

BOTTOM ASH IMPOUNDMENT ANNUAL INSPECTION REPORT

**MONROE POWER PLANT
3500 E FRONT STREET, MONROE, MICHIGAN 48161**

Prepared For:

DTE ELECTRIC COMPANY

Prepared By:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
WIXOM, MICHIGAN**

CEC PROJECT 363-863

AUGUST 2026



Civil & Environmental Consultants, Inc.

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1.0 INTRODUCTION

Annual inspections are required by the U.S. Environmental Protection Agency's (EPA) Coal Combustion Residuals (CCR) Rule (40 CFR § 257.83), which was established on April 17, 2015. The CCR Rule requires that a CCR unit must "be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards."

Civil & Environmental Consultants, Inc. (CEC) prepared this Annual Inspection Report (AIR) for the DTE Electric Company (DTE) following the 2026 inspection of the Monroe Power Plant Bottom Ash Impoundment (BAI). Conducted on July 22, 2026, the inspection and this subsequent report fulfill federal requirements established by the CCR Rule. This report outlines the inspection's observations and the recommended remedial actions.

The primary objective of the 2026 annual inspection was to assess the structural and operational integrity of the Bottom Ash Impoundment (BAI) and ensure the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The evaluation included a review of existing documentation, including previous inspection reports, as well as a thorough on-site visual inspection. The on-site examination focused on identifying any signs of distress or malfunction across the impoundment's key features, such as its toe, crest, slopes, and hydraulic structures. The findings from both the document review and the visual inspection are presented in the following sections.

2.0 RESULTS OF INSPECTION

2.1 DESCRIPTION OF IMPOUNDMENT

The Bottom Ash Impoundment (BAI) was originally constructed in the late 1960s. It was constructed by building a perimeter dike off the southern portion of the Monroe Power Plant island within Lake Erie. Prior to the plant's construction, an Act of Congress removed the area used for the BAI from the Waters of the United States. The CCR within the BAI primarily collected in the northern third of the impoundment, creating a delta in the area. The BAI received CCR until October 2015 and is now an Inactive CCR Surface Impoundment.

2.2 REVIEW OF EXISTING INFORMATION

To comply with Section 257.83(b)(1)(i), which mandates a review of previous inspection records, CEC examined the weekly inspections performed by plant personnel in the time frame since the previous annual inspection performed in August 2025 until July 2026.

2.3 2026 VISUAL INSPECTION

As required in Section 257.83(b)(1)(ii) and (iii), CEC personnel performed a site walk and visual inspection of the BAI on July 22, 2026. The visual inspection involved walking the perimeter of the impoundment, including the embankment crests, exterior slopes of the embankment, discharge structures, and making discrete observations of the interior of the basins based on accessibility. Hydraulic structures underlying the base of the CCR unit do not exist at the BAI, only an approximately 200 foot long weir located on the west side of the BAI.

2.3.1 Conditions Assessed

The annual inspection investigates a range of specific conditions to identify potential issues. These included:

- Surface cracking, misalignment, and various forms of displacement (slides, slumps, slips, and sloughs)
- Animal burrows and slope erosion
- Seepage and inadequate slope protection
- Vegetation health (e.g., patchy, inadequate, or excessive/woody growth)
- Accumulation of debris and signs of settlement or depressions
- Condition of outlet/overflow structures and signs of vandalism
- Change in geometry from the last AIR

2.3.2 Findings

Based on observations at the time of the visual inspection, the BAI appeared to be well maintained and in good working order. No signs of major structural issues were observed on the embankment crest, exterior slopes, or discharge structure during this annual inspection or the activities reflected over the past year as evidenced by the weekly reports.

Some specific observations include:

- A small leak in the otherwise inactive weir is noted, however not a major concern as the weir is a permitted outfall and flow quantity/quality is within compliance limits.
- Some minor/shallow sloughing/erosion is present along the north side of the separation berm, however this also is not a concern as there is little to no water level differential across the berm, no traffic is permitted on the berm, and the south pond is also DTE property.
- Lengthy vegetation and mature trees were noted along the slopes.

2.4 APPROXIMATE VOLUMES IN THE SURFACE IMPOUNDMENT

Section 257(b)(2)(iii) of the EPA CCR Rule requires an approximation of the minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection. Depths of water ranged from a minimum depth of 0 to 3 feet along the north/east/south shores to a maximum depth of approximately 20 feet near the weir along the west side. The water surface elevation at the time of CEC's inspection was approximately 574.2 (Plant Local Datum), as observed from the staff gage in the Process Waste and Stormwater Basin which is at approximately the same elevation as the BAI.

An approximation of the volume of the impounded water and CCR at the time of the inspection is required by Section 257.83(b)(2)(v) of the EPA CCR Rule. The volume of impounded water in the impoundment is estimated to be 30.8 million cubic feet per "CCR Impoundment Inflow Design Flood Control System Plan" by AECOM, revised August 30, 2024. Approximately 275 cubic yards of CCR remain in the BAI at the time of the inspection (per AECOM, 8/10/26). Closure construction to remove CCR material from the BAI is in progress, and no new CCR material has been added to the BAI since 2015.

An approximation of the total storage capacity of the BAI is required by Section 257.83(b)(2)(iv) of the EPA CCR Rule. The total storage capacity of the impoundment is estimated to be 37.2 million cubic feet per "CCR Impoundment Inflow Design Flood Control System Plan" by AECOM, revised August 30, 2024.

2.5 INSTRUMENTATION

Reporting of the location and type of existing instrumentation and the maximum recorded readings on each instrument since the previous annual inspection is required under Section 257.83(b)(2)(ii)

of the EPA CCR Rule. However, there is no instrumentation related to geotechnical monitoring of the impoundment slopes present at the Monroe Power Plant BAI.

2.6 CHANGES IN THE SURFACE IMPOUNDMENT

Notice of changes in geometry since the previous annual inspection is required under Section 257.83(b)(2)(i) of the EPA CCR Rule. Discussion of any changes affecting the stability or operation of the impounding structure since the previous annual inspection is required under Section 257.83(b)(2)(vii) of the EPA CCR Rule. There has been no appreciable change to the geometry or perimeter extent of the impoundment since the previous annual inspection by Burns & McDonnell of Michigan, Inc. on August 21, 2025.

3.0 RECOMMENDATIONS

Based on our inspection of the Bottom Ash Impoundment (BAI), we recommend the following:

- Repairing the northern face of the southern separation berm, however this is not an urgent need. The observed minor/shallow sloughing is not an immediate structural threat and there is little to no water level differential across the berm. Water depth adjacent to the berm is also shallow (2 to 4 feet). DTE should continue to monitor and prohibit vehicle traffic on the separation berm unless and until the berm is repaired.
- Regular maintenance of the vegetation on the inner and outer slopes of the impoundment.
- Continue to regularly monitor the weir for signs of structural weakness, in particular the area of the leak.

4.0 STATEMENT BY A QUALIFIED PROFESSIONAL ENGINEER

The Annual Inspection Report (AIR) for the DTE Monroe Bottom Ash Impoundment (BAI) was prepared by Civil & Environmental Consultants, Inc. (CEC). This Report is based on review of previous information and reports that CEC has relied on, other than information originally prepared by CEC, but not independently verified, and on-site observations. Therefore, this Certification/Statement of Professional Opinion is limited to the information available to CEC at the time this document was written and their on-site observations. Therefore, subject to the preceding statements, it is my opinion as a Professional Engineer licensed in the State of Michigan, that this document has been prepared in accordance with good and accepted engineering practices as exercised by other engineers practicing in the same discipline(s), under similar circumstances. It is my professional opinion that the AIR was prepared consistent with the requirements of the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," published in the Federal Register on April 17, 2015, which became effective on October 4, 2016 with subsequent revisions, the final rule became effective on November 4, 2024. (40 CFR 257 Subpart D). This Certification/Statement of Professional Opinion is limited to § 257.83(b), pertaining to Annual Inspections for the DTE Monroe BAI. More specifically, and in accordance with the preceding statements, I find that the design, construction, operation, and maintenance of the DTE Monroe BAI is consistent with recognized and generally accepted good engineering standards.

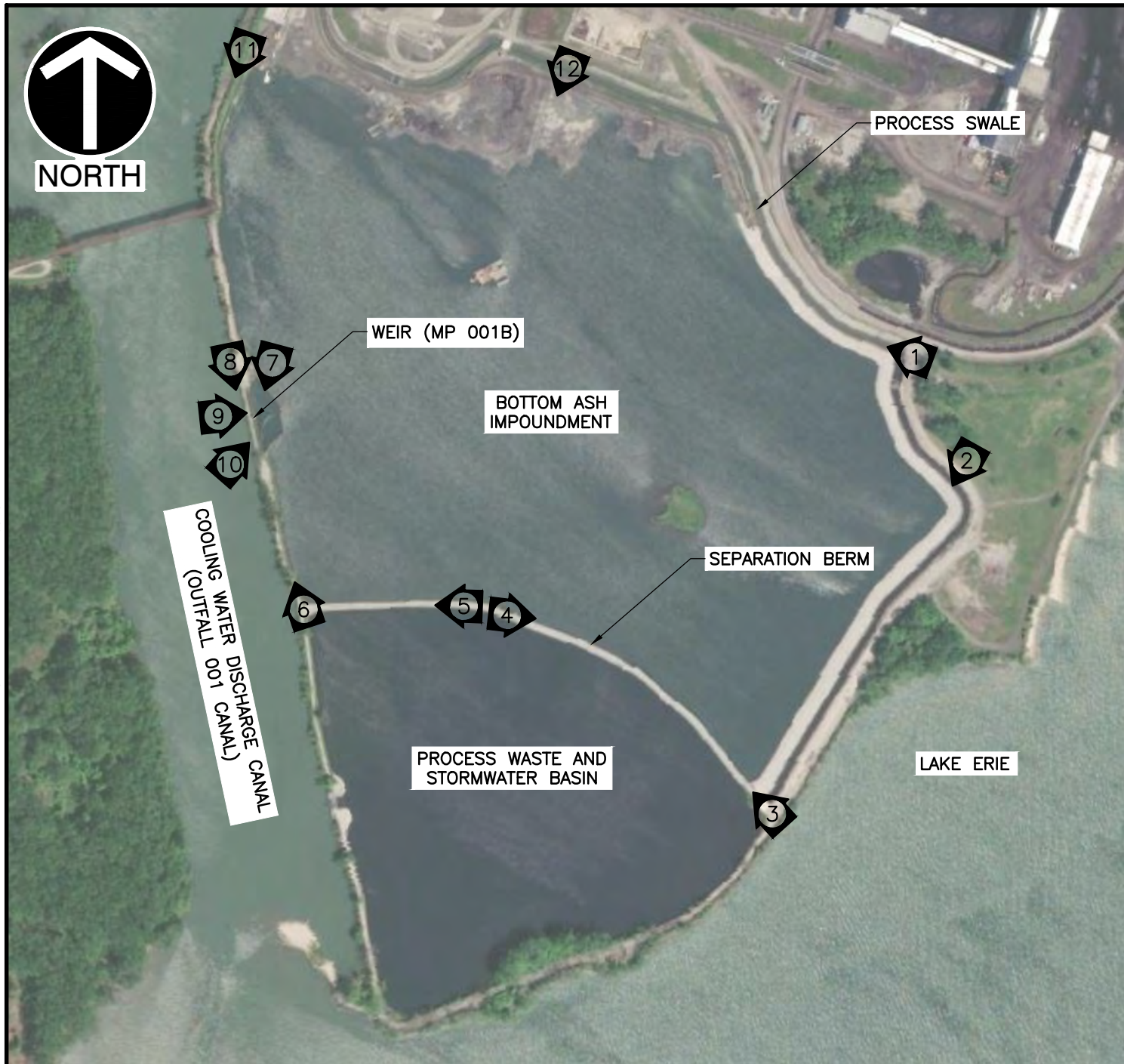
The use of the words "certification" and/or "certify" in this document shall be interpreted and construed as a Statement of Professional Opinion and is not and shall not be interpreted or construed as a guarantee, warranty, or legal opinion.

PRINTED NAME: Andrew Rodzianko, P.E.



FIGURES

\\svr-fs-det\Projects\360-000\363-863\--CADD\Drawings\SW01-2026 Annual Inspection Report\363863-SW01-Site Map.dwg{1} LS:(8/7/2026 - jgag) - LP: 8/25/2026 9:05 AM



LEGEND



PHOTO LOCATION/DIRECTION/NUMBER

REFERENCE

1. AERIAL IMAGERY SOURCED FROM ESRI IMAGERY WITHIN AUTOCAD CIVIL3D 2026. ACCESSED ON JULY 27, 2026.

SCALE IN FEET



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DTE ELECTRIC COMPANY
MONROE POWER PLANT
BOTTOM ASH IMPOUNDMENT

CCR RULE ANNUAL INSPECTION
SITE MAP WITH PHOTO LOCATIONS

DRAWN BY:	JSG	CHECKED BY:	ANR	APPROVED BY:	ANR	FIGURE NO.:
DATE:	AUGUST 2026	DWG SCALE:	AS SHOWN	PROJECT NO:	363-863.SW01	1

APPENDIX A

IMPOUNDMENT INSPECTION CHECKLIST

CCR SURFACE IMPOUNDMENT INSPECTION FORM

Qualified Person / Annual Inspection Checklist

Pursuant to 40 CFR Part 257, Subpart D – Standards for the Disposal of Coal Combustion Residuals

1. Facility & Unit Information

Facility Name:	Monroe Power Plant	Owner / Operator:	DTE Electric Company
CCR Unit Name / ID:	Bottom Ash Impoundment	Operating License #:	9812
Location (City, State):	Monroe, MI	Hazard Potential Class:	☐ High ☒ Significant ☐ Low
Unit Type:	☐ Existing CCR Surface Impoundment ☐ New CCR Surface Impoundment ☐ Lateral Expansion ☐ Legacy CCR Surface Impoundment ☒ Inactive CCR Surface Impoundment		

2. Inspection Details

Inspection Date:	July 22, 2026	Inspection Time:	9:30 AM
Weather Conditions:	Partly Cloudy, Calm	Temperature (°F):	60s/70s
Inspector Name:	Andrew Rodzianko	Title / Qualification:	Project Manager / Professional Engineer
Inspection Type:	☐ Weekly (≤7 days) ☐ Monthly Instrumentation ☒ Annual (Qualified PE) ☐ Special / After Storm Event		
Previous Inspection Date:	August 21, 2025	Pool Elevation / Freeboard:	~1.7' Freeboard

3. Visual Inspection Checklist – Structural Integrity & Conditions

Inspect for any appearances of actual or potential structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit (40 CFR § 257.83(a)(1)(i)). Mark Yes if condition is observed/deficient.

Inspection Item	Yes	No	N/A or Comments
A. Embankment Crest & Geometry			
Changes in geometry of the impounding structure since last inspection	☐ Yes	☒ No	☐ N/A / Comments: _____
Settlement, depressions, or uneven crest elevation	☐ Yes	☒ No	☐ N/A / Comments: _____
Cracking (transverse, longitudinal, or desiccation) on crest	☐ Yes	☒ No	☐ N/A / Comments: _____
Inadequate freeboard or abnormally high/low pool levels	☐ Yes	☒ No	☐ N/A / Comments: _____
Vehicle ruts or other crest damage	☐ Yes	☒ No	☐ N/A / Comments: _____
B. Upstream (Interior) Slope			
Erosion, rills, gullies, or wave action damage	☒ Yes	☐ No	☐ N/A / Comments: Minor/shallow erosion on separation berm
Slides, sloughs, scarps, bulges, or boils	☒ Yes	☐ No	☐ N/A / Comments: Minor/shallow sloughing on separation berm
Seepage or wet spots (note location & approximate rate)	☐ Yes	☒ No	☐ N/A / Comments: _____
Animal burrows or vegetation issues (excessive/lack of cover)	☒ Yes	☐ No	☐ N/A / Comments: Lengthy vegetation in some areas
Liner or cover system damage (if visible/applicable)	☐ Yes	☐ No	☒ N/A / Comments: _____
C. Downstream (Exterior) Slope & Toe			
Erosion, rills, gullies, or slope deterioration	☐ Yes	☒ No	☐ N/A / Comments: _____
Slides, sloughs, scarps, bulges, or sinkholes	☐ Yes	☒ No	☐ N/A / Comments: _____
Seepage, wet areas, or soft ground at toe (note turbidity)	☐ Yes	☒ No	☐ N/A / Comments: _____
Animal burrows or excessive vegetation/trees	☒ Yes	☐ No	☐ N/A / Comments: Trees on western slope
Signs of piping or internal erosion	☐ Yes	☒ No	☐ N/A / Comments: _____

D. Appurtenant Structures & Other Conditions			
Deterioration or improper operation of overtopping controls	☐ Yes	☒ No	☐ N/A / Comments: _____
Sudden drops in the level of impoundment contents	☐ Yes	☒ No	☐ N/A / Comments: _____
Debris, sediment, or blockage affecting operation	☐ Yes	☒ No	☐ N/A / Comments: _____
Identification markers / signage present and legible	☒ Yes	☐ No	☐ N/A / Comments: _____
Any other conditions disrupting or potentially disrupting safety	☐ Yes	☒ No	☐ N/A / Comments: _____

4. Hydraulic Structures Outlet Inspection

Inspect the discharge of all outlets of hydraulic structures which pass underneath the base of the surface impoundment or through the dike for abnormal discoloration, flow, or discharge of debris or sediment (40 CFR § 257.83(a)(1)(ii)).

Structure / Outlet ID	Condition Observed	Flow / Discoloration / Debris?	Comments / Actions
Weir (MP 001B)	Fair condition with some corrosion	No flow other than minor leak in one isolated location along ~200' long weir	DTE already taking action to address leak, however is not a major structural/safety concern

5. Instrumentation Monitoring (Monthly Requirement)

At intervals not exceeding 30 days, monitor all CCR unit instrumentation (40 CFR § 257.83(a)(1)(iii)). Record readings below.

Instrument ID / Type	Location	Reading / Value	Notes / Max Since Last
☒ No instrumentation present at this unit			

6. Annual Inspection Additional Data (Qualified Professional Engineer)

Required when conducting annual inspection under 40 CFR § 257.83(b). Complete if this is an annual PE inspection.

Approx. min / max / present depth of water & CCR:	Water: 0-20', minimal fluctuation; CCR (per AECOM, 8/10/26): 0-3.5'
Approx. min / max / present elevation* of water & CCR:	Water: present ~574.2' w/minimal fluctuation; CCR (per AECOM, 8/10/26): min ~554.6', max ~563.5'
Storage capacity of impounding structure at time of inspection:	~37.2 million cubic feet (AECOM)
Approx. volume of impounded water and CCR:	Water: ~30.8 million cubic feet (AECOM); CCR: ~275 cubic yards (per AECOM, 8/10/26)
Changes in geometry since previous annual inspection:	None
Review of operating record / previous inspections completed?	☒ Yes ☐ No Comments: Similar observations noted

*All elevations relative to local Plant Datum

7. Findings, Deficiencies & Corrective Actions

Summary of Observations / Deficiencies Identified: A small leak in the otherwise inactive weir is noted, however not a major concern as this is still a permitted outfall and flow quantity/quality is within compliance limits. Some minor/shallow sloughing/erosion is present along the north side of the separation berm, however this also is not a concern as there is little to no water level differential across the berm, no traffic is permitted on the berm, and the south pond is also DTE property. Lengthy vegetation and mature trees noted along the slopes.
Recommended / Required Corrective Actions (and target completion date): Regular maintenance of vegetation recommended. Separation berm slope should be repaired if vehicular traffic is planned to occur, otherwise not urgent.
☒ Unit appears to be in satisfactory condition consistent with recognized and generally accepted good engineering standards.

8. Certification & Signature

I certify that this inspection was conducted in accordance with the requirements of 40 CFR § 257.83 and that the information recorded is true and accurate to the best of my knowledge. Results of this inspection must be recorded in the facility's operating record as required by § 257.105(g)(5).

Inspector Signature: Andrew Rodzianko

Date: 8/28/26

Printed Name: Andrew Rodzianko

License / PE Number (if applicable): MI PE No. 6201061456

APPENDIX B

IMPOUNDMENT INSPECTION PHOTOLOG



Photo Number:

1

Description:

Looking west at process waste ditch with northern portion of BAI in background.



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51229 Century Court, Ste. B, Wixom, MI 48393

Phone: 947-546-0020

Project Name: DTE Monroe Power Plant
2026 Annual Inspection

Client Name: DTE Electric Company

Project Number: 363-863



Photo Number:

2

Description:

Looking south from west side of BAI at riprap lined berm separating process waste ditch (foreground) from BAI to right.



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Photo Number:

3

Description:

Looking west at separation berm from east end. Berm closed to vehicle traffic.



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Photo Number:

4

Description:

Typical minor/shallow erosion/sloughing on north face of separation berm.



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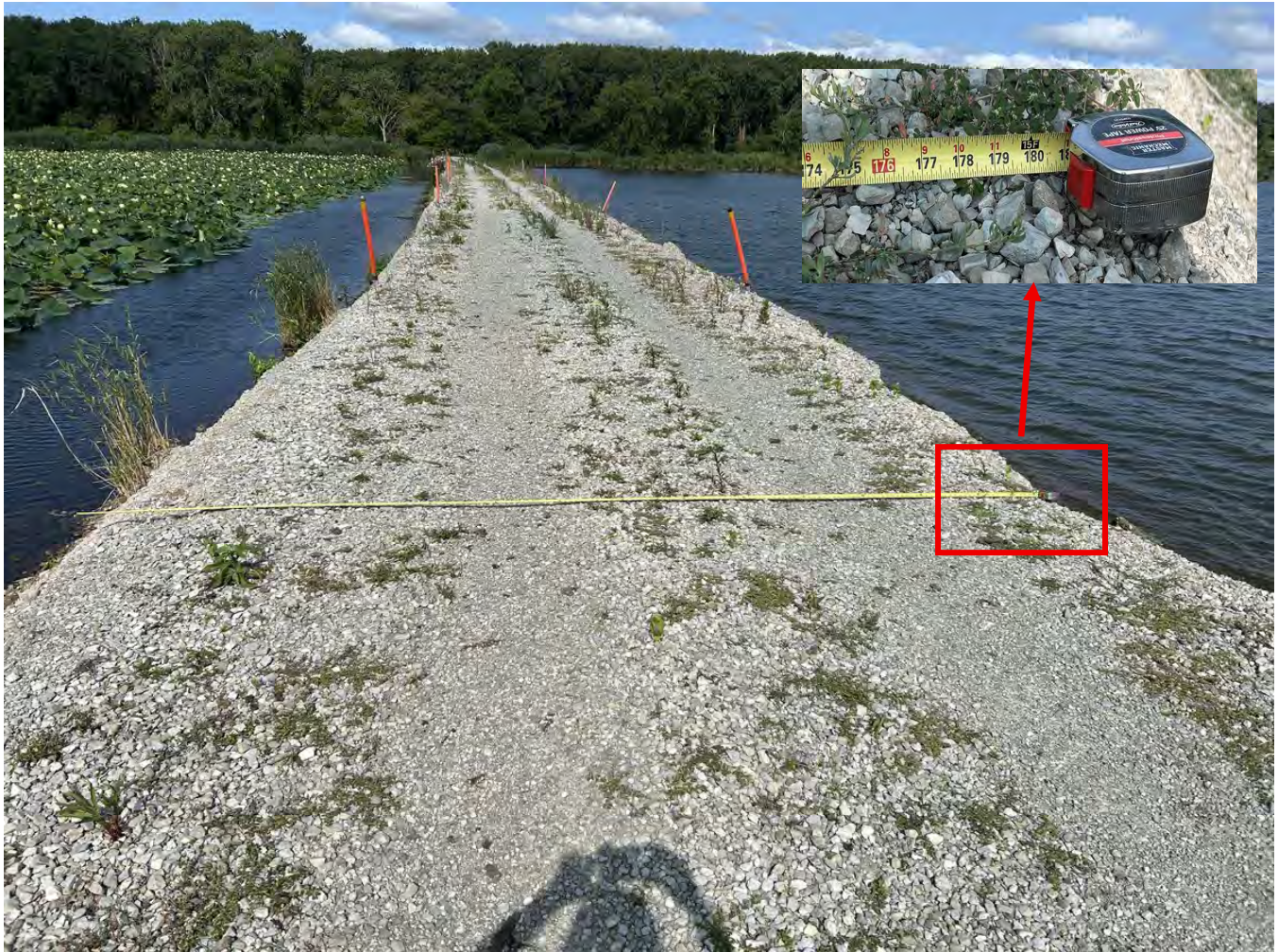


Photo Number:

5

Description:

Typical narrowest crest width of separation berm.



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Photo Number:

6

Description:

Looking north at west perimeter berm from southwest corner. Outfall canal to left, BAI to right. Mature woody vegetation on outboard slope. Lengthy vegetation on both outboard and inboard slopes.



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Photo Number:

7

Description:

View of weir inboard side from north. Turbidity curtain, steel skimmer, and grated walkway with handrails all in fair condition.



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Photo Number:

8

Description:

View of weir outboard side from north. Discharge channel armored with riprap and vegetation.



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Photo Number:

9

Description:

Minor leak in weir.



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Photo Number:

10

Description:

Typical view of outboard side of weir—no flow visible. Some corrosion present.



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Photo Number:

11

Description:

Looking south along inboard slope of perimeter berm from northwest corner of BAI. Vegetation recently mowed.



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Photo Number: 12

Description: Panoramic of north end of BAI, looking south.



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