



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: **12/13/2020** Time: **1120** ⁺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 beginning afternoon of 12/12 and continuing to early morning of 12/13

Amount of rainfall (inches): 0.49

++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 sun and clouds, no measurable precipitation until 12/12

Weather conditions (time of inspection): Fog, Low 40's

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

Calibration Method: 2 Point

Date: **12/13/20** Time: **1115**

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: **6.3**

Observations/Notes: Intermittent areas of standing water in grass, max depth approx. 1"

Location: 29 Gundalow – 2 (Culvert)

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

pH: **11.8**

Observations/Notes: Water extending approx. 18" beyond culvert inlet into stone area, approx. max depth 4". Flow visible through culvert.

Location: 64 Gundalow – 1 (Drainage Course)

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

pH: **11.5**

Observations/Notes: Accessible flowing water extending approx. 16" from culvert outlet, approx. 2" deep.

Location: 64 Gundalow – 2 (Drainage Course)

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

pH: **9.3**

Observations/Notes: Large area of pooled water extending approx. 5' from culvert inlets, max depth approx. 8". Visible flow through culverts.

Location: 4 Brickyard Circle – 1 (Drainage Course)

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

pH: **8.3**

Observations/Notes: Water flowing through culvert with pools at outlet, max depth approx. 10". Visible flow through culvert and into raceway.

Location: 4 Brickyard Circle – 2 (Drainage Course)

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

pH: **Not Monitored**

Observations/Notes:

Location: 4 Brickyard Circle – 3 (Drainage Course)

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

pH: **Not Monitored**

Observations/Notes:

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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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: **12/15/2020** Time: **0930** ⁺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

+Storm event info (approx):

Amount of rainfall (inches):

++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): Cloudy with brief light rain on 12/14, no measurable precipitation

Weather conditions (time of inspection): Sunny, Low 30's

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

Calibration Method: 2 Point

Date: **12/15/20** Time: **0925**

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)



4 Brickyard Circle - 2 (Drainage Course)

PHOTOGRAPHS



4 Brickyard Circle – 3 (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: 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 extending approx. 12" beyond culvert inlet into stone area, approx. max depth 4". Flow visible through culvert.

Location: 64 Gundalow – 1 (Drainage Course)

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

pH: 11.8

Observations/Notes: Accessible flowing water extending approx. 12" from culvert outlet, approx. 1" deep.

Location: 64 Gundalow – 2 (Drainage Course)

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

pH: 9.8

Observations/Notes: Standing water extending approx. 18" from culvert inlets, max depth approx. 2".

Location: 4 Brickyard Circle – 1 (Drainage Course)

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

pH: 9.5

Observations/Notes: Standing water extending approx. 2.5' from outlet, max depth approx. 10".

Location: 4 Brickyard Circle – 2 (Drainage Course)

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

pH: 7.9

Observations/Notes: Water flowing through center and adjacent to east wall of raceway, approx. 3" deep.

Location: 4 Brickyard Circle – 3 (Drainage Course)

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

pH: 7.6

Observations/Notes: Pooled area in center of raceway, max depth approx. 3".

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>

<p>OTHER COMMENTS AND OBSERVATIONS</p> <ul style="list-style-type: none">• None.



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

Date: **12/18/2020** Time: **0940** ⁺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

+Storm event info (approx):

Amount of rainfall (inches):

++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 clouds with snow beginning late on 12/16 and continuing through the day on 12/17

Weather conditions (time of inspection): Cloudy, Mid 20's

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

Calibration Method: 2 Point

Date: **12/18/20** Time: **0935**

Notes:

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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 Circle – 3 (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: 12.6

Observations/Notes: Water extending approx. 12" beyond culvert inlet into stone area, approx. max depth 4". Flow visible through culvert.

Location: 64 Gundalow – 1 (Drainage Course)

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

pH: **12.3

Observations/Notes: **Standing water in drainage course covered by snow/ice - pH measurement taken from standing water just inside culvert. Standing water approx. 1" deep.

Location: 64 Gundalow – 2 (Drainage Course)

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

pH: **10.0

Observations/Notes: **Standing water in drainage course covered by snow/ice - pH measurement taken from standing water just inside culvert. Standing water approx. 1" deep.

Location: 4 Brickyard Circle – 1 (Drainage Course)

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

pH: 9.3

Observations/Notes: Standing water extending approx. 2.5' from outlet, max depth approx. 10".

Location: 4 Brickyard Circle – 2 (Drainage Course)

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

pH: 7.6

Observations/Notes: Small area of accessible standing water adjacent to 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: 7.5

Observations/Notes: Snow manually removed to access flowing water. Waited until flow resumed to take pH measurement.

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>

<p>OTHER COMMENTS AND OBSERVATIONS</p> <ul style="list-style-type: none">• Heavy snow cover over 29 Gundalow – 1, 64 Brickyard – 1, 64 Brickyard – 2, and 4 Brickyard – 3.
