Missing mortar upstream of auxiliary spillway crest.
ONYX SPECIALTY PAPERS INC
FISH SCREEN & FLOATING LOG BOOM
Missing mortar and missing stone in roadway masonry retaining wall.
Broken sluice gate platform handrails.
Loss of mortar in joints
MIXED MASONRY & CONCRETE RETAINING WALL
FLOW
DAM SPILLWAY
Missing mortar and open joints with vegetation.
RIP RAP SLOPE
RIVER OUTLET CONTROL STRUCTURE
Minor cracking, efflorescence, and missing mortar joints.
WILLOW STREET BRIDGE
HOUSATONIC RIVER
Minor leakage through both gates.
Minor cracking and surface deterioration of concrete cap slab.
2 @ 5'X6' GATES
Minor cracking and efflorescence in the downstream concrete training wall.
FLOW
MASONRY TRAINING WALL
Former utility pole
LOCKED GATES
CONCRETE TRAINING WALL
Offset vertical joint in right training wall.
Vertical crack in right training wall
NOT TO SCALE
CONCRETE TRAINING WALL
WILLOW MILL DAM
ANNUAL INSPECTION REPORT
SOUTH LEE, MASSACHUSETTS
2025 Annual Inspection
Site Sketch
Figure No.: 1
Date of Inspection: August 12, 2025
Project No.: 01.0019896.72


NOTES
1. DRAWING DEVELOPED FROM A PLAN ENTITLED "WILLOW MILL DAM (MA00262) SITE SKETCH, BY "FUSS & O'NEILL, INC., DATED APRIL 14, 2017. PHOTO LOCATIONS ARE APPROXIMATE.
LEGEND
APPROX. PHOTOGRAPH LOCATION & ORIENTATION
WILLOW STREET
CANAL SLUICE GATES
INTAKE STRUCTURE
LOCKED GATES
AUXILIARY SPILLWAY (WASTE WEIR)
MASONRY RETAINING WALL
PARKING LOT
PROCESS WATER DIVERSION
HEAD RACE
CANAL
6" DRAIN PIPE
FISH SCREEN & FLOATING LOG BOOM
ONYX SPECIALTY PAPERS INC
MIXED MASONRY & CONCRETE RETAINING WALL
FLOW
DAM SPILLWAY
RIP RAP SLOPE
RIVER OUTLET CONTROL STRUCTURE
WILLOW STREET BRIDGE
HOUSATONIC RIVER
2 @ 5'X6' GATES
FLOW
MASONRY TRAINING WALL
LOCKED GATES
CONCRETE TRAINING WALL
CONCRETE TRAINING WALL
NOT TO SCALE
WILLOW MILL DAM
ANNUAL INSPECTION REPORT
SOUTH LEE, MASSACHUSETTS
2025 Annual Inspection
Photo Location Sketch
Figure No.: 2
Date of Inspection: August 12, 2025
Project No.: 01.0019896.72

Appendix A – Limitations

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of General Electric (Client) for the stated purpose(s) and location(s) identified in the Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. Our findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal, and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. Our services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

SUBSURFACE CONDITIONS

4. If presented, the generalized soil profile(s) and description, along with the conclusions and recommendations provided in our Report, are based in part on widely-spaced subsurface explorations by GZA and/or others, with a limited number of soil and/or rock samples and groundwater /piezometers data and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

5. Water level readings have been made in test holes (as described in the Report), monitoring wells and piezometers, at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this Report. Fluctuations in the groundwater and piezometer levels, however, occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, reservoir and tailwater levels, the presence of subsurface utilities, and/or natural or artificially induced perturbations.

GENERAL

6. The observations described in this report were made under the conditions stated therein. The conclusions presented were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

7. In preparing this report, GZA relied on certain information provided by the Client, state and local officials, and other parties referenced therein available to GZA at the time of the evaluation. GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this evaluation.

8. Any GZA hydrologic analysis presented herein is for the rainfall volumes and distributions stated herein. For storm conditions other than those analyzed, the response of the site's spillway, impoundment, and drainage network has not been evaluated.

9. Observations were made of the site and of structures on the site as indicated within the report. Where access to portions of the structure or site, or to structures on the site was unavailable or limited, GZA renders no opinion as to the condition of that portion of the site or structure. In particular, it is noted that water levels in the impoundment and elsewhere and/or flow over the spillway may have limited GZA's ability to make observations of underwater portions of the structure. Excessive vegetation, when present, also inhibits observations.

10. In reviewing this Report, it should be realized that the reported condition of the dam is based on observations of field conditions during the course of this study along with data made available to GZA. It is important to note that the condition of a dam depends on numerous and constantly changing internal and external conditions, and is evolutionary in nature. It would be incorrect to assume that the present condition of the dam will continue to represent the condition of the dam at some point in the future. Only through continued inspection and care can there be any chance that unsafe conditions be detected.

COMPLIANCE WITH CODES AND REGULATIONS

11. We used reasonable care in identifying and interpreting applicable codes and regulations. These codes and regulations are subject to various, and possibly contradictory, interpretations. Compliance with codes and regulations by other parties is beyond our control.

12. This scope of work does not include an assessment of the need for fences, gates, no-trespassing signs, repairs to existing fences and railings and other items which may be needed to minimize trespass and provide greater security for the facility and safety to the public. An evaluation of the project for compliance with OSHA rules and regulations is also excluded.

COST ESTIMATES

13. Unless otherwise stated, our cost estimates are for comparative, or general planning purposes. These estimates may involve approximate quantity evaluations and may not be sufficiently accurate to develop construction bids, or to predict the actual cost of work addressed in this Report. Further, since we have no control over the labor and material costs required to plan and execute the anticipated work, our estimates were made using our experience and readily available information. Actual costs may vary over time and could be significantly more, or less, than stated in the Report.

ADDITIONAL SERVICES

14. It is recommended that GZA be retained to provide services during any future: site observations, explorations, evaluations, design, implementation activities, construction and/or implementation of remedial measures recommended in this Report. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

Appendix B – Photographs

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, Massachusetts	**Project No.** 01.0019896.72

Photo No.	**Date:**
1	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Canal and intake structure from downstream access road. Note: Canal dewatered for ongoing masonry repairs, gate replacement, and sediment removal operations.

Photo No.	**Date:**
2	8/12/2025

Direction Photo Taken:
Downstream.

Description:
Fish screen (trash rack) platform from left abutment parking lot.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
3	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Overview of the impoundment from near the fish screen platform.

Photo No.	**Date:**
4	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Fish screen (trash rack) platform from the fish screen platform.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
5	8/12/2025

Direction Photo Taken:
Downstream.

Description:
Canal and auxiliary spillway (waste weir) structure.

Note sediment removal operations were being performed during inspection and repairs to the canal and auxiliary spillway structure were performed in August and September of 2025.

Photo No.	**Date:**
6	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Canal sluice gates. Gate #3 to the right (photo left) and Gate #4 to the left (photo right).

Steel plate bulkheads were placed on upstream side of headwall to facilitate gate removal and in-kind replacement.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
7	8/12/2025

Direction Photo Taken:
Downstream facing down.

Description:
Upstream side of the canal sluice gates.

Note missing mortar between the stone masonry blocks. Both gates had been removed to prepare for in-kind replacement.

Photo No.	**Date:**
8	8/12/2025

Direction Photo Taken:
Upstream/Down

Description:
Pavement void/hole at the left upstream paved parking area. Hole measured about 7-inches deep. Note tension cracks in pavement adjacent to hole.

See Photo 9 below for close-up of depressed pavement and differential settlement in capstones for left upstream training wall.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
9	8/12/2025

Direction Photo Taken:
Right.

Description:
Area of depressed asphalt and approximately 1-inch differential settlement at left upstream training wall capstones.

See Photo 24 for view of area from right side of river.

Photo No.	**Date:**
10	8/12/2025

Direction Photo Taken:
Left / Down.

Description:
Submerged masonry blocks on the upstream face of the spillway.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
11	8/12/2025

Direction Photo Taken:
Downstream and left.

Description:
Overview of the auxiliary spillway (waste weir) from the canal sluice gate platform.

Note areas of missing mortar, particularly on sloping masonry downstream of weir. Vegetation growth in joints. Black corrugated pipe is for temporary canal dewatering. No flow from PVC canal drainpipe (at base of auxiliary spillway) due to temporary canal dewatering.

Photo No.	**Date:**
12	8/12/2025

Direction Photo Taken:
Downstream.

Description:
Downstream channel from the sluice gate platform.

Missing mortar and missing stone observed in the roadway masonry retaining wall (see red circle and close-up inset).

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
13	8/12/2025

Direction Photo Taken:
Right.

Description:
Spillway and right side of the dam from the sluice gate platform.

About 5-inches of water flow over the spillway crest during the inspection.

Photo No.	**Date:**
14	8/12/2025

Direction Photo Taken:
Right.

Description:
Right abutment and river outlet control structure upstream of the spillway.

Note missing mortar on the outlet control structure. Steel plate on outlet control structure was placed during the 2004 repairs.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
15	8/12/2025

Direction Photo Taken:
Right.

Description:
Right downstream concrete training wall.

Minor cracking and efflorescence of the concrete observed.

Photo No.	**Date:**
16	8/12/2025

Direction Photo Taken:
Upstream and Left.

Description:
Downstream side of the auxiliary spillway.

Note vegetation in joint between “original” spillway weir masonry and lower buttress.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
17	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Downstream side of the river outlet control structure.

Note minor leakage through both gates.

Photo No.	**Date:**
18	8/12/2025

Direction Photo Taken:
Downstream.

Description:
Channel (Housatonic River) downstream of the Willow Street Bridge.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
19	8/12/2025

Direction Photo Taken:
Downstream.

Description:
Downstream of dam and bridge from power canal sluiceway platform.

Photo No.	**Date:**
20	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Overview of the spillway from the Willow Street Bridge.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
21	8/12/2025

Direction Photo Taken:
Upstream.

Description:
River outlet control structure Gate #1 operator.

Photo No.	**Date:**
22	8/12/2025

Direction Photo Taken:
Upstream and Right.

Description:
Seepage, efflorescence and orange-staining at base of right training wall downstream of River Outlet Control Structure.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
23	8/12/2025

Direction Photo Taken:
Downstream.

Description:
Upstream side of the river outlet control structure gate operators (Gate 1 on the right and Gate 2 on the left).

Photo No.	**Date:**
24	8/12/2025

Direction Photo Taken:
Left.

Description:
Overview of the left side of the dam including the fish screen (trash racks), canal sluice gate structure, and spillway.

Note: Red arrow indicates area of paved parking lot holes / settlement and capstone differential settlement (see Photos 8 and 9). Mortar loss visible in training wall joints below.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
25	8/12/2025

Direction Photo Taken:
Left.

Description:
Right side of right concrete training wall adjacent to the outlet control structure.

Photo No.	**Date:**
26	8/12/2025

Direction Photo Taken:
Upstream and Left.

Description:
Right side of right concrete training wall adjacent to the outlet control structure.

Note crack next to steps (red arrow).

Also note: Gate was temporarily unlocked and opened for inspection access.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
27	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Signage along left bank of river with Willow Street bridge and dam upstream (photo background).

Photo No.	**Date:**
28	8/12/2025

Direction Photo Taken:
Right.

Description:
Left training wall and bridge abutment beneath the Willow Street bridge.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.	**Date:**
29	8/12/2025

Direction Photo Taken:
Upstream.

Description:
Closeup of river outlet control structure gates.

Note: Minor leakage through the gates.

Photo No.	**Date:**

Direction Photo Taken:

Description:

NOT USED

Appendix C – Inspection Checklist

ANNUAL DAM INSPECTION CHECKLIST

Name of Dam:	Willow Mill Dam	I.D. No.:	MA00262
Location:	South Lee, Massachusetts (Town, State)		
Owner:	Onxy Specialty Papers, Inc.	River / Stream:	Housatonic River
MassDEM Classification Data:	Intermediate (Size)		Significant (Hazard)

PHYSICAL DATA:	Stone Masonry, Run-of-River (Type of Dam)	14 feet to Primary Spillway Crest (Height of Dam)	50 acre-feet (Normal Pool Storage Capacity)
ELEVATIONS: 838.0 ft NGVD (spillway crest; 839.2 ft avg. annual flow) (Normal Pool)		5 in± over crest (Pool at Inspection)	

Names of Individuals at Inspection	Title/Position	Representing
Jonathan D. Andrews, P.E.	Associate Principal	GZA GeoEnvironmental, Inc.
Seth D. Krause, P.E.	Senior Project Manager	GZA GeoEnvironmental, Inc.
Leslie Decristofaro, E.I.T.	Engineer I	GZA GeoEnvironmental, Inc.
Lexus Pattershall, E.I.T.	Engineer I	GZA GeoEnvironmental, Inc.
Raymond F. Mullin, E.I.T.	Engineer II	GZA GeoEnvironmental, Inc.
Thomas Czelusniak	Remediation Systems Manager	HDR
Alex Carli-Dorsey	Remedial Project Manager	Environmental Protection Agency
Donald Zukowski (part-time)	Operations Support Manager	Onyx Specialty Papers, Inc.

DATE OF INSPECTION: August 12, 2025

WEATHER: Sunny TEMPERATURE: 70s / 80s - deg F

This is to certify that the above dam has been inspected and the following are the results of this inspection.

SIGNATURE OF INSPECTOR

Name of Dam: Willow Mill Dam I.D. No.: MA00262 Inspection Date: August 12, 2025

AREA INSPECTED	ITEM NO.	CONDITION	OBSERVATIONS	CHECK ( ) ACTION NEEDED: MONITOR	INVEST.	REPAIR
MASONRY DAM / PRIMARY SPILLWAY 1 of 2						
UPSTREAM FACE	1	Surface Conditions	Generally obscured by flow and impoundment.	X		
	2	Condition of Joints	Generally obscured by flow and impoundment.	X		
	3	Unusual Movement	Generally obscured by flow and impoundment.	X		
	4	Abutment-Dam Contacts	Generally obscured by flow and impoundment.	X		
	5					
	6					
DOWNSTREAM FACE	7	Surface Conditions	Generally obscured by flow.	X		
	8	Condition of Joints	Generally obscured by flow.	X		
	9	Unusual Movement	Generally obscured by flow.	X		
	10	Abutment-Dam Contacts	Generally obscured by flow.	X		
	11	Drains	Generally obscured by flow.	X		
	12	Leakage	Generally obscured by flow.	X		
	13					
	14					
CREST	15	Surface Conditions	Generally obscured by flow.	X		
	16	Horizontal Alignment	Appeared to be in adequate alignment.			
	17	Vertical Alignment	Appeared to be in adequate alignment.			
	18	Condition of Joints	Generally obscured by flow.	X		
	19	Unusual Movement	Generally obscured by flow.	X		
	20	General	n/a			
	21					

ADDITIONAL COMMENTS: REFER TO ITEM NO. IF APPLICABLE

General (all pages): Typically submerged structures should be observed during low-flow conditions, including signs of scour at the downstream toe of the spillway, which is reported to be exposed bedrock. These observations can be made during routine quarterly inspections, subject to flow conditions, or during a drawn-down annual inspection (every five years per OM&M Plan Section 3.1.2). Note that the 2022 Phase I Inspection Report indicated that there was a piece of missing masonry on the right downstream face of the spillway. This area was obscured by flow during the current inspection. There is portion of the spillway crest near the right abutment that appears to be lower than the rest of the spillway crest; this conditon appears to be by design or a construction artifact.

Name of Dam: Willow Mill Dam I.D. No.: MA00262 Inspection Date: August 12, 2025

AREA INSPECTED	ITEM NO.	CONDITION	OBSERVATIONS	CHECK ( ) ACTION NEEDED: MONITOR	INVEST.	REPAIR
MASONRY DAM / PRIMARY SPILLWAY 2 of 2						
UPSTREAM CHANNEL	22	Slide, Slough, Scarp	None observed.			
	23	Erosion	None observed.			
	24	Vegetation Condition	None observed.			
	25	Debris	None observed.			
	26	Seepage	None observed.			
	27	Left Upstream Training Wall	Missing mortar and capstone settlement upstream of dam. See Item 27 comment below.			X
DOWNSTREAM CHANNEL	28	Sidewalls	See "DOWNSTREAM AREA & MISC."			
	29	Channel Floor	Generally obscured by flow.	X		
	30	Unusual Movement	None observed.			
	31	Discharge Area	Generally obscured by flow.	X		
	32	Downstream Area	Housatonic River - no unusual observations.			
	33	Sinkholes, Scour Holes, etc.	Generally obscured by flow.	X		
	34	Foundation Seepage	Generally obscured by flow.	X		
	35					
	36					
UPSTREAM TIMBER DAM	37	Exposed Portion	Below-water timbers observed.			
	38	Breached Section	Not observed.			
	39					
	40					
	41					

ADDITIONAL COMMENTS: REFER TO ITEM NO. IF APPLICABLE

Item 27: Area of missing mortar is below parking lot and capstone settlement described in Item 118.

Items 37, 38: Based on review of previous documentation, remnants of an old timber dam exist upstream of the current dam. It appeared that below-water timber remnants were observed approximately 20 feet upstream of the spillway during this inspection. This breached upstream timber dam is no longer a water-retaining structure associated with this project.

Name of Dam: Willow Mill Dam I.D. No.: MA00262 Inspection Date: August 12, 2025

AREA INSPECTED	ITEM NO.	CONDITION	OBSERVATIONS	CHECK ( ) ACTION NEEDED: MONITOR	INVEST.	REPAIR
		RIVER OUTLET WORKS 1 of 1				
SLUICE GATES & CONTROLS	42	Intake Area	Appeared clear.			
	43	Stoplog Grooves	Appeared adequate.			
	44	Shore-side Gate #1 U/S Face	Not observed - fully submerged.	X		
	45	Shore-side Gate #1 D/S Face	Observed from downstream; closeup inspection not performed.			
	46	Shore-side Gate #1 Stems	Appeared adequate.			
	47	Shore-side Gate #1 Operator	Appeared adequate.			
	48	Shore-side Gate #1 Leakage	Minor leakage observed.	X		
	49	River-side Gate #2 U/S Face	Not observed - fully submerged.	X		
	50	River-side Gate #2 D/S Face	Observed from downstream; closeup inspection not performed.			
	51	River-side Gate #2 Stems	Appeared adequate.			
	52	River-side Gate #2 Operator	Appeared adequate.			
	53	River-side Gate #2 Leakage	Minor leakage observed.	X		
	54	Gate Operation	Gate #1 last exercised 4/16/24 & Gate #2 on 5/28/25 (per Logbook & quarterly inspection forms).			
	55					
RIVER OUTLET STRUCTURE	56	U/S Masonry Condition	Partially obscured by flow. Minor cracking and efflorescence and missing mortar joints.	X		
	57	D/S Masonry Condition	Minor efflorescence observed at mortar joints.	X		
	58	Concrete Cap Slab	Minor cracking and surface deterioration.	X		
	59	#1 Sluiceway Liner	Observed from downstream. Appeared intact.			
	60	#2 Sluiceway Liner	Observed from downstream. Appeared intact.			
	61	Seepage	None observed.			
	62	Discharge Area	Clear.			
	63	Right Training Wall	Offset of a vertical joint in the right concrete training wall.	X		
	64					

ADDITIONAL COMMENTS: REFER TO ITEM NO. IF APPLICABLE

Items 45 and 46: Leakage appeared similar to photographs included in 2022 Phase I Inspection Report and 2024 Annual Inspection Report.

Item 63: Offset of a vertical joint in the right concrete training wall observed just upstream of the right side river outlet structure. Offset is about two inches longitudinally (perpendicular to the flow of the river). A vertical crack in the right training wall was observed just downstream of the right side river outlet structure. These features appeared similar to those in photographs included in the 2022 Phase I inspection, 2023 annual inspection, and 2024 annual inspection.

Name of Dam: Willow Mill Dam I.D. No.: MA00262 Inspection Date: August 12, 2025

AREA INSPECTED	ITEM NO.	CONDITION	OBSERVATIONS	MONITOR	INVEST.	REPAIR
AUXILIARY SPILLWAY / HEADRACE WALL 1 of 2				CHECK ( ) ACTION NEEDED		
UPSTREAM FACE	65	Surface Conditions	Appeared adequate.			
	66	Condition of Joints	Appeared adequate.			
	67	Unusual Movement	Appeared adequate.			
	68	Abutment-Dam Contacts	Appeared adequate.			
	69	Canal Walls	Areas of missing mortar & displaced masonry stones at top of right wall.			
	70					
DOWNSTREAM FACE/BUTTRESS	71	Surface Conditions	Appeared adequate.			
	72	Condition of Joints	Mortar loss at uppermost joint (between masonry capstones and underlying masonry façade).			X
	73	Unusual Movement	None observed (slight angle/bulge in masonry façade is by design, per 2005 Record Drawings).			
	74	Abutment-Dam Contacts	Appeared adequate.			
	75	Drains	6" PVC drain pipe near the right side toe. No flow from drain due to canal being dewatered for repairs.	X		
	76	Leakage	Leakage observed on upstream side of canal, particularly adjacent to Gate # 3 (right gate)			
	77					
	78					
CREST	79	Surface Conditions	Deteriorated mortar joints and missing stone masonry on left/upstream face near the crest.			
	80	Horizontal Alignment	Appeared adequate.			
	81	Vertical Alignment	Appeared adequate.			
	82	Condition of Joints	Cracked / deteriorated mortar joints.			
	83	Unusual Movement	None observed.			
	84	General	Minor vegetative growth in some deteriorated mortar joints.	X		
	85					

Note: Headrace canal was dewatered to support canal wall masonry repairs,

ADDITIONAL COMMENTS: REFER TO ITEM NO. IF APPLICABLE

Item 75: Continue to clean the six-inch canal drainpipe at the right side downstream toe of the auxiliary spillway if it becomes clogged.
Items 69, 72, 76, 79, 82, 84: Repairs were performed by Substructure, Inc. in August and September 2025 following the 2025 annual inspection to address the comditions noted during this and past inspections.
Observations made from adjacent areas; canal not entered.

Name of Dam: Willow Mill Dam I.D. No.: MA00262 Inspection Date: August 12, 2025

AREA INSPECTED	ITEM NO.	CONDITION	OBSERVATIONS	CHECK ( ) ACTION NEEDED: MONITOR	INVEST.	REPAIR
		AUXILIARY SPILLWAY / HEADRACE WALL 2 of 2				
HEADRACE CHANNEL	86	Headwall Masonry	Occasional mortar loss, particularly near typical water level - no missing masonry stones observed.			
	87	Slope Masonry Wall	Appeared adequate.			
	88	Vegetation Condition	Minor vegetation growth at spillway crest.	X		
	89	Tunnel Entrance	Missing bricks in tunnel arch.			
	90	Debris	None observed.			
	91	Sediment	None observed.			
	92	Seepage	None observed.			
	93	Channel Floor	Not observed - covered by sediment being removed.			
	94	Unusual Movement	None observed.			
	95					
	96					
HEADRACE INTAKE	97	Headrace Gates	Removed for in-kind replacement. Steel bulkheads temporarily in place.			X
	98	Headrace Gate Operators	Appeared adequate.			
	99	Headrace Sluiceways	Some leakage, particularly to right of Gate #3.			X
	100	Bar Racks	Partically submerged; appeared adequate above water.	X		
	101	Pumphouse Condition	Not entered. Exterior appeared adequate.			
	102	Access Ways	Appeared adequate.			
	103	Gate Operation	N/A - gates removed for in-kind replacement. Replacement ongoing during the 2025 insp.			
LEFT MASONRY ABUTMENT	104	Masonry Condition	Appeared adequate.			
	105	Abutment	Appeared adequate.			
	106	Concrete Cap Slab	Appeared adequate.			
	107	Seepage	None observed.			
	108	Unusual Movement	None observed.			
	109					

Note: Headrace canal was dewatered to support canal wall masonry repairs, gate replacement, and sediment removal

ADDITIONAL COMMENTS: REFER TO ITEM NO. IF APPLICABLE

Item 86, 88, 89, and 103: Repairs were made by Substructure, Inc. in August and September 2025 following the 2025 annual inspection to address the conditions noted during this and past inspections.

Name of Dam: Willow Mill Dam I.D. No.: MA00262 Inspection Date: August 12, 2025

AREA INSPECTED	ITEM NO.	CONDITION	OBSERVATIONS	CHECK ( ) ACTION NEEDED: MONITOR	INVEST.	REPAIR
		DOWNSTREAM AREA AND MISC. 1 of 1				
DOWNSTREAM AREA	110	Abutment Seepage	None observed.			
	111	Training/Retaining Walls	Minor cracking and efflorescence in the downstream right side training wall.	X		
	112	Slide, Slough, Scarp	None observed.			
	113	Drainage System	Outlet structure, spillway, and auxiliary spillway discharge to the Housatonic River.			
	114	Willow Street Masonry Wall	Missing stone and mortar in retaining wall below Willow Street.	X		
	115	Willow Street Bridge	Closed to vehicular traffic. Vehicle access to left side of dam via alternate route.			
	116	Downstream Hazard Description	Willow Street Bridge immediately downstream of the dam; residential, commercial and Rt. 102 downstream.			
	117	Date of Last Update of Emergency Action Plan	December 31, 2019 (per July 29, 2022 Phase I Report).			
MISCELLANEOUS	118	Impoundment Banks	Distress in paved area upstream of Intake Structure/left abutment: see comment below			X
	119	Access Roads	Appeared adequate.			
	120	Boat Barrier	Not observed.			
	121	Signage	Appeared adequate.			
	122	Fences / Railing	Handrails along the left spillway abutment (canal sluice gate structure) had broken sections.			X
	123	Security / Access	Appeared adequate.			
	124	Former Utility Pole	Previously-observed depression in grassed area near River Outlet Structure was not observed.			
	125	General Vegetation	Maintain vegetation within 20 feet of the dam.	X		

ADDITIONAL COMMENTS: REFER TO ITEM NO. IF APPLICABLE

Item 115: Alternate access to left side of dam from Rt 102 via Meadow St, Pine St, and Willow St.

Item 118: Areas of pavement settlement and (2 holes in pavement (one measured 7" deep). Differential settlement of left training wall capstones adjacent to settled area. Also see Item 27 missing mortar in wall below.

Item 124: Depression was observed during 2023 annual inspection. Caretaker reported that the depression was filled and grass reestablished.

Appendix D – August/September 2025 Canal Repair Photographs (By Onyx)

Note: These canal repair photographs were taken by Onyx and provided to GZA in late August/early September 2025, after the completion of GZA's annual inspection on 8/11/2025. They are included to provide an update regarding the repairs and as-built conditions of the canal, as documented by Onyx.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, Massachusetts	**Project No.** 01.0019896.72

Photo No. 1	
Direction Photo Taken: Right	
Description: Upstream face of the repaired auxiliary spillway. Note repointed mortar joints.	

Photo No. 2	
Direction Photo Taken: Right	
Description: Upstream face of the repaired auxiliary spillway. Note repointed mortar joints.	

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No. 3	
Direction Photo Taken: Downstream	
Description: Crest of the repaired auxiliary spillway. Note repointed mortar joints.	

Photo No. 4	
Direction Photo Taken: Downstream	
Description: Ongoing repairs at the arch at the downstream end of the canal. Note steel reinforcement installed as part of the repair.	

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No.
5

Direction Photo Taken:
Downstream

Description:
Repaired arch at the downstream end of the canal. Repair area in red circle.

Photo No.
6

Direction Photo Taken:
-

Description:
Constructing new timber canal gate.

Client Name: General Electric Company	**Site Location:** Willow Mill Dam (MA00262) South Lee, MA	**Project No.** 01.0019896.72

Photo No. 7	
Direction Photo Taken: -	
Description: Constructing new timber canal gate.	

Photo No. -	**Date:** -
Direction Photo Taken: -	
Description: -	

Not Used

GZA GeoEnvironmental, Inc.