



DRAINAGE MONITORING REPORT

GEOTECHNICAL | ENVIRONMENTAL | ECOLOGICAL | WATER | CONSTRUCTION MANAGEMENT

Known for excellence. Built on trust.

Eversource Transmission
Line:

F107 - Seacoast Reliability Project

Location:

Newington, New Hampshire

GZA Project No:

04.0190967.00

TYPE OF INSPECTION: Daily Weekly Storm Event⁺ Reduced Frequency⁺⁺
 Other:

Date: 10/28/2020 Time: 1420 ⁺Was this inspection triggered by a 0.25" storm event? Yes No

If yes, how did you determine whether a 0.25" storm event has occurred? Rain Gauge Weather Station
 Other If other, please describe Weather Underground

+Storm event info (approx): Intermittent light rain from early morning to early afternoon on 10/28

Amount of rainfall (inches): 0.26

++Reason for Reduced Frequency
(i.e., Monthly due to dry conditions):

Inspector name(s) and title(s): Matt Deane, Technical Specialist

Others present/affiliation(s):

Weather conditions (since last inspection): Mostly cloudy

Weather conditions (time of inspection): Light rain, Mid 40's

pH Meter Information (make/model): Hanna HI98107

Calibration Method: 2 Point

Date: 10/28/20 Time: 1415

Notes:

PROJECT TEAM

PROJECT OWNER

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CURRENT/RECENT SITE WORK ACTIVITIES / NOTES

- None

PHOTOGRAPHS



29 Gundalow - 1 (Drainage Area)



29 Gundalow - 2 (Culvert)



64 Gundalow - 1 (Drainage Course)



64 Gundalow - 2 (Drainage Course)



4 Brickyard Circle - 1 (Drainage Course)

DRAINAGE AREA MONITORING

Location: 29 Gundalow – 1 (Drainage Area)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: ---

Observations/Notes:

Location: 29 Gundalow – 2 (Culvert)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 10.1

Observations/Notes: Standing water observed in the culvert and extending approx. 10" beyond culvert inlet into stone area, approx. max depth 3.5"

Location: 64 Gundalow – 1 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: ---

Observations/Notes:

Location: 64 Gundalow – 2 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 6.6

Observations/Notes: Small area of standing water in stone riprap approx. 3" deep

Location: 4 Brickyard Circle – 1 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 6.6

Observations/Notes: Standing water extending approx. 24" beyond culvert outlet, approx. 10" deep

Location: Knight's Brook – 1 (Upstream in Brook)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Knight's Brook – 2 (Downstream in Brook)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Knight's Brook – 3 (Above Duct Bank in Brook)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Hannah – 1 (Wetland NW-22)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Hannah – 2 (Wetland NW-24)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Flynn Pit – 1 (Wetland NW-4)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location:

Status of surface water at the time of inspection? Dry Standing Flowing

pH:

Observations/Notes:

OTHER COMMENTS AND OBSERVATIONS

- None



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TYPE OF INSPECTION:

- Daily Weekly Storm Event⁺ Reduced Frequency⁺⁺
 Other:

Date: 10/29/2020 Time: 1430 ⁺Was this inspection triggered by a 0.25" storm event? Yes No

If yes, how did you determine whether a 0.25" storm event has occurred? Rain Gauge Weather Station
 Other If other, please describe Weather Underground

+Storm event info (approx): Light rain beginning early afternoon and continuing through evening of 10/29

Amount of rainfall (inches): 0.19 at time of inspection

++Reason for Reduced Frequency
(i.e., Monthly due to dry conditions):

Inspector name(s) and title(s): Matt Deane, Technical Specialist

Others present/affiliation(s):

Weather conditions (since last inspection): Variable rain and clouds

Weather conditions (time of inspection): Light rain, Mid 40's

pH Meter Information (make/model): Hanna HI98107

Calibration Method: 2 Point

Date: 10/29/20 Time: 1425

Notes:

PROJECT TEAM

PROJECT OWNER

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CURRENT/RECENT SITE WORK ACTIVITIES / NOTES

- None

PHOTOGRAPHS



29 Gundalow - 1 (Drainage Area)



29 Gundalow - 2 (Culvert)



64 Gundalow - 1 (Drainage Course)



64 Gundalow - 2 (Drainage Course)



4 Brickyard Circle - 1 (Drainage Course)

DRAINAGE AREA MONITORING

Location: 29 Gundalow – 1 (Drainage Area)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: ---

Observations/Notes:

Location: 29 Gundalow – 2 (Culvert)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 11.2

Observations/Notes: Standing water observed in the culvert and extending approx. 12" beyond culvert inlet into stone area, approx. max depth 3.5"

Location: 64 Gundalow – 1 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: ---

Observations/Notes: Approx. 0.25" standing water at culvert outlet, not enough to obtain reading

Location: 64 Gundalow – 2 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 6.7

Observations/Notes: Small area of standing water in stone riprap approx. 3" deep

Location: 4 Brickyard Circle – 1 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 6.7

Observations/Notes: Standing water extending approx. 24" beyond culvert outlet, approx. 10" deep

Location: Knight's Brook – 1 (Upstream in Brook)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Knight's Brook – 2 (Downstream in Brook)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Knight's Brook – 3 (Above Duct Bank in Brook)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Hannah – 1 (Wetland NW-22)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Hannah – 2 (Wetland NW-24)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location: Flynn Pit – 1 (Wetland NW-4)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

Location:

Status of surface water at the time of inspection? Dry Standing Flowing

pH:

Observations/Notes:

OTHER COMMENTS AND OBSERVATIONS

- None



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TYPE OF INSPECTION: Daily Weekly Storm Event⁺ Reduced Frequency⁺⁺
 Other:

Date: **10/30/2020** Time: **1525** ⁺Was this inspection triggered by a 0.25" storm event? Yes No

If yes, how did you determine whether a 0.25" storm event has occurred? Rain Gauge Weather Station
 Other If other, please describe Weather Underground

+Storm event info (approx): Light rain beginning early afternoon and continuing through evening of 10/29, turning to snow and wintery mix morning of 10/30 and continuing through afternoon

Amount of rainfall (inches): 0.94

++Reason for Reduced Frequency
(i.e., *Monthly due to dry conditions*):

Inspector name(s) and title(s): Matt Deane, Technical Specialist

Others present/affiliation(s):

Weather conditions (since last inspection): Variable light rain and wintery mix

Weather conditions (time of inspection): Light snow, Mid 30's

pH Meter Information (make/model): **Hanna HI98107**

Calibration Method: 2 Point

Date: **10/30/20** Time: **1520**

Notes:

PROJECT TEAM

PROJECT OWNER

Eversource

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CURRENT/RECENT SITE WORK ACTIVITIES / NOTES

- None

PHOTOGRAPHS



29 Gundalow - 1 (Drainage Area)



29 Gundalow - 2 (Culvert)



64 Gundalow - 1 (Drainage Course)



64 Gundalow - 2 (Drainage Course)



4 Brickyard Circle - 1 (Drainage Course)



4 Brickyard Circle - 2 (Drainage Course)

PHOTOGRAPHS



4 Brickyard – 2 (Drainage Area) facing northeast



4 Brickyard – 3 (Drainage Area)



4 Brickyard – 3 (Drainage Area) facing southwest

DRAINAGE AREA MONITORING

Location: 29 Gundalow – 1 (Drainage Area)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: ---

Observations/Notes: Some areas of saturated soil but no standing water

Location: 29 Gundalow – 2 (Culvert)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 12.3

Observations/Notes: Water observed in the culvert and extending approx. 12" beyond culvert inlet into stone area, approx. max depth 5"

Location: 64 Gundalow – 1 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **11.6

Observations/Notes: ****Measurement taken from just inside culvert outlet as water entering drainage course was inaccessible under stone riprap, water approx. 0.5" deep**

Location: 64 Gundalow – 2 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 9.7

Observations/Notes: Large area of standing water in stone riprap approx. 5" deep

Location: 4 Brickyard Circle – 1 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 9.4

Observations/Notes: Standing water extending approx. 24" beyond culvert outlet, approx. 12" deep

Location: 4 Brickyard Circle – 2 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 7.1

Observations/Notes: Water running along east wall of raceway, approx. 2" deep

Location: 4 Brickyard Circle – 3 (Drainage Course)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: 7.1

Observations/Notes: Small area of water in center of raceway, approx. 3" deep

Location: Knight's Brook – 1 (Upstream in Brook)

Status of surface water at the time of inspection? Dry Standing Flowing

pH: **Not Monitored**

Observations/Notes:

<p>Location: Knight's Brook – 2 (Downstream in Brook) Status of surface water at the time of inspection? <input type="checkbox"/> Dry <input type="checkbox"/> Standing <input type="checkbox"/> Flowing pH: Not Monitored Observations/Notes:</p>
<p>Location: Knight's Brook – 3 (Above Duct Bank in Brook) Status of surface water at the time of inspection? <input type="checkbox"/> Dry <input type="checkbox"/> Standing <input type="checkbox"/> Flowing pH: Not Monitored Observations/Notes:</p>
<p>Location: Hannah – 1 (Wetland NW-22) Status of surface water at the time of inspection? <input type="checkbox"/> Dry <input type="checkbox"/> Standing <input type="checkbox"/> Flowing pH: Not Monitored Observations/Notes:</p>
<p>Location: Hannah – 2 (Wetland NW-24) Status of surface water at the time of inspection? <input type="checkbox"/> Dry <input type="checkbox"/> Standing <input type="checkbox"/> Flowing pH: Not Monitored Observations/Notes:</p>
<p>Location: Flynn Pit – 1 (Wetland NW-4) Status of surface water at the time of inspection? <input type="checkbox"/> Dry <input type="checkbox"/> Standing <input type="checkbox"/> Flowing pH: Not Monitored Observations/Notes:</p>
<p>Location: Status of surface water at the time of inspection? <input type="checkbox"/> Dry <input type="checkbox"/> Standing <input type="checkbox"/> Flowing pH: Observations/Notes:</p>

OTHER COMMENTS AND OBSERVATIONS

- Two monitoring locations, 4 Brickyard – 2 and 4 Brickyard – 3, were added to the monitoring event. Locations are shown on the attached figure.